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In addition to defending the Copernican system, and discovering the principle of inertia, Galileo made intensive studies in a new science, the strength of materials. Studying the load on a beam, he found that the strength decreases as the length increases, unless you increase the thickness at an even greater weight. You cannot, therefore, simply double the size of a structure and expect it to carry double the weight. His illustration of a cantilever beam in Discorsi e dimonstrazioni matematiche intorno à due nuove scienze (Leiden, 1638) demonstrates his discovery that the breaking force on a beam increases as the square of its length. (Photo and caption courtesy of the Linda Hall Library of Science, Engineering & Technology).
From the Editor

Susan Fingerman

This final issue of 2007 is the first November issue that marks the end of term for our Division and Section Chairs. Consequently, there are many last thoughts and thank-yous in their columns. A recurring theme is the tremendous importance of the support of both other Board members and the many volunteers who also do the Division/Section’s work. It’s amazing to me that in this time of overload – in information as well as seemingly in all areas of life – that SLA members continue to produce terrific events and meetings with almost all volunteer effort. Kudos to you all, and particularly to those who step up to lead in all levels of our organization.

Speaking of volunteers, I’d like to welcome the first of our FOUR Book News Selectors, Kiem Ta. Kiem is the Science Librarian at the Edmon Low Library at Oklahoma State University. She has been both a reference and a systems librarian, and so brings that perspective to her selection process.

The other three selectors, each taking an STN issue, include myself, Carol Lucke from the Naval Research Lab, and Marie C. Fraties-Block from BASF – The Chemical Company. So we should give you the nice balance in points of view that I hoped would be represented as we select. It’s difficult to choose the 100 books from the 2000 in each issue of Sci-Tech Book News, and to satisfy the many disciplines and libraries which our readers represent. If you have comments on the selections we’d love to hear from you.

I am also once again looking for a new volunteer. Our excellent Web Reviews columnist, Diane Brenes of the Boeing Copmany, is unable to continue writing her terrific columns. I’d love to hear from any of you willing to write a similar column quarterly.

I’m also very pleased that we have an essay review of a very important and thought-provoking book, Balanced Libraries: Thoughts on Continuity and Change, by Walt Crawford. Walt mines the blogosphere for the latest thinking by those who often think deeply. He combines these with articles from the “traditional” library literature and weaves them into his own cogent analysis. Thanks to my Assistant Editor Christina Pikas for getting reprint permission from the author John Dupuis.

We welcome and encourage you to submit other essay/reviews in the future.

Also in this issue we have a few reports from the Annual Conference in Denver. They were received after the August issue was sent to the printer. One of them, on The Science of Beer, is actually a second report on that session. Amazingly, Michael White’s report hardly repeats a word of the August review, and it is so well-written and informative that I decided to include it.

Speaking of conferences, there is a lot here too about the upcoming Annual Conference in Seattle. That’s because planning is well along by this time. The intriguing sessions described in our Chair and Section messages make Seattle a MUST conference for me, even if my daughter didn’t just happen to live there (and I didn’t have SciTech News business to attend to.)

I once again solicit reports about other Conferences that you attend – has anyone gone to the Charleston Conference, IFLA, or even non-library sponsored meetings that get you thinking about your work in a different way? I’d love to hear from you.

For those going to Louisville in January, see you there.

Susan Fingerman
susan.fingerman@jhuapl.edu
Balanced libraries: Thoughts on continuity and change, by Walt Crawford – A Review Essay


[Assistant Ed. Note: As I started reading my copy of Balanced Libraries, I wondered what would be the best way to introduce this great book to the non-blogging science librarians. I pondered writing a review, but then I ran across this enthusiastic review from Engineering and Science-Technology Division member, John Dupuis.]

The library literature. I don’t know about you, but those three words strike fear in my heart. When I think library literature, the word that comes to mind is, well, turgid. (And to be fair, most bodies of official scholarly literature are just as turgid, if not more so, so I’m not picking on us any more than any other discipline.) Books and articles that are basically a struggle to get through, dull, overwhelming, full of jargon. Just awful. For all the great ideas that can be encapsulated in the articles, the execution can often leave a bit to be desired. And the articles I’ve inflicted on the world are no different, I’m sure. So, what’s to be done? Engage the biblioblogosphere, of course! Lively and diverse, full of opinion and debate, mostly written in a conversational, accessible style. The experimental rigor might not be there, but that’s more than made up for by diversity, immediacy and accessibility.

On the other hand, wouldn’t it be nice to have a shining example of a book that is well written and with ambitious, almost scholarly, intentions, well thought out arguments, deeply explored ideas, intellectually rigorous debate that seriously engages the most important professional topics of the day? Impossible, you say. I say, I’m holding that very book right here in my hands and it’s Walt Crawford’s Balanced Libraries: Thoughts on Continuity and Change. And the issue it is engaging is perhaps the most important facing our profession these days: how to embrace new technological possibilities while still maintaining our core values as libraries and librarians while not going completely crazy in the process. And how does Crawford’s fare in this endeavor? Pretty darn good, if you ask me. There’s a lot of very profound wisdom in this book, and I would recommend it very seriously to any library professional, especially to those that are most directly engaged in building technology solutions for libraries.

There’s a lot of good stuff in this book that I want to talk about, but first let’s talk a little about the author for those of you who may not know about him. Walt Crawford is the author of numerous other books (including the excellent First Have Something to Say, which I’ve also read and which was influential in my blogging career), the important library ezine Cites & Insights (http://citesandinsights.info/) and his blog Walt at Random (http://walt.lishost.org/). A sage and sane voice in the biblioblogosphere, one that many have found inspiring.

And now, Balanced Libraries.

One of the best things about this book was that it provoked an awful lot of internal debates as I was reading it. You know how when you’re reading a book and suddenly you’re stopped in your tracks by something? It doesn’t matter if you agree or disagree (and I certainly didn’t agree with everything in Crawford’s book), it makes you think, it makes you start a kind of virtual discussion with the author. You find yourself saying, “But, what if...” or “You know, that’s not how I think that would happen...” or “Right on, and what about...” It takes a long time to read a book like that, because so much of your time is spent digesting what you’ve read. It often took me a day or two in between chapters to process. Lee Smolin’s The Trouble with Physics, which I was reading more or less simultaneously, was the same.

So, what were those debates, what were...
the topics I endlessly worked over with my imaginary Walt Crawford? Well, let's take a look at the book more or less chapter by chapter and see what came up with.

Chapter 1 (A Question of Balance) is the introduction. Crawford defines balance as “change with continuity,” “expansion over replacement,” and “continuous improvement over transformation,” which is a definition I can live with. I guess you could say my first virtual debate was here, struggling with my own definition of balance. Like Crawford, I think I favor gradual, incremental change most of the time, but I do have a bit of the revolutionary in me as well and certainly this section helped me come to my own definition, even if it’s a bit less than ideally “balanced.” But it's a good way to start the book, to make sure we’re more or less on the same wave length.

Chapter 2 (Patrons and the Library) really resonated with me. Are the “patrons always right?” Do we do what they want, no matter what, even if it might be outside our core mission? To what degree do we “pander” to patrons’ every whim and to what degree do we use our professional judgment to decide what's best for them? A difficult question, one that I don’t have the answer for -- and this chapter provoked a lot of introspection.

Chapter 4 (Existing Collections and Services) struck a bit of an off note for me. In the discussion about existing collections there’s quite a long section that romanticizes traditional book browsing on the shelves. I’m not sure the serendipity you get from browsing on the shelves is better than the kind of serendipity a good online system (with tags and recommendation systems, for example) can give you. I appreciate and use both kinds of discovery but I think that they can and should be profoundly complementary.

Chapter 6 (Balancing Generations) treats that hoary old proposition: kids today are going to hell in a hand basket/old fogies are so out of touch. Crawford struck a good balance here, talking about balancing the needs of younger vs. older patrons and the strengths of more experienced staff vs. new grads. Being a newer librarian who’s not so young, I found a lot to like in this chapter, even if I sometimes seemed to find myself in both camps at once.

Chapter 7 (Pushing Back: Balance vs. Resistance) has a discussion of the dangers of Fear, Uncertainty and Doubt (FUD) that got me thinking. It seems that there’s a challenge here, how to find a model for life-long contribution to the profession for everybody, not just the tech-savviest. Ultimately, we all get a little duller around the cutting edge (some less than others, some earlier than others), so how do we harness the wisdom and experience of those that have been-there-done-that?

Chapters 8 (Naming and Shaming) and 9 (Improving and Extending Services) were perhaps the most provocative and compelling in the book. They give the compelling and controversial story of the Library 2.0 wars, from the True Believers to the doubters to the mushy middlers. Crawford’s portrayal of many of the L2 advocates is considerably less than flattering, to the point where I found myself shaking my head and remembering why I mostly stayed on the sidelines for the debate. On the other hand, Chapter 9 is an amazing exposition of perhaps what L2 is really about. I often found myself nodding my head in vigorous agreement, thinking “Gee, that’s cool” or "Maybe I should try that!" The contrast between the two chapters is telling: in one librarians sound shrill and a bit mean, in the other we sound open minded, progressive and brilliant. Chapters 10 through 13 really just expand on the possibilities for embracing balanced change begun in chapter 9.

Chapters 14 (Balanced Librarians) and 15 (Change and Continuity) form a kind of extended conclusion for the book. Chapter 14 challenges us as professionals to take it easy, to use our time and energy wisely, to pace ourselves but at the same time to stop and think, to focus our concentration and really contemplate our situation. Chapter 15 brings it all together, challenging us to once again think deeply about what is worth keeping and what needs to be changed. As Crawford closes, "Whatever names you adopt, whatever tools wind up suiting your needs, I hope these thoughts will help you find a balance of continuity and change." (p. 229)

Well, you get the idea. Every chapter will make you think.

Another really interesting thing about this book was how it advanced the form of scholarship. Here’s a self-published book with very serious intentions, not lightweight at all, which mostly referenced blogs in the bibliography. I find that really interesting. A book that's about how...
librarians should engage the most important issues in their professional practice and it's mostly propelled by bloggers and not by reams of articles in the official scholarly journals. By my quick count, 151/187, or about 80% of the items in the bibliography are blog posts. And he makes us sound pretty good too. And I'm not just saying that because my blog appears three times in the bibliography.

For the most part, Crawford showcases the best writing and the best thinking out there among the iblogs (except for Chapter 8, mentioned above, but even that showcases some real passion too); we are committed and engaged and thinking about the issues. If you are a liblogger and your colleagues are a bit skeptical about the worth of what you are doing, show them this book. What we do, if we do it well, is worthy for our tenure files, for our professional CV's. Our work on our blogs should be counted the same as any one else's contributions in traditional media based on its intrinsic quality not its format or place of publication. Thanks to Crawford, we have an example of what we are capable of presented in a somewhat more traditional format and written by someone whose contributions to the field cannot be easily dismissed. We appreciate the support.

But enough of me. Go buy the book. One for yourself and one for your library's collection.

2007 Annual Conference Session Reports

Science of Beer
Monday, June 4, 2007
Presented by: Science-Technology, Chemistry and Food, Agriculture & Nutrition Divisions
Sponsored by: ACS Publications, Annual Reviews, CAS, Elsevier, Royal Society of Chemistry
Speaker: Dr. Charles Bamforth, University of California, Davis
Moderator: James Manaasco, University of Louisville
Reported by: Michael White, Librarian for Research Services, Queen's University, Kingston, Ontario

Many people celebrate the end of a long day at work by relaxing with a cold beer at their local pub. But for professor Charlie Bamforth, going to the pub for a pint isn't just idle recreation or an escape from work, it's serious business. Dr. Bamforth has spent more than thirty years studying the amber-colored liquid that is the world's most popular beverage. In fact, he is one of the world's leading authorities on the art and science of brewing. Approximately 100 SLA attendees were fortunate to hear Dr. Bamworth's entertaining and informative lecture on the art, science and history of beer.

Sporting glasses, a bald pate, round nose, plump cheeks and modest beer belly, Dr. Bamforth looks like the typical male beer drinker. His knowledge of beer, however, is encyclopedic. He brings to the subject the curiosity and insight of a scientist and the creativity and wit of an artist. Bamforth is the Anheuser-Busch Endowed Professor of Brewing Science and Chair of the Department of Food Science and Technology at the University of California, Davis, where he has worked since 1999. He started in the brewing industry in 1978 and worked for UK-based Bass Brewers and Brewing Research International, an independent research organization. His published work includes seven books and more than 100 articles. He also holds a US patent (4,880,643) on a process that improves the head on a glass of beer. He has given hundreds of presentations to groups and organizations, including the New York Academy of Sciences.

Dr. Bamforth's lecture started with a basic overview of the four ingredients of beer: water, barley, yeast and hops. Beer, in fact, is 90 percent water and was widely consumed in the days before the reliable availability of clean drinking water. (Alcohol kills pathogens.) He then reviewed the brewing process and various styles of beer ranging from lagers, ales and pilsners to porters and stouts.

The most interesting part of his lecture was the discussion of chemical compounds that impart both desirable and undesirable qualities to beer. For example, vicinal diketones such as diacetyl and pentanedione impart butterscotch and honey flavors to beer. Sulfur compounds, on the other hand, are linked to the odor of rotten eggs, overripe cabbage and skunk, giving rise to the term "skunky beer." The oils and resins found in hops, the spice of beer, impart bitterness to some styles of beer that is much favored by "hopheads" and others who enjoy ales with a kick.

On the current practice of placing a slice of lemon or lime in beer, Dr. Bamforth was adamant: "you do not put foreign bodies in beer." He
also advised all men in the audience to keep a clean-shaven face lest their beards introduce contaminants into their beer. What about the alleged negative health affects of beer and its link to obesity? “Nonsense,” declared Dr. Bamforth patting his own stomach, “this is a sausage belly.” Moderate (2 drinks per day) beer consumption has been proven safe and even effective at preventing some diseases such as arterial sclerosis. Dr. Bamforth also pointed out that even the pilgrims drank beer. They landed in Massachusetts, hundreds of miles from their intended destination, because their supply of beer was running low. Dr. Bamworth’s most recent books include:

- Essays in Brewing Science (Springer, 2006) with Michael J. Lewis.
- Beer: health and nutrition (Blackwell, 2004)

How Hybrid Vehicles Will Move You
Monday, June 4, 2007
Presented by: Transportation, Chemistry and Engineering Divisions and Materials Research and Manufacturing Section
Sponsored by: Paterra, Inc., Thomson Scientific, and Dialog.
Moderator: Matt Barrett,
Reported by: Betsy Aldridge, PACCAR

Attended by about 50 librarians, this session featured three panelists: Jeff Gonder representing the U.S. National Energy Research Laboratory’s Advanced Vehicle Systems Group, Lee Kemp of the Denver Rapid Transit District’s Hybrid Vehicle Program, and Richard Parish of WestStart.

Some websites for the organizations are:
http://www.nrel.gov/vehiclesandfuels/ctts.html
http://www.nrel.gov/vehiclesandfuels/researchers.html
http://www.rtd-denver.com/
http://www.rtd-denver.com/Programs/Environment/index.html
http://www.weststart.org/

The panel provided recent developments in hybrid vehicle propulsion systems for heavy and light duty vehicles (freight trains, trucks, buses, cars, and possibly maritime and aviation applications) and discussed the technology’s adoption by industry and consumers, as well as the future of hybrid vehicles.

The widening gap between oil production and consumption over time on a chart presented by Jeff Gonder was staggering. New discovery is decreasing rapidly, as well. Two barrels are consumed for every one discovered (Campbell, 2005). He compared lead acid, nickel metal, lithium, plug-in, and fuel cell technologies. There’s progress being made, but still a long way to go. Although hybrid electric vehicles saved 5.5 million barrels of oil in 1999, that’s less than we now import in one day alone. Some of Jeff’s favorite sources include: fueleconomy.gov, eia.doe.gov, howstuffworks.com.

Lee Kemp reported that in a comparison between 4 diesel and 4 hybrid vehicles in Denver, the hybrids demonstrated 15% lower maintenance costs and 30% better fuel mileage. Based on those findings, Denver Rapid Transit is planning to purchase 45 more hybrids! He indicated that it’s the energy storage system that needs more research. They look at lifecycle costs. It currently costs $20,000 per bus to replace the energy storage. They’re evaluating fuel cells and finding regenerative braking interesting for stop and go driving.

Richard Parrish reported that it’s WestStart’s goal to reduce petrol use 15% by 2020. The issues spurring change are rising fuel costs, major engine changes (2007-2010 requirements), increased electric power, and idling management. The Hybrid Truck Users Forum (HTUF) and its working groups hope to facilitate development of the market for hybrid trucks. Partnerships are going to be the key to success. A recent trial with 24 hybrid vehicles found excellent user acceptance with a 9-55% improvement in fuel economy. Hydraulic hybrid shows promise. Parrish would like to see the IRS provide incentives/tax credits. Biodiesel mixes have shown a break even point after year 9.

The program ended with a vigorous Q & A exchange.

IHS Standards Facility - Field Trip
Wednesday, June 6, 2007
Presented by: Engineering and Chemistry Divisions, Materials Research and Manufacturing Section
Sponsored by: IHS
Reported by: Betsy Aldridge, PACCAR

The bus was almost filled with about 50 participants who ventured out of downtown Denver to the IHS Standards Facilities in a
nearby suburb. It was a lovely day and felt good to get out of the city and see the area from the comfortable bus. IHS is a major supplier of engineering standards to many of our SLA member libraries.

Thomas Littman, Senior Vice President, Technical Publishing, and a member of the Engineering Management Team (see http://www.ihs.com/About-IHS/engineering-management.htm) welcomed and presented us with an overview of IHS services and the plan for the tour. He honored Sara Davis, Engineering Librarian of the Year, who had joined the tour.

I was surprised to learn that IHS started their business with vendor catalog information, then added the standards arm. They now have over 2500 employees worldwide. They do have a small library.

We were split into several groups for the tours. We saw the Network Operations Center, Production, Product Development, Training and Marketing, Customer Support, and other departments. I enjoyed meeting the Customer Service staff.

We saw their exhibit of past technologies (like the VSMF data files) and old brochures (sort of an archive).

They have flags for all the countries they serve flying proudly in the production area.

I was pleased to see banners like” We’re Not Pleased Until Our Customer Is Pleased”, “Excellence is our Standard” and “Committed to Quality in Every Way”. It reminded me of the Japanese manufacturing Kaizen approach (continuous improvement) so prevalent in manufacturing. They do use quality circles and Six Sigma techniques.

Many thanks to IHS who was the sponsor and host for this enlightening event. And bravo to the Engineering and Chemistry Divisions (with Materials Research and Manufacturing Section) who planned this event. Let’s do more like it in the future! ✪
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Chemistry Division

A. Ben Wagner, Chair

This will be my final message as chair. On January 1, 2008, I become Past-Chair and look forward to supporting the new Board and Susan Cardinal, our incoming Chair. I extend my thanks to Ted Baldwin, our outgoing Past-Chair, for all his fine counsel and performance of his duties in that capacity. It will be great to work with Susan and the new Board as we kick the year off with a board meeting at the January Leadership Summit in Louisville.

You’ve heard me mention many times what a terrific learning and networking opportunity the Leadership Summits are. Details of the summit have been announced, so do consider joining us from January 23-26, 2008. All members are welcome.

I hope after the board meeting that Sue and I can report progress on a number of initiatives, including:

- A central awards committee to review the criteria for and oversee the Sparks Award, the ACS Publications New Professional Award (sorry, I got the name wrong in the last issue), and the newly authorized occasional Chemistry Division (DCHE) Distinguished Service Award.
- An International Members Initiative Task Force to brainstorm about ways to attract more international members to our Division.
- A new divisional strategic plan.

I have no question that the Division and the program planning for Seattle 2008 are in the best possible hands. I am looking forward to being able to step back from the day-to-day affairs of the Division to focus on informal contact with members and potential members. Membership is what it is all about. I would have never survived the year without everyone’s patience and faithfulness. Stay in touch. 

A. Ben Wagner
Chair, SLA Chemistry Division
Science and Engineering Library, University at Buffalo
abwagner@buffalo.edu
Scopus is the largest abstract and citation database of peer-reviewed literature and quality web sources with smart tools to track, analyze and visualize research.
Message from the Chemistry Division Chair Elect

Greetings from your Chair-Elect. Hope you have had a lovely fall with fresh apples, pumpkins and a creative and entertaining Halloween. In Rochester, NY, the weather has been unbelievably warm, feeling more like summer, but the shorter days and turning leaves signal winter’s approach.

2008 will be a year of transition, as several Board positions will be changing hands. I am so grateful to all our volunteers and I’m especially appreciative of the service that our outgoing board members have provided us. Thank you to Ted Baldwin, Past-Chair; Loren Mendelsohn, Mentorship Chair; Jim Martin, Membership Chair; Judith Currano, Professional Development, and Teri Vogel, Webmaster.

I expect great things from our new board members and appreciate their willingness to serve. Congratulations to Luray Minkiewicz, our new Chair-Elect (2008), Cathy DiPalma, Program Planner (2009 meeting) for the MRM section and Margarete Bower our returning Secretary. Please welcome Denise Calihan, Mentorship Chair; Judith Currano, Membership Chair, and Ted Baldwin, Professional Development Chair.

Please consider attending the Leadership Summit (http://www.sla.org/content/resources/leadcenter/LeadershipSummit/08leadsummit/index.cfm) in Louisville, KY on Jan 23 – 26, 2008. I’ve scheduled a board meeting for January 26 at 9 am. All board members and others interested who can not attend in person are encouraged to teleconference. I’ll be in touch closer to the meeting with details. Please let me know if you wish to participate.

Next year’s annual conference (http://www.sla.org/content/Events/conference/ac2008/index.cfm) in Seattle, WA on June 15 – 18, 2008, has been on my mind. Rachel Ellison, Nora Stoecker and I are busy entering details into the online program planner. We’ve decided to pursue the following CE Courses, programs and receptions: Diving into Patents: A Primer for Librarians; Chemistry for the Non-chemist Librarian; Chemical Information Sources, Requests and Reference; Exploring the Generational Element: Chemistry Academic Roundtable; Hot Science Technology Sampler; Electronic Notebooks; Corporate Roundtable; Vendor Roundtable on Materials Resources; Speed Networking Reception; Newcomers Lunch; and Chemistry No-Host Dinner.

We are also cosponsoring the following programs: All Science Poster Session on Collaborative Communities, Science of Coffee, Biofuels/alternative fuels (Alternative fuel technologies for a healthy planet), and Nanomaterials and the Environment.

Thank you to all who have sent us ideas, agreed to teach, speak, moderate, sponsor the programs, serve on the Board, provide feedback and plan to attend. I look forward to working with you!

Sue Cardinal, Chair-Elect
s cardinal@library.rochester.edu
Beyond the Chemistry Web ...

Bob Buchanan, Physical Sciences Librarian, Auburn University

Feel free to send recommendations to me at buchara@auburn.edu. Thanks to Dana Roth for suggesting websites.

GENERAL
- Search over 900 open access repositories from across the globe using a single search engine: The Directory of Open Access Repositories or OpenDOAR. You can also locate open access repositories by region, country, subject, or content type. http://www.opendoar.org

- Based on the 1950s radio segment by Edward R. Murrow, This I Believe is “a national media project engaging people in writing, sharing, and discussing the core values and beliefs that guide their daily lives.” http://thisibelieve.org

GENERAL SCIENCE
- Written by experts and vetted by an editor, the Encyclopedia of Earth offers over 2,000 articles about the earth in non-technical language. http://www.eoeart.org

- Search across the science portals of twelve countries via WorldWideScience.org. Sponsored by the U.S. Department of Energy, this federated search engine is surprisingly fast. The search default is the Google “AND” but Boolean operators and truncation are also supported. http://www.worldwidescience.org


- SciTalks: Smart people on cool topics is a rapidly growing science video database. Combining an active collection of video links with visitor uploads, SciTalks makes science more accessible. Be careful; it is easy to lose track of time watching the fascinating science videos found here. http://scitalks.com

- The Human Metabolome Project provides extensive curated data for about 2,500 human metabolites – molecules smaller than 1,500 amu produced by metabolic reactions. Records compile data from many sources, including experimental concentration, NMR and MS spectra, and point to related data in other online databases. http://www hmdb.ca
- Sponsored by the NSF and the Public Library of Science, SciVee provides a venue for scientists to post publications along with a video presentation. The goal is to help make science articles more accessible to the scientific community and the general public.
  http://www.scivee.tv

- Aimed at the biosciences, JoVE: Journal of Visualized Experiments aims to “increase reproducibility and transparency in biological sciences.” Although there are only 114 articles, the quality is impressive.

- CHEMISTRY
  - The National Library of Medicine’s ToxSeek searches the ToxNet databases and (optionally) other toxicological and environmental health databases from NLM, NIH, the U.S. government, and international sources. Relying on natural language, this fast federated search engine clusters results and sorts by relevance.

  - Finding information in your print Gmelin collection became easier with the Gmelin-Complete-Catalog which is an online version of Springer’s Complete Catalog of 1997/98. Thanks to Ben Wagner for providing this document as a searchable PDF.
  http://ublib.buffalo.edu/libraries/asl/guides/Gmelin-Complete-Catalog.pdf

  - Nan Butkovich has put together A Quick Guide to Citing Using the ACS Style Guide, 3rd Ed. that summarizes key points in just four pages. Students will appreciate its brevity.
  http://www.libraries.psu.edu/pams/Quick%20Guide%20ACS.pdf

- In contrast, and tending towards YouTube meets the biology lab, LabAction.com is a biology video-sharing website.
  http://www.jove.com
  http://www.labaction.com

- You can download the Generated Database of Chemical Universe of Small Molecules which contains 26.4 million compounds of known, and not-yet-known, molecules that consist of 11 atoms (or fewer) of C, N, O, or F. Structures must meet constraints of chemical stability and synthetic feasibility.
  http://dcbwww.unibe.ch/groups/reymond

http://jdc.jefferson.edu/scitechnews/vol61/iss4/15

November 2007

SciTech News
Materials Science: A SAGE Full-Text Collection
A Discipline-Specific Research Database

Materials Science: A SAGE Full-Text Collection is a discipline-specific research database that provides site-wide access to 15 highly cited, peer-reviewed journals from SAGE Publications and participating societies. Features include the following:

- 14,200+ full-text articles
- Cited reference linking
- Backfile to volume 1, issue 1
- Ability to create electronic coursepacks and reading lists
- 100% active full-text links
- OpenURL 1.0 linking

"Having the Collections has added new titles that we did not have before. It has made those we did have in print available electronically and remotely. It's what patrons want. Right from the beginning, our usage statistics have indicated that all four of the Collections are being used more heavily than many of the other databases we have."

—Eleanor Lomax, Electronic Resources Librarian, Florida Atlantic University

We are committed to developing the content and impact of our journals and are pleased to report that 93% of the titles included in Materials Science: A SAGE Full-Text Collection are highly ranked in the Thomson Scientific Journal Citation Reports®.

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<td>113/175 in Materials Science, Multidisciplinary</td>
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<td></td>
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<td>51/75 in Polymer Science</td>
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<tr>
<td>Journal of Intelligent Materials Systems and Structures</td>
<td>1.276</td>
<td>63/175 in Materials Science, Multidisciplinary</td>
</tr>
<tr>
<td>Journal of Plastic Film and Sheeting</td>
<td>0.711</td>
<td>15/16 in Materials Science, Coatings and Films</td>
</tr>
<tr>
<td>Journal of Sandwich Structures &amp; Materials</td>
<td>0.261</td>
<td>81/106 in Engineering, Mechanical</td>
</tr>
<tr>
<td>Journal of Reinforced Plastics and Composites</td>
<td>0.427</td>
<td>13/21 in Materials Science, Composites</td>
</tr>
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<td></td>
<td>59/75 in Polymer Science</td>
</tr>
<tr>
<td>Journal of Thermoplastic Composite Materials</td>
<td>0.466</td>
<td>12/21 in Materials Science, Composites</td>
</tr>
<tr>
<td>Mathematics and Mechanics of Solids</td>
<td>0.552</td>
<td>119/175 in Materials Science, Multidisciplinary</td>
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<tr>
<td></td>
<td></td>
<td>49/65 in Mathematics, Interdisciplinary Applications</td>
</tr>
<tr>
<td></td>
<td></td>
<td>81/109 in Mechanics</td>
</tr>
<tr>
<td>Structural Health Monitoring</td>
<td>1.721</td>
<td>7/66 in Engineering, Multidisciplinary</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8/53 in Instruments and Instrumentation</td>
</tr>
</tbody>
</table>

View a complete list of titles included in the Collection at www.sagefulltext.com/materials.

To subscribe, request pricing information, or arrange a trial of Materials Science: A SAGE Full-Text Collection, please contact sagecollections@sagepub.com.

SciTech News
November 2007

Published by Jefferson Digital Commons, 2007
Materials Research & Manufacturing Section

Betsy Aldridge, Chair

Below are some signs that planning is progressing for the 2008 annual SLA conference in Seattle. Following is a report from Nora Stoecker, MRM Chair-Elect, on the Materials Resources Roundtable.

R&D development, engineering applications, competitive intelligence, market research – the need for information about materials and their properties touches almost all of our clients and customer organizations.

Database providers, publishers, associations, websites – there are so many potential sources of information, and so many tools and applications that could help get the right information, in the most usable form, to those clients and customers.

Wouldn’t it help to have respected representatives of the materials information provider community describe for us ways in which their resources have really been used to add value to scientific, engineering, and business applications?

At the 2008 SLA conference in Seattle, the Chemistry Division’s popular vendor roundtable will be hosted by its Materials Research & Manufacturing Section. We expect to have five vendors at this 90-minute session – and are planning to have a “case-studies” feature to the session.

As I write, ASM International and STN-Fiz Karlsruhe have already agreed to attend. I expect to hear very soon from CSA, and have just contacted several others. It should be a really great session! Hope to see you there.

Wednesday June 18th, 12:15-1:45pm: Vendor Roundtable
(with focus on materials science resources)
Moderators: TBA
Location: Seattle; SLA Conference
Description: Materials science topics are relevant for many of our clients and customers. Join us in discussing information resources and tools with a select group of materials science vendors and publishers.
Sponsor: TBA

I’m working with the Transportation (TRAN) and the Food, Agriculture, and Nutrition Division (FAN) towards a program on Alternate Fuels, as sort of a follow-up to the Hybrid Vehicles program at last year’s conference. Lined up for presentations so far are Dr. Richard Nelson, Director/Dept. Head, Engineering Extension, Kansas State University and biodiesel expert, as well as a librarian from the National Agricultural Library.

Please do let either myself or Nora know if you’d like to assist with either of these programs or any that our Chemistry Division is sponsoring, or any other Division/Section activities. We’ll get you plugged in!

I’ve really enjoyed this year and hope you’ve gained from the Section’s contributions to our Division and Association.

Many thanks to all of our MRM volunteers and members who make this a growing and valuable group. And to our Chemistry Division officers who are a true delight! Their commitment and efforts to fully incorporate the Section have been greatly appreciated. I know Nora and Cathy DiPalma will continue to lead the Section in providing programs that are beneficial to our materials / manufacturing information needs and fulfill the other needs and desires reflected in the official MRM Strategic Plan.

See you in Seattle!
Betsy Aldridge
PACCAR Technical Library
betsy.aldridge@paccar.com

SciTech News

November 2007
Two Degrees of Separation: an Award-Winning Text and a Metal-cutting/Machining Master

A new 5th edition of Manufacturing Processes for Engineering Materials, 2008, by Serope Kalpakjian and Steven R. Schmid is now in stock (though dated 2008, it was published 7/17/07) – see http://vig.prenhall.com/catalog/academic/product/0,1144,0132272717,00.html for details (it wasn’t yet listed on Amazon as of the writing of this content).

This book has won the M. E. Merchant Manufacturing Textbook Award. To learn more about this Society of Manufacturing Engineers (SME) award, named for a metal cutting, machining, and early proponent of using computers in manufacturing, go to http://www.sme.org/cgi-bin/smeefhtml.pl?/foundation/grants/fspmer.htm&&&SEF&.


SME featured this “master” in their “Masters of Manufacturing” series - see http://www.sme.org/cgi-bin/find-articles.pl?&ME04ART39&ME &20040701&PUBME-206,107,66,132&SME#article - Manufacturing Engineering July 2004 Vol. 133, No. 1, “Masters of Manufacturing: M. Eugene Merchant”. Jim Destefani, Senior Editor of Manufacturing Engineering, writes, “In these articles, we honor a distinguished figure in manufacturing technology, and by doing so, we hope to remind readers that a career of great achievement in manufacturing is still possible.”

Betsy Aldridge
Betsy.aldridge@paccar.com

The Materials Research & Manufacturing Section of the Chemistry Division Welcomes its New Members

Margaret Lafferty
Chemistry Librarian
University of Minnesota
Science & Engineering Library
108 Walter Library
117 Pleasant St SE
Minneapolis, MN 55455
Email: mlaffert@umn.edu

Bushra Nazli
Resource Center Coordinator
Development Initiative Inc
Resource Center
Block A Basement
Parliament Lodges
Islamabad, 44000
**Remember the International!**

SLA has an initiative focusing on international members, so it’s appropriate to highlight just a few international associations/resources in our materials-manufacturing world. Please share additional finds via our MRM listserv.

Meet the Asian-Australasian Association for Composite Materials (A ACM) which “aims to encourage the interchange of knowledge in all aspects of composite materials amongst both the scientific and engineering communities.” It provides a biannual conference – the last one was in 2006.

http://www.me.ust.hk/~accm5/

Have you heard of dasimef? The head of this public web-based project is Prof. G. HIRT, at the Institute of Metal Forming (IBF), University of Technology Aachen (RWTH), Germany. The goal of this group is “To collect addresses of laboratories which measure or, more generally, determine physical data, that can be used for modelling metal forming processes. Besides the contact addresses we want to provide the determination methodology and the testing requirements to interested customers....”

This database is being made available on the web at no cost (requires registration) –


**The Fraunhofer Institute for Mechanics of Materials (Germany)**

http://www.iwm.fraunhofer.de/englisch/e-index.html

“...develops solutions to increase the safety, availability, and lifespan of components and systems ranging from microelectronic devices to power plant components. The Institute develops concepts to make optimum use of new materials as well as cost-effective and environmentally compatible shaping and precision-machining processes....”

They provide their annual report on the website and their parent organization provides a database to search reports and a magazine at


**Intelligent Processing and Manufacturing of Materials (Canada)**

http://www.ipmm.mining.ubc.ca/index.php describes itself as an “informal international community of people interested in intelligent software and hardware applications and solutions to problems in the creation and manufacture of minerals, metals, materials and products.” They just had their biannual conference in June and programs can be viewed at http://www.ipmm.mining.ubc.ca/Confprogram.php.

**International Cold Forging Group (Germany)**

http://www.lft.uni-erlangen.de/SEITEN/ICFG/index.html. Their objective is “to promulgate the economic advancement of cold forging - by encouraging and co-ordinating national and international co-operation, - by stimulating research, - by disseminating knowledge of relevant processes and sciences....”

Their web site provides a collection of documents, data sheets, papers. For example, the latest document is Tool Life & Tool Quality in Cold Forging - Part 3: Application of PM-steel and tungsten carbide material for cold forging tools - a comparison between Europe and Japan (ISBN 3-87525-242-X and ISBN 978-3-87525-242-2) and latest paper is by Meidert, M. “Improvement of Service Life of Cold Forging Tools by FEM Simulation”, 14-17, 2006.

**International Academy for Production Engineering (HQ in Paris)**

http://www.cirp.net/index.php?option=com_frontpage&Itemid=1

The Academy’s aims are: “promoting scientific research, related to manufacturing processes, production equipment and automation, manufacturing systems and product design and manufacturing; promoting cooperative research among the members of the Academy and creating opportunities for informal contacts among CIRP members at large; promoting the industrial application of the fundamental research work and simultaneously receiving feedback from industry, related to industrial needs and their evolution....”

They archive their newsletter on the website. Upcoming 2008 conferences include the following:

18th CIRP Design Conference Monday - April 07, 2008
11th CIRP Conference On Modelling Of Machining Operations - Tuesday, September 16, 2008
2nd CIRP Conference On Assembly Systems - ISAS 2008 - Sunday, September 21,
Global Outlook, Strategic Vision

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SciTech News  November 2007
Engineering Division

Bob Tolliver, Chair

The objectives of the Engineering Division are to provide an association for those having an interest in library and information science as they apply to engineering and the physical sciences and to promote the use of materials and knowledge for the benefit of libraries and other educational organizations.

Since this is my last SciTech News column as Chair, I would like to start out by thanking the Engineering Division Advisory Board for helping me to survive my year as Chair and for making it an enjoyable experience. I'd also like to thank all of the other Division members who have served the Division through their contributions to our conference programs, our committees, and our discussion list.

Speaking of the Division's discussion list, by the time you receive this I should have the list migrated over to our new SLA host. Hopefully everything will go smoothly and I'll get everyone on the new list. If you stop getting discussion list messages, please let me know. I want to thank the Institution of Engineering and Technology (IET) for the years that they have kindly hosted our list.

Next year marks 40 years since Engineering became a Division and our Chair-Elect and program planner for next year, Daureen Nesdill, has been hard at work putting together the Engineering Division's programs for next year's meeting in Seattle. We will be celebrating our 40th anniversary on Sunday evening, immediately following the opening session of the Conference. In honor of our anniversary, we will be holding a raffle to cover a lucky winner's conference registration fees. So join us for fun and a chance to win. And, conveniently, SLA is kicking off their 100th anniversary celebration on Wednesday night, so stick around for that as well.

Daureen has also been working on a mini-symposium on the topic of cyberinfrastructure. There will be an introductory session on the topic by Dan Atkins, Director of the NSF's Office of Cyberinfrastructure, and this will be followed by sessions on electronic lab notebooks, informatics, and the impact of cyber infrastructure on corporate and academic librarians. This should be a great set of programs.

We will also be sponsoring or co-sponsoring sessions on standards, Maglev, the history of flight, and a CE course on DTIC (Defense Technical Information Center). By the way, if you're interested in the CE course, don't forget to apply for the Continuing Education Travel Award sponsored by IEEE. The award will cover the CE registration fee, travel, and one night of lodging. And don't forget the annual All Science Reception, which will feature a poster session this year.

As a final note and a plug for the Division, I just want to say that it's been a great experience serving as Chair of the Engineering Division and serving in other capacities over the last few years. If you're a member of the Division, I would encourage you to get involved in Division committees and leadership positions. I think we have a great group of people in our Division and it's a good place to get involved, develop leadership skills, and serve the Association.

See you next year,
Bob Tolliver
diabob@umich.edu
Libraries of every type have two common problems:

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There’s never enough money to enhance the collection. **MONEY**

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CALL FOR NOMINATIONS AND APPLICATIONS

Elsevier/SLA
Engineering Librarian of the Year Award

Please consider nominating a colleague or associate for our Engineering Librarian of the Year award. This $1,500 gift is offered annually to honor a Member of the SLA Engineering Division.

The award is sponsored by Elsevier and the Division to highlight the accomplishments and contributions of members to the engineering librarian profession. Recognition comes in the form of the stipend, a certificate, and a presentation at the Division’s Annual Business Meeting held during the annual SLA Conference. Prospective candidates are encouraged to nominate themselves, or an associate may nominate them.

Criteria for entry are:
1. Membership in good standing in the SLA Engineering Division, as of January 1 of the previous year in which the award is presented.

2. Distinguished achievement in the engineering library profession, through an exceptional contribution on the job, within the SLA Engineering Division, or within the industry at large. This accomplishment should have taken place within the calendar year immediately preceding the nomination. However, in selected cases, based solely on the Awards Committee’s judgment, recognition may be given for an ongoing, long-term contribution.

Instructions for submissions – Deadline March 3, 2008

Provide full name, address, telephone numbers, e-mail address, and a maximum one-page statement of the nominee’s qualifications to:
Joan C. Dubis
The Boeing Company
Library Services
5301 Bolsa Avenue – M/S H012-A001
Huntington Beach, CA 92647
joan.c.dubis@boeing.com or jcdubis@yahoo.com
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Special Libraries Association Engineering Division
$1,200 Inspec Stipend Award - Call for Applications

Award to attend the SLA Annual Meeting in
Seattle, WA, 15-18 June 2008

Inspec is sponsoring the award of a $1,200 travel stipend toward payment of expenses incurred while attending the annual Special Libraries Association conference in Seattle, WA, June 15-18, 2008. This award is available for library school students only.

The Inspec Award will be given to the qualified student who submits the best essay of three or less double spaced typed pages on the following theme:

“Because of all the electronic resources licensed by your Library, you’ve been mandated to drastically reduce your physical collection over the next three years. Describe your strategy for accomplishing this challenge, how you would address it with your loyal walk-in clientele, and a methodology for marketing your ‘new’ (basically virtual) library.”

Qualifications:
1. Currently a student member of the Special Libraries Association.
2. Be attending his or her first SLA Conference.

Special Instructions:
1. Give your full name, address, telephone number, email address, and a statement, on one page, of your qualifications, as given above, for entering the award competition. Include the name of your library school.

2. Type your full name (without any additional personal information) at the top of each essay page. Double space the typing on all pages.

Deadline for Submission: **March 3, 2008**

The recipient of the Inspec Award will be notified by April 1.

Submit Entries for the award to:

Bette Finn, SLA Engineering Division Awards Committee
Georgia Tech Library and Information Center
Georgia Institute of Technology
Atlanta, Georgia 30332 0900
Phone: (404) 894 1790 Fax: (404) 894 8190
E-mail: bette.finn@library.gatech.edu
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The IET Digital Library contains all IET journals, magazines, conference publications and seminar digests, encompassing a wide range of essential information in electrical and electronic engineering, telecommunications, computing, power, control, radar, circuits, materials, life sciences related research and IT.

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IET Conference Publications
IET Seminar Digests

* Including 9 new titles from 2007:
IET Computer Vision
IET Image Processing
IET Signal Processing
IET Synthetic Biology
IET Renewable Power Generation

New for 2007 -
IET Digital Library Archive (1872-1993)
The Institution of Engineering and Technology is digitising its journal archive from the start of
IET publications in 1872 up to 1993 adding a
further 70,000 articles to the IET Digital Library.
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SciTech News
November 2007

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2006 IEEE Continuing Education Travel Award Winner – Doreen Nesdill

In 2006, I submitted an essay to the Engineering Division’s Awards Committee to be considered for the Continuing Education Travel Award sponsored by IEEE. I had just been asked by a graduate student in chemistry named Jennie to write a letter of support for her to teach a credit course on research methods. At the University of Utah, graduate students can apply for one of three Graduate Assistantship Grants to develop and teach a class. Jennie also wanted me to work with her in developing and teaching the course because she felt that chemistry majors required a better understanding of the chemistry literature.

I was thrilled to be asked to work with Jennie because it meant that after she graduated, I would be teaching the course. I wanted to make sure I was up to speed on the chemical literature information. Since the SLA Chemistry Division taught a whole day CE course on chemistry at the annual meeting, I wondered how I could convince my supervisor to support me in attending the class. While I was wondering an email arrived from the Engineering Division announcing a new award, the Continuing Education Travel Award sponsored by IEEE. So I wrote about my opportunity to teach chemistry research methods and won! When my supervisor found out, she provided me with the funds to take the second half day course in chemistry. I was a double winner!

CE course instructors Judith Currano, Head, Chemistry Library, University of Pennsylvania and Bartow Culp, Chemistry Librarian, Purdue University, dissolved some of the rust that I had developed and taught me a lot I did not know. I do have some background in chemistry – my ABD was in chemical ecology – but I never heard of the Hill Order. Now, I also know about SMILES.

In August, Jennie heard that she had not won the Graduate Assistantship Grant. Ugh. There actually was no winner that year due to lack of funds. We reapplied in 2007 and were turned down. While discussing this with faculty, one said I should teach the class myself as a special topics course. Another asked me to specifically teach a hands-on workshop for chemistry graduate students in June of each year. Chemistry graduate students start fall semester, take two semesters of classes and then start to write their research proposals in June.

So, now I am organizing a credit class for both chemistry and biology juniors and seniors covering research methods. They will work in groups with each group having an assigned research topic. I am inviting people around the campus to come in talk about their support role in research. Guest speakers will be from the grants office, technology transfer office, Center for High Performance Computing, Institutional Review Board, Animal Welfare, Environmental Health and Safety, and a few journal editors.

I’ll address information literacy, i.e. the different sources of information and how to use them, Endnote, scholarly publishing, citation searching, electronic lab notebooks, impact factors and all the variations on impact factors, resources for keeping up with the changes in conducting research, etc. Each group will search for grants to support the assigned research project, write a proposal, and determine how to acquire the supplies needed and the permissions required to conduct the research. They will end the semester with determining the most appropriate journal in which to publish.

The hands-on workshop for graduate students writing their research proposals will start with a lesson on Endnote. This will provide the students with a better understanding of how databases are structured. After that, I can introduce the students to searching databases in chemistry with all their nuances. The nuances are not as daunting for me since I have taken the SLA CE chemistry course. I appreciate the opportunity IEEE and the Engineering Division provided me to attend the course and update my skills. I urge any Engineering Division member needing to update or learn new skills to apply for the Continuing Education Travel Award sponsored by IEEE.+

Doreen Nesdill
Science and Engineering Library
J. Willard Marriott Library, University of Utah
daureen.nesdill@utah.edu
IEEE Continuing Education Stipend

The IEEE (Institute of Electrical and Electronics Engineers) Continuing Education Stipend will be awarded to the SLA Engineering Division member who submits the best essay on how the applicant will benefit professionally from a continuing education course.

The award is up to $1,000 for expenses incurred while attending any CE course offered at the annual Special Libraries Association Conference in Seattle, Washington, June 15-18, 2008. The stipend may be applied to travel, food, and one night's accommodation. Award applicants must be members in good standing of the SLA Engineering Division for at least one year as of January 1, 2008.

The winner will be required to submit an article to SciTech News within twelve months of completion on how the course helped them either in library applications or professionally. Apply by submitting a one to three page (double spaced) essay on how you will benefit professionally from the specific continuing education course. Include your full name, address, telephone number, and e-mail address. Please type your full name at the top of each essay page.

The deadline for submission is March 3, 2008. The recipient of the award will be notified by April 1.

Please submit entries to:
Penny S. Sympson, SLA Engineering Division Awards Committee
Wiss, Janney, Elstner Associates, Inc.
330 Pfingsten Road
Northbrook, IL 60062
Voice: 847.753.7202 Fax: 847.498.0358
E-mail: psympson@wje.com
Aerospace Section

Welcome to my last article as the Aerospace Section Chair. I feel honored to have been Chair. The experience has been one of learning and awe. I have learned that it takes a great many talented and generous people to put on our Annual Conference and I am in awe of every single one of them for their enthusiasm, dedication, generosity and willingness to give of themselves for their love of this profession.

Participating in the leadership of SLA is not done in isolation; rather it is an experience of collaboration, teamwork and support. I for one had not previously volunteered in this type of capacity and would not have been as successful as I have been without the tremendous support and encouragement of the 2007 SLA Engineering Division Advisory Board Members: Chair & Discussion List Chair, Robert Tolliver; Past-Chair & Nominating Chair Kathy Nordhaus; Treasurer, Suzanne Cristina; Secretary, Susan K. Smith; Director & Award Chair, Joan Dubis; Membership Chair, Cheryl Hansen; Archivist & Mentoring Chair, Bonnie Osif; Bulletin Editor, Susan Fingerman; Government Relations Chair, Gale Harris; Professional Development Chair, Sara Davis; Standards Chair, Lee Pharis; Vendor Relations Chair, Jackie Florimonte; Web Editor, Vani Inampudi; Past-Chair of the Aerospace Section, Marcia Rodney; and Eileen Dorschner for volunteering to lead the Mandel Selection Committee. I thank you all for your generous support.

When you read this article it will be November, but believe it or not that is only 6 short months away from the Annual Conference. I get ahead of myself. First up is the 2008 SLA Leadership Summit. The Summit will be in Louisville this year and I have great confidence that the SLA Kentucky Chapter will show us a good time. I’ve taken a sneak peak at the Conference events as well as what the Louisville Convention and Visitors Bureau list as events occurring while you are at the leadership conference. Medieval & Renaissance Treasures from the Victoria and Albert will be at the Speed Art Museum, and Murder at the Howard Johnson’s at the Derby Dinner Playhouse are just a couple of suggestions for those free evenings.

The 2008 Conference will be held in Seattle, my hometown, and I am very excited about the programming that Kathryn Breinniger, Aerospace Section Chair and Daureen Nesdill, Engineering Chair, have been working on. I will only tease you with hints – innovations in flight, fortieth anniversary, DTIC, cyberinfrastructure, maglev…does that spark your curiosity?

I have my fingers crossed that I will actually be able to attend the 2008 Conference as it is a wonderful city to visit. Great shopping and tourist attractions include Nordstroms, the Pike Place Market, the Seattle Aquarium, Seattle Art Museum, the Museum of Flight, Experience Music Project, the Underground Tour and Blake Island, just to name a few. In case I don’t see you in Seattle, have a wonderful time!

Regards,
Amy
Amy_C_Smith@Raytheon.com
Call for Nominations – George Mandel Memorial Award

The Aerospace Section of the Engineering Division invites nominations from its membership for candidates for the 2008 George Mandel Award. The award, sponsored by AIAA and Dr. David Mandel, is given each year to the Aerospace Section member who meets one or more of the following qualifications:

1. A nominee must have been a current member in good standing of the Aerospace Section for at least a year.
2. Current members of the nominating committee are ineligible to be nominated.
3. Past recipients of the award are generally ineligible for nomination, except for momentous contributions.
4. Nomination or application of an Aerospace Section member (either a peer or oneself) should be based on at least one of the following criteria:
   a. Present a paper at the Special Libraries Association (SLA) annual conference; serve on the annual conference program planning committee; be a speaker or panel member (but not a moderator) of a program at the conference; or lead a continuing education segment at the conference.
   b. Become or be elected as chair of the Section, an officer of the Engineering Division, or a member of any of the boards or committees of the SLA, or have participated actively in or contributed significantly to Aerospace Section activities.
   c. Make significant contributions to the profession through place of employment or publications.
   d. Receive an award for outstanding service from his/her employer in the aerospace industry.

To nominate a peer, or yourself, for this award please send a brief justification to the Aerospace Section Chair-Elect 2008, Gale Harris by December 31, 2007. Questions can be sent to Gale. E-mail address (preferred) gale.harris@lmco.com or by U.S. mail to:

Gale Harris
Lockheed Martin Aeronautics Company
Company Research Library
P.O. Box 748
MS 2246
Fort Worth, TX 76101

For more information about the Award, please see:
http://units.sla.org/division/deng/Aerospace1.html
Science-Technology Division
Ann Koopman, Chair

The objectives of the Science-Technology Division shall be to draw together those members of the Special Libraries Association having an interest in the role of library and information science as applied to the recording, retrieval and dissemination of knowledge and information in all areas of science and technology, and to promote and improve the communication, dissemination and use of such knowledge for the benefit of libraries and their users.

They say that time flies when you’re having fun, and it does seem like this year has just sped by. In fact, it has been a lot of fun. It has also been a privilege and an honor to serve as your Chair for 2007. Thank you for the opportunity. It has been such a pleasure to get to know so many of you, and I only regret that there wasn’t time to talk to everyone.

So here we are at the end of the year, ready to turn over SLA offices to the very capable next group of leaders. Christine Whitaker will take up the reins as Chair of the Division, Cheryl Hansen continues as Treasurer, and congratulations to our newly elected Secretary, Christy Caldwell, and Chair-Elect, Pam Enrici. Christine is already making appointments for 2008 so the Board can hit the ground running come January.

We had a wonderful response to our calls for committee workers and chairs in 2007, and were able to match every volunteer to a position. I hope you will continue to view the Science-Technology Division (Sci-Tech) as a good place to spend your volunteer hours, and will respond to Christine’s call. Truly, we want to be known as a division that is easy to break into, that welcomes volunteers with open arms and good committees. As observed by Jim Olsen in our member profile this month, Sci-Tech strives to be a happy and productive place to learn and to make friends.

Preparations for the 2008 Annual Conference in Seattle are already in progress. Roger Beckman and his intrepid band of reviewers are already selecting our contributed papers for next year.

Now is the time to think about whom you would like to nominate for our Division awards – the awards deadlines are fast approaching. Dale Riordan reports that our proposal for a CE course on Science Information Literacy for the Non-Scientist was accepted by SLA. The course will be taught by Sci-Tech member Sarah Oelker. Notice that this gives us 3 unique CE courses in three years (thanks to Dale’s perseverance and persuasive skills), the success of which has ensured that we’ve done well financially on our recent conferences.

In fact, we’ve done well enough that you’ll see a new award on the awards list for 2008. Nevenka Zdravkova, Sheila Rosenthal, and the International Relations and Award Committees have proposed and the Board has funded, an annual travel stipend for an international student. Nevenka explains the details elsewhere in this issue. In January, the new Board will also review the funding levels of the other travel awards, with a view toward increasing them wherever we’re able.

By now you’ll all have seen Anna Ren’s handiwork in the form of our new Division discussion list, hosted by SLA. All Sci-Tech members were subscribed to the new list (of course with the option to unsubscribe), and the list is still open to non-members. Gratifyingly, hardly any members unsubscribed themselves! Now that the list is hosted by SLA, we’ll be better able to coordinate the addition of new members, and it will be easier for the list management job to move around. Anna has given us over 10 years of service in that role, and deserves thanks from ALL of us for her efforts on the development of our list.

The 2008 SLA Leadership Summit is fast approaching. The Kentucky Chapter will host us in Louisville on January 23-26. This meeting is small and much more intimate than the Annual Conference. During the Summit, the Sci-Tech Board will hold a regular board meeting open to all ST members. We’d love to see you there! Look for registration and schedule information at www.sla.org/content/resources/leadcenter/LeadershipSummit/08leadsummit/

And finally, I’d like to thank all the Sci-Tech members who have helped the Board along the way this year. There are far too many to name, but to everyone who has tendered advice, offered encouragement, suggested a better way of doing something, spotted a need, or set a good example, thank you. Sci-Tech thrives on your thoughtfulness & boundless generosity.

Ann Koopman
Ann.Koopman@jefferson.edu
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SciTech News November 2007
Science-Technology Division Mentoring Program

The Sci-Tech Division’s Mentoring Program is alive and kicking! We already have 10 mentorships ongoing between Sci-Tech mentors and both students and new career professionals. We’d like to express our sincere appreciation to all of the folks who volunteered to be mentors so far: Michael Leach, Maxine Schmidt, Robin Jourdan, Karen Buxton, Ann Koopman, Valerie Perry, Mary Frances Lembo, Mary Strife, Anna Ren and Jean Piety.

And many thanks to all of our mentees who are taking advantage of this opportunity to build professional connections and learn from your peers.

One mentee provided the following feedback: “We have had a couple opportunities to communicate, and I’ve enjoyed them! [My mentor] has been able to give me some great advice and insight into some work-related issues, and she’s pleasant all around, so the mentorship has been a good experience for me so far. I’m glad the division offers a program like this!”

The Mentoring Program matches students, new members or new career professionals with an experienced member of the profession in their area of interest. The mentor acts as a guide and someone who can field questions about job searching, preparation for the profession, making one’s way into SLA, and career development. Time involved is minimal - typically, the mentor will contact the mentee several times during the year just to touch base and be available for questions during the year.

Topics may be diverse and may include: specifics about subject-based collections or reference service, job search and interview tips, outreach advice, guidance with professional development, SLA involvement, ideas for jump-starting research projects, how to turn a research project into a poster or publication, etc.

If you are interested in being a mentor or are seeking a mentor, please contact:
Hilary Davis
Tel: 919.513.0654 | Fax: 919.513.1108
hilary_davis@ncsu.edu

♥♥♥♥

What Have You Been Doing Lately?

The SciTech Division wants to know! Please send us information about your awards, prizes, promotions, professional publications & presentations, or other recognition. We’ll publish your activities in a regular column in SciTech News, bringing awareness of our members’ accomplishments to the wider SLA and Library community.

Send details to Susan Shepherd, sushepherd@ucsd.edu, by January 3, 2008 for publication in the February issue of SciTech News. ♥
Vision
To be a leading knowledge sharing, professional development and continuous learning resource for information professionals with an interest in science and technology.

Mission
To provide access to information about the continuing development of new technologies as they apply to libraries and information centers, not only in science and technology but in all areas served by the Association, and to provide its members the technical information and skills they will need to function in the 21st century. To accomplish this mission, the Division must assume an active leadership role and provide members with forums for communication, networking, education, research and professional growth.

History
The Science-Technology Division originated as the Technology group in 1924. The present name was adopted in 1950. The divisions of Chemistry, Engineering, Aerospace, Metals/Materials, Nuclear Science, Petroleum and Energy Resources, Pharmaceutical, Public Utilities and Competitive Intelligence all began as sections of the Science-Technology Division.

Need
Members will join the Division to keep up with developments in the field of information management and to exchange professional expertise. The majority of members will come from a multi-disciplinary environment and will perform a combination of duties for their organizations. Involvement and participation in Division activities continue to be positive factors for membership retention. Ways should be found and programs developed to engage members at the local, regional and global levels.

New information handling technologies continue to have an impact on the operations of libraries. Library and information center staff will need to learn how to use these for the benefit of their users. Improved and expanded telecommunications systems and digitization will continue to change the way information is accessed and disseminated. An era of rapid change will result in constant redefinition of the role of the information professional.

Environment
1. The information industry will continue to grow.
   a. New information sources will continue to be published.
   b. There will be an increasing demand for science and technology information.
   c. There will be an increase in the population of information professionals.
2. As a result of growth of information, related expenditures will continue their upward trend.
3. Rapid fundamental changes in information technology will take place, with broader utilization of computers resulting in changes in information delivery. Use technology to help curb expenses, e.g. change bulletin format from print to electronic.
   a. Greater emphasis will be placed on quality and economically provided services.
   b. Time constraints for information delivery will continue to increase.
   c. Continued pressure will exist to purchase selectively and effectively.
   d. Awareness and concern over intellectual property issues will increase.

Marketing Plan
The Division will:
- Adapt to the new January to December calendar year for nominations and election calendar. Update correspondence and meetings accordingly.
- Investigate new social networking opportunities.
- Adapt Conference planning to new guidelines for 2008.
- Establish a Vendor Relations Committee.
- Automatically add new Science-Technology members to the listserv, with removal upon request.
- Send a form letter, developed/updated by the Membership Committee, to anyone who discontinues Division affiliation. The letter will encourage the members to renew their membership and solicit reasons for non-renewal. The Membership Committee will make this information available to the Division Chair through its annual report and a summary report published in SciTech News. The list of dropped members will be contacted in a timelier manner.
- Encourage current members to volunteer for committees or special projects by promoting
these at meetings or through special mailings and/or email of promotional materials to targeted individuals.

- Include a volunteer form in SciTech News each year.
- Provide a mentor or contact person for new members for their first year. Personal contact will be made a few weeks after the welcoming packet goes out.
- Recruit members in library schools by focusing on the benefits of Division membership including networking and employment recruitment opportunities. Student relations could be involved with/contact schools/speakers to come to class/give tours.
- Support for students
- Offer a free one year student membership
- Money and/or orientation for attending a conference
- Meeting on practical advice with LIS students, include food
- Develop and maintain a more customized brochure to be sent to prospective members.
- Explore additional liaison arrangements with other professional library and information organizations.
- Promote Division activities to non-members
- Engage in joint projects with other divisions and other associations.
- Encourage regional Division meetings and invite non-Division SLA members.
- Develop programs that focus on and address critical work issues facing members in the current climate of change and investigate emerging fields.
- Provide mechanisms to keep members aware of new technologies as they impact library and information science.
- Improve the existing web site to incorporate membership information, articles, suggestions and member news so it provides state of the art information about the field, information sharing, networking opportunities, and increases membership, build a virtual division.
- Plan publications useful to information professionals.
- Investigate sponsorship of an issue of Information Outlook, update the Awards Bibliography, and pursue other projects.

Committee members: Charlene Stachnik, Chair, sta@umich.edu
Bonnie Osif bao2@psu.edu, Brian Winterman bwinterm@indiana.edu, Valerie Perry vperry@uky.edu, Debra A Jesionowski DebraA.Jesionowski@entergizer.com
Ex-officio: Ann Koopman ann.koopman@jefferson.edu, Wilda Newman wildanewman@yahoo.com, Christine Whitaker cwhitaker@gw.med.sc.edu, Susan Fingerman susan.fingerman@jhuapl.edu

1999-2006 Science and Technology Strategic Plan found at: http://www.sla.org/division/dst/Governing%20Documents/strategic%20plan.html

November 2007 SciTech News
nature.com
is life science

nature.com
is physical science

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nature.com

Published by Jefferson Digital Commons, 2007
Science Technology Division and European Chapter
Student Travel Stipend Award

Offered jointly by the Science Technology Division (DST) and the European Chapter, a travel stipend will be awarded to a current European library and information science (LIS) student to attend, for the first time, an SLA conference. This joint award of $2,000 USD will reimburse costs of attendance at the 2008 SLA Annual Conference in Seattle, Washington, USA, from June 15-18, 2008.

Eligibility
- Have an excellent command of written and spoken English
- Be enrolled in an accredited graduate-level LIS program during academic year 2007-2008
- Be able to make all the necessary travel arrangements for a visit to the USA.
- Be interested in a career in special librarianship, preferably with a focus on working in a science technology environment.
- Be a first-time attendee at an SLA conference.

Application Procedure
- Include a current resume or CV with your current postal and email address and telephone number.
- Include a letter of recommendation which explains why you would be a good candidate for the 2008 award. The recommendation may come from either a faculty advisor in your program or an SLA member who knows you well.
- Write a two-part essay, in English, double-spaced, of approximately 500 words, which:
  1. Tells us why you chose to enroll in a graduate LIS program and what you hope to do with your degree, and
  2. Addresses one of the following three topics:
     - What skills must the new information professional possess and why?
     - What is the biggest challenge facing the profession, in general, and information professionals in your country, in particular?
     - What benefits/knowledge do you hope to gain from attending the 2008 SLA conference? (Do not describe what you will do during the conference).
- All documents must be prepared in a format readable by Microsoft Word and must be emailed no later than December 31, 2007 to Rachel Kolsky rachel.kolsky@aig.com

Post Award Requirements
1. Recipient will write a brief article, in English, approximately 1,000 words on the conference experience for the November 2008 SciTech News and the Fall issue of the SLA Europe Newsletter.
2. Recipient will be asked to serve on a Science-Technology Division Committee of their choice.

Notification
1. Applicants will receive notification of award status by mid March 2008. The award checks will be sent to the recipient as soon as the travel receipts are received by the Awards Chairperson.
2. The recipient’s name will be posted to the Science-Technology Division’s Web Site.
3. The award will be announced and a certificate presented to the recipient at the Science-Technology Division’s Annual Business meeting/breakfast. Detail forthcoming.
Celebrating Our Members – James L. Olsen

At the 2007 Annual Conference the Science-Technology Division (Sci-Tech) inaugurated a new form of member recognition. At our annual business meeting, we honored members who are celebrating significant anniversaries with the Division. These are members who have stayed with us for 25+ years. Most of them have rendered significant service to Sci-Tech, and many have become involved at the Association level of SLA.

Wilda Newman and Richard Hulser were present to receive their certificates of recognition, and they shared a few words with the attendees about their experiences. Other honorees received their certificates by mail. As we look at ways to recruit new members and promote our Division, one of the best things we can do is identify the members who have stuck with us through thick and thin and who can tell us something about why they chose to spend their time and energy with Sci-Tech. So, starting with this issue of SciTech News, we’re going to share some interviews with honorees, as they reminisce about their years in the Division.

Jim Olsen first joined in 1952 as the result of encouragement by his boss—a familiar path for many new members. Jim had obtained his undergraduate degree after World War II, and had taken his first job at the Johns Hopkins University Applied Physics Laboratory. He quickly learned that SLA was a great place to connect with others—he cites NETWORKING as the most valuable benefit of membership. It was especially good for the new librarian he was at the time.

Soon after, Jim went to work for what was then Smith Kline and French, and stayed in the pharmaceutical corporation world for many years. He chaired the Pharmaceutical Section of Sci-Tech before it became a division in its own right. He wrote for SciTech News (notably a critique of the SLA salary survey). He formed strong bonds with members like the late Frank Spalding as a result of working together on committees or projects. He has always considered Sci-Tech his primary division.

Jim was also active in other units of SLA, serving over the years as President of the Washington DC Chapter, Chair of the IT Division, member and Chair of the SLA Tellers Committee, member of the Nominating Committee, Research Committee, Annual Conference Advisory Council, Professional Development Advisory Council, and Chair of the Bylaws Committee. He was a candidate for Director, SLA Board, and the office of Treasurer, SLA. He recalls that he “lost to great people,” but was very pleased to have been asked to run. Jim was inducted into the SLA Hall of Fame in 1989.

When asked to reflect on his experiences over the years, Jim offers his appreciation for the encouragement and support he received from “a wonderful group of people,” opportunities to participate, and recognition of his contributions. He is most proud of his work on the SLA Nominating Committee, which he regards as an opportunity to shape the future of the organization.

Even though he has been retired for many years, Jim still keeps up his membership in SLA and Sci-Tech because of his sincere belief in supporting the Association, “even if only with a few dollars.” Knowing that our 2009 Centennial celebration is just around the corner, Jim notes that he is already at work on some remarks about the value of SLA membership which, given the opportunity, he will present at the Annual Conference. For the present, his advice to new members includes:

"Volunteer your time and energy to any task available in your Chapter and at Division and Association levels. Your participation creates opportunities to learn how SLA works. Participation inevitably creates visibility. Visibility leads to being invited to serve! Serving builds your strengths and skills. You win, and so does SLA!"

"Seize opportunities to interact with others—network with everyone in sight! Remember that not everyone else is outgoing, so take some initiative and reach out. My 'people skills' were not the best, but the leaders I worked with drew on my strengths and skills to get the best out of me. Ask questions. There is no such thing as a bad question! Got ideas? Speak out! Your initiatives will prod others to open up with their views."

"Learn people skills by working with people. SLA work at all levels is like a continuous CE course in leadership and management skills—in other words, people skills.”

This “get involved” mantra is a consistent theme...
among our members of long standing. It's the very best way to build relationships.

Since this was the first time we tried to work with the SLA membership records, it became apparent that there is a learning curve. We've learned that we need to pay attention to the potential for name changes, membership "stutters" (skipping a year), and other vagaries of the system. We thought we were honoring Jim for 35 years, but it turned out he deserved 55! You can help clear up the gaps by verifying your membership record with SLA, especially now that we have new association management software in place.

Ann Koopman
Chair, Science-Technology Division

Science-Technology Division 2007 Recognition Awards: Celebration of Significant Anniversaries

At the 2007 Annual SLA Conference in Denver, CO, the Sci Tech Division inaugurated this celebratory recognition of long-time Division members (25+ years). Congratulations and Thank You.

40 years (1967)
Billie M. Connor-Dominguez

35 years (1972)
Wilda B. Newman

60 years (1947)
Marguerite C. Soroka

55 Years (1952)
James L. Olsen

50 years (1957)
Robert J. Havlik

45 years (1962)
Mildred Bobrovich

30 years (1977)
Dewey A. Goff
Charles LeGuern
Edward W. Lyden
Rocco Piccinino
Linda Riffle
Yan Y. Soucie

25 years (1982)
Linda A. Dodson
Richard P. Hulser
Amanda M.A. Putnam

Division Appreciation Awards

The following were recognized at the Science-Technology Division Annual Business Meeting and Breakfast at the SLA Annual Conference in Denver, CO in June. While many of their pictures were in our August issue, space did not allow us to print the complete listing. Once again, we congratulate these contributors for their well-deserved awards.

Anna Ren – Impossible Award, in recognition of her leadership, commitment and endurance during the redesign of the Division's website, and for her long tenure in communications and networking.

Roger Beckman, in recognition of his leadership of the contributed paper series.

Dale Riordan, in recognition of her devoted work on CE courses, running successful courses 3 years in a row.

Michelle Wilde, in recognition of her efforts to produce the Denver Sci-Tech program.

Lisa Johnston, with many thanks for her patience with our numerous questions, all of which required extensive research in our archives

Marty Jamison, retiring STN Advertising Manager, in recognition of his exemplary (and lucrative) service

Tamika Barnes McCullough, in appreciation of her service as Membership Chair

Virginia Baldwin, in appreciation of her service as Liaison to the ALA Science & Technology Section

Valerie Perry, in appreciation of her dedicated service as Treasurer
2008 SCI-TECH DIVISION ACHIEVEMENT AWARD

The SCI-TECH Achievement Award is the highest annual award presented by the Science-Technology Division and is reserved for those recipients whose professional work is marked by distinction and dedication to scientific and technical librarianship. The purpose of the award is to recognize those Division members who have made outstanding contributions to the Division and/or to the literature of science and technology librarianship in the past 1 to 5 years.

The $750 award is presented annually, with a corresponding scroll describing the reason for the award. The Science-Technology Division Awards Committee reserves the right to withhold the award if a sufficient number of appropriate candidates are not nominated.

ELIGIBILITY: Be a current member of the SLA and have been a member of the Science-Technology Division for at least three years; be working currently in a library, information center, library school or other information capacity.

NOMINATIONS: Self-nominations are encouraged.

TO NOMINATE/APPLY: Include a list of accomplishments and activities over the past 1 to 5 years. The materials should be double-spaced. (750 words or less) Neatness, spelling and grammar will be considered in the judging. Supporting documentation, includes a current curriculum vita OR resume for the candidate, significant publications, supporting letters, etc.

DEADLINE FOR NOMINATIONS: March 1, 2008.

Please send all nominations and accompanying materials to:
Sheila Rosenthal, Chair of the Sci-Tech Awards Committee
slr@sei.cmu.edu

Sci - Tech

Science Technology Division Volunteer Form

Yes, I want to explore volunteer opportunities with Sci-Tech!

My name: ____________________________ Email: ____________________________

I would most enjoy: (check all that apply)

_____ Working with people
_____ Working with technology
_____ Gathering and analyzing information
_____ Planning events (programs, parties)
_____ Writing

I’m interested in a specific committee or role: ___________________________________

OR

_____ Just talk to me about where I might fit

Please copy and mail your form to:

Christine Whitaker
School of Medicine Library
University of South Carolina
Columbia, SC 29208
or email your inquiry to whitaker@sc.edu
2008 SCIENCE-TECHNOLOGY AND ENGINEERING DIVISIONS
BONNIE HILDITCH INTERNATIONAL LIBRARIAN AWARD

The Bonnie Hilditch International Librarian Award, sponsored by the Science-Technology and Engineering Divisions, is presented to a librarian outside of the United States and Canada. The purpose of the award is to provide an opportunity for a librarian outside of the United States and Canada to attend the annual Special Libraries Association (SLA) conference. The award will cover conference registration, lodging and airfare, up to and not exceeding US$2,000. The SLA annual conference will be held in Seattle, WA., USA, June 15-18, 2008.

The Awards Committee reserves the right to withhold the award if a sufficient number of appropriate candidates are not nominated.

QUALIFICATIONS:

Be a current member of SLA, preference given to members of the SLA Science-Technology and/or Engineering Division.

Candidate should reside and work outside of the United States and Canada and be working currently in a library, information center, library school or other information capacity, preferably either in the science and technology and/or engineering area.

Submission should be in English.

NOMINATIONS:

Self-nominations are encouraged. Send an online statement including information on the candidate’s professional career, professional activities or offices held, special projects or services, publications, and any other related functions that qualify the person for the award.

Documentation must include a current curriculum vita OR resume for the candidate, significant publications, supporting letters, etc.

Please inform the committee if you are currently applying for other SLA awards.

DEADLINE FOR NOMINATIONS: December 31, 2007. Nominations and all accompanying materials should be sent to Sheila Rosenthal, Chair of the Sci-Tech Division Awards Committee, at the following email address: slr@sei.cmu.edu

APPLICATION PROCEDURES for the SCIENCE-TECHNOLOGY and ENGINEERING DIVISIONS BONNIE HILDITCH INTERNATIONAL LIBRARIAN AWARD

1. The winner will be responsible for making all necessary travel arrangements (passports, visas, etc.) for a visit to the U.S. as well as for conference attendance.

2. Include a current resume and relevant materials as outlined in the criteria for the award.

POST AWARD REQUIREMENTS:

1. Recipient will write a brief article (approximately 1,000 words) on the conference experience for the November 2008 SciTech News.

2. Recipient will be asked to serve on the Science-Technology and Engineering Division Awards Committee the following year in order to provide for the continuity and enthusiasm of this award.
SCIENCE-TECHNOLOGY DIVISION S. KIRK CABEEN TRAVEL STIPEND AWARD

The S. Kirk Cabeen Travel Stipend Award is offered to a library school student or first time conference attendee. The $750 award is to be used toward expenses of attending the SLA Annual Conference in Seattle, WA, USA June 2008.

QUALIFICATIONS: Be a library school student or first time attendee; be a current member of SLA, preference going to Science-Technology Division members; if NOT a student, then must be attending his or her first SLA conference;

NOMINATIONS: Self-nominations are encouraged.

Send a typed and signed document including complete title, Library School and anticipated graduation date, employer, and all professional and personal contact information.

All nominations must also include the following:

A short essay (500 words or less) on the theme of the 2008 Annual Conference: “Breaking Rules, Building Bridges.” The essay should be double-spaced. Neatness, spelling and grammar will count in judging. Supporting documentation must include a current curriculum vitae OR resume for the candidate, significant publications, supporting letters, etc.

Applications should also mention if you are currently applying for other SLA division awards.

DEADLINE FOR NOMINATIONS: March 1, 2008. Nominations and all accompanying materials should be sent to Sheila Rosenthal, Chair of the Sci-Tech Division Awards Committee, at the following email address: slr@sei.cmu.edu

POST AWARD REQUIREMENTS:
1. Recipient (s) will write a brief article (approximately 1,000 words) on the conference experience for the November 2008 Sci-Tech News.
2. Recipient (s) will be asked to serve on the Science-Technology Division Awards Committee in the following year to provide for the continuity and enthusiasm of the awards.

NOTIFICATION:
1. Applicants will receive notification of award status by mid March 2008. The award checks will be sent to the recipient as soon as the receipts are received by the Awards Chairperson.
2. The recipients’ names will be posted to the Science-Technology Division’s Web site
3. The award will be announced and presented to the recipient at the Science-Technology Division’s Annual Business meeting/breakfast.
**Science-Technology Division Call for Posters:**

**SLA Annual Conference - Seattle 2008**

The SLA Science-Technology Division invites submissions for its Poster Session. The session will be held at the Annual SLA Conference in Seattle, Washington, on June 17th, 2008, from 7:00 – 9:00 PM.

**Session Theme:** Creating New and Stronger Relationships within Science Communities

**Description:** Is your library leading the way on a new and innovative project that bridges the gap between the library and a scientific community? We are looking for poster submissions that explore the innovative ways in which you are building relationships; from scientific art exhibits to collaborative projects, show us how your library is building or maintaining strong relationships.

**ELIGIBILITY:** Any SLA member is welcome to submit an abstract for consideration. Preference will be given to members of the Science-Technology Division.

**CRITERIA:** relevance to the session theme.

**ABSTRACT:** Please be sure to submit your name, institution, fax, email address, poster title, and description (250 words or less) by email to Valrie Davis (see below).

**POSTERS:** If chosen, acceptance reflects a commitment to present your poster at the SLA Annual Conference in Seattle, Washington at the June 17th session.

**DEADLINE FOR SUBMISSION OF ABSTRACTS:** February 1st, 2008.

SUBMIT ABSTRACTS (and questions) TO:

Valrie Davis
Agricultural Sciences Librarian
University of Florida Libraries
Gainesville, FL 32601
Ph. (352) 273-2880
Email: vdaleis@ufl.edu
Web Reviews

For this issue we will look at a selection of open access sci-tech audio and podcasting sites. (Thanks to Intute http://www.intute.ac.uk/ for pointing me to some of these sites).

Directories

Learn On The Go

Learn On The Go, a directory of educational and instructional podcasts, links to over 75 science and technology programs. Shows like Futures in Biotech, SensibleChemistry Lectures, NOVA E=mc2, NPR: Technology, A very Spatial Podcast and more are listed with listening and link details. Search by keyword or browse by category.

Podcasting News
http://www.podcastingnews.com/forum/link_17.htm

All about podcasting, this site provides news, a directory, user forums, and recent articles. Check out the directory to Science podcasts, with subcategories: astronomy, biology, chemistry, energy, environment & nature, pseudoscience & the unknown, space, technology and more.

Learn Out Loud Podcast Directory

Learn out Loud, one of the largest online directories of educational audio and video resources, offers a highly selective list of current Technology podcasts (215) and Science podcasts (155). Each entry includes a description, reviews & ratings, links to the feed URL, website, individual programs and even cover art. Sort by most popular, A-Z, member rating and more. Truly amazing site – worth a look.

Radio Programs

Berkeley Groks Science Show
http://www.groks.net

Tune in to hear the world famous question of the week, witty segments, and interviews with lead scientists, science writers, or researchers.
Broadcast weekly from Berkeley, CA, hosts Charles Lee and Frank Ling provide insight into current science and technology developments. Episodes are available as a podcast and archived as MP3 files.

**Diffusion Science Radio**
http://www.diffusionradio.com/
This international radio show, aired every Thursday from Sydney, Australia, covers “new science, hard science, pop science, historical science and very silly science.” A team of over 20 writers/producers provide commentary, interviews and a news segment. Subscribe to free podcasts and search the archive for episodes dating back to 1999.

**Naked Scientists Science Podcasts**
http://www.thenakedscientists.com/HTML/podcasts/
Listen to the Naked Scientists (Cambridge University researchers and physicians), a weekly radio program, interview famous scientists and researchers, and take live questions from the listening audience. A preview of up and coming shows as well as shows back to 2001 are available for download.

**Quirks & Quarks**
http://www.cbc.ca/quirks/index.html
Quirks & Quarks, a 30 year and running Canadian Broadcasting Corp. hourly weekly radio program, covers the latest on the environment, science, technology and medicine. This award-winning show can also be heard via podcast and audio files. Search the Quirks archives by subject or date. Each entry includes a summary and links.

**This Week in Science: the weekly science talk radio program**
http://www.twis.org/
Broadcast every Tuesday from the University of California, Davis, this hour long science and technology program, hosted by Kristen Sanford and co-hosted by Justin Jackson, is highly entertaining. Audio archives back to 2000 and podcasts since 2005.
topics covered in the AAAS (The American Association for the Advancement of Science) weekly Science Magazine and their ScienceNOW online daily news site. Subscribe to the RSS feed. Listen online to the current or archived podcasts back to December 2005. Each entry includes a summary; the more current include transcripts.

Journal Publications

Science Elements
http://acswebcontent.acs.org/communications/podcasts/science_elements.html

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Science Podcast
http://www.sciencemag.org/about/podcast.dtl#section_podcast-list

These weekly podcasts take a closer look at

SciTech News November 2007
New Science and Technology Journals


*Basins and Coasts News*, a publication of USAID’s Integrated Management of Coastal and Freshwater Systems (IMCAFS), is aimed at helping practitioners working in coastal watersheds to improve their understanding of the issues, discover new approaches and concepts, and gain insight through case studies prepared by their peers. Primary focus is on the global need to incorporate allocations of freshwater to river and marine ecosystems into decisions about water resource use.

**Clay Technology.** IOM Communications Ltd. no.1, 2006. 6/year. £150.00. [http://www.iom3.org/claytechnology/](http://www.iom3.org/claytechnology/)

*Clay Technology,* is the magazine of ICTA, the International Clay Technology Association, an association operating within the Institute of Materials, Minerals and Mining (IOM3). ICTA was formed as a result of a merger between the Institute of Clay Technology (ICT) and IOM3 in 2006. The magazine focuses on clay products such as tiles, pipes, and bricks; innovative use of heavy clay products; and people within the industry. It includes features, news from the industry, economic updates and event previews. Each issue covers a specific subject such as drying, the future of brick, energy conservation, clay paving, and roofing.


*Ecohydrology* is an international journal publishing original scientific and review papers that aim to improve understanding of processes at the interface between ecology and hydrology and associated applications related to environmental management. *Ecohydrology* emphasizes interactions and associated feedbacks in both space and time between ecological systems and the hydrological cycle. Research contributions are solicited from disciplines focusing on the physical, ecological, biological, biogeochemical, geomorphological, drainage basin, mathematical and methodological aspects of ecohydrology. Research in both terrestrial and aquatic systems is of interest provided it explicitly links ecological systems and the hydrologic cycle. The journal also publishes research on new instrumentation and techniques if they describe truly new and significant advances in methodology that can be broadly applied to the ecohydrological understanding and management of environmental systems.


*Global Water News,* published by the Global Water System Project, an initiative of the Earth Science System Project, presents a systems approach to global change studies of the global water system. Articles include “A New Assessment of World Water Resources and Their Ecosystem Services,” “Green Water – Conceptualizing Water Consumed by Terrestrial Ecosystems,” and “Freshwater Resources of Africa: Major Issues and Priorities.”


This annual volume provides informed commentary about and assessment of Canadian and related comparative innovation, science, and environment (ISE) policies and institutions. Initiated by the Carleton Research Unit on Innovation, Science, and Environment (CRUISE) in the School of Public Policy and Administration, it is aimed at interested and informed Canadians involved in or affected by this crucial realm of Canadian policy, politics, and governance. The series involves academics from a variety of disciplines, doctoral students doing advanced research in the ISE field, and knowledgeable practitioners from the public and private sectors.


The objective of *IJSurfse* is to disseminate...
knowledge between academics/researchers and industry practitioners. Because of the multiscale nature of surface science and engineering, *IJSurfSE* will provide a forum for cross-scale investigations into the property, integrity and durability of surfaces and subsurfaces of advanced elements. Topics include surface characterization and metrology; friction and wear, including mechanisms, modeling, characterization, measurement and testing; interface temperatures of sliding surfaces; coatings and surface treatments; tribology of composite materials: metallic, polymeric and ceramic; nanoscale tribology; and special surfaces such as those for high-performance lenses.


*IJSDes* is a multidisciplinary journal that focuses on the theoretical and practical aspects of sustainable design. It aims to establish an effective channel of communication between design experts in academic and research institutions, professionals working in industry and related businesses, and government agencies and policy-makers concerned with sustainability issues in design. The international dimension of the journal is emphasized in order to overcome cultural and national barriers and to meet the needs of accelerating technological and ecological change and changes in the global economy. In addition, the journal allows researchers, practitioners and decision-makers to monitor and identify design strategies, solutions and trends on a global scale. Topics covered include sustainable design strategies and innovation, eco-design, life cycle design and life cycle assessment (LCA), user-centered design and co-design, virtual design and e-design, design ethics and sustainability, design of renewable and alternative energy systems, and sustainable design and materials selection.


The *Journal of Fuel Cell Science and Technology* provides the research, development, and applications community with a forum for archival research and development information on all aspects of the science, engineering, and associated technology concerned with fuel cells of all types. Topics include: development of constituent materials (metal, ceramic, polymer and bio-based); joining, bonding, connecting, interface/interphase regions and seals; cell design; processing and manufacturing; thermal and water management; multi-scale modeling; aging, durability and damage tolerance, reliability, optimization and control; transport and infrastructure; and fuel cell applications, infrastructure and commercialization.


*Journal of Informetrics (JOI)* publishes refereed articles on fundamental quantitative aspects of information science. The journal, although limited to metrics aspects, has a broad scope. In principle, all quantitative analysis of original problems in information science are within the scope of *JOI*. Besides its generality, the journal focuses on papers describing fundamental methods and theories and/or universally important data, gathered in a non-trivial way. Fundamental methods comprise mathematical, probabilistic or statistical models and techniques as well as methods in operational research. These methods can serve the quantitative explanation of certain phenomena, evaluation of information and its producers as well as the management of libraries and other information centres. *Journal of Informetrics* also publishes papers that improve standardization in informetrics. In general the journal aims to contribute to increasing the degree of “hardness” of the field, and to increase the degree of “exactness” of the scientific field of informetrics. Specific topics include informetric laws, modelling generalized bibliographies, aspects of inequality or concentration and diffusion, citation theory, linking theory, evaluation techniques for scientific output, library management, graph-theoretic and topological analysis of networks, and visualization and mapping of science.


*Plant Mutation Reports* is a free newsletter that reports on the following fields of plant research:
(1) DNA damage, repair and mutagenesis; (2) insertion mutagenesis; (3) experimental mutagenesis with artificial mutagens; (4) crop breeding and genetics with induced mutations; (4) genomics and molecular genetics of induced mutations; (5) mutational analysis and mutant germplasm. Recent articles include "Development of Three Groundnut Varieties with Improved Quantitative and Qualitative Traits through Induced Mutation," "Genetic Improvement of Long Grain Aromatic Rices through Mutation Approach," and "Development of Photoperiod Insensitive Mutant Lines Using Gamma Irradiation of Traditional Aromatic Rice."
Sci-Tech Book News Reviews  Kiem Ta, Selector

The following section consists of 100 book reviews selected from *Sci-Tech Book News*, reprinted with the permission of Book News Inc. This review journal is published four times a year, each issue reviewing over 2,000 new titles in the physical and biological sciences, mathematics, engineering, computer science, technology, and agriculture. For a sample issue and subscription information, contact Book News Inc. at 5739 NE Sumner Street, Portland, OR 97218. Phone: (503)281-9230; Fax: (503)287-4485; E-mail: booknews@booknews.com.

**PSYCHOLOGY**

BF323 2007-002957 978-1-59147-930-7

**Inhibition in cognition.**
Title main entry. Ed. by David S. Gorfein and Colin M. MacLeod. (Decade of behavior) *American Psychological Assn.*, ©2007 337 p. $79.95

Psychology researchers from around the US gathered in Arlington, Texas in March 2005 to share and integrate their findings on inhibition in various aspects of cognition. The 15 papers presented here discuss such topics as mechanisms of transfer-inappropriate processing, working memory capacity and inhibition, aging and inhibition deficits, concepts of inhibition and developmental psychopathology, and network models.

BF724 2005-009305 0-19-516953-0

**Lifespan cognition; mechanisms of change.**
Title main entry. Ed. by Ellen Bialystok and Fergus I.M. Craik.
*Oxford U. Press*, ©2006 397 p. $75.00

Researchers in cognition will find much of value in this interdisciplinary volume, which takes as its premise the pairing of chapters on given subjects, one by an expert in childhood and the other by an expert on aging, allowing connections and comparisons to be made between the two. Other chapters are on lifespan and methodology, including those on inter-and intra-individual differences in problem solving, and brain changes. Topics include working memory, representation, language, and differentiation of cognitive abilities. The contributors are psychologists in the US, Canada, Germany, and Australia. Bialystok is at York U. in Toronto; Craik is in Toronto at the Rotman Research Institute at the Baycrest Centre for Geriatric Care.

BF323 2007-004381 978-0-7657-0488-7

**Playing Pygmalion; how we create one another.**
Joselson, Ruthellen. *Jason Aronson*, ©2007 151 p. $34.95 (pa)
Joselson (psychology, Fielding Graduate U.) examines why we humans create the characters of people in our lives and respond to what we have created rather than to the real person. She reminds us that we do this unconsciously and that therapists often fall into the same trap as she describes why we create one another, why we recreate others from memories, why we impose our own perceived faults over the characters of others, why we repress the fact we are making up the people around us, and how out own insecurities get in the way of understanding others as themselves.

BF511 2006-014136 978-0-19-516915-7

**Handbook of emotion elicitation and assessment.**
This handbook details the major methodological achievements of the now mature multidisciplinary field of affective science, and Coan (psychology, U. of Virginia, Charlottesville) and Allen (psychology, cognitive science, and neuroscience, U. of Arizona, Tucson) hope that it serves to stimulate further innovation in this highly theory-driven field. International contributors to 26 chapters discuss strategies for eliciting emotion in the laboratory setting (e.g., through films, music, self-statements); measurement of emotions (raising the conceptual issues of the validity of elicited emotions and whether measurement alters the response); and approaches to understanding the biological bases of emotion including functional magnetic resonance imaging.


**Spirit, science, and health; how the spiritual mind fuels physical wellness.**
*Praeger*, ©2007 230 p. $49.95
Medicine is increasingly embracing a health promotion rather than disease model. As
associates with the Spirituality and Health Institute at Santa Clara U., Plante (psychology, Santa Clara U.) and Thoreson (emeritus, education and psychology, Stanford U.), introduce 14 chapters examining how the formerly little-researched psychosocial factor of spirituality/religion relates to health in general and to specific patient populations. Social cognitive theory, to which the contributions of preface writer Albert Bandura (Stanford U.) are well-known, is used to explain the demonstrated health effects of such practices as meditation and holy name repetition. Case examples treat ethical pitfalls.

PRODUCTION, INDUSTRY, COMMERCE

HD57 2007-929136 978-0-7695-2913-4
E-commerce technology/enterprise computing, e-commerce, and e-services; proceedings.
Computer Society Press, ©2007 709 p. $231.00 (pa)
Fifty-nine papers from the combined July 2007 conference report on advances in the state of the art and practice of e-commerce and Web-based information systems, and identify emerging research topics in the field. Most papers are related to the infrastructure issues and enabling technologies that facilitate dynamic e-business and Web-based information systems. Material is organized in sections on e-commerce applications, trading, marketing, business modeling, document management, auction and dynamic pricing, enterprise computing, and Web services for electronic commerce. There is no subject index.

HD9980 2006-027706 978-1-59904-180-3
Enterprise service computing; from concept to deployment.
Title main entry. Ed. by Robin G. Qiu.
Idea Group Publishing, ©2007 426 p. $94.95
Qiu (information science, Pennsylvania State U.) compiles 15 chapters for students and professionals working in the field of enterprise service computing. The volume is organized into sections covering the life cycle of enterprise service computing’s development: business aspects; requirements; modeling, design methods, and methodologies; technologies; formal modeling, verification and validation; and best practices and deployment. Chapters do not need to be read in order, as each presents its own view of technology and business. Researchers and scholars in computers, information systems, and electronic engineering from around the world contributed to the volume.

SOCIOLOGY

HM851 2006-007261 978-0-19-531280-5
Computers, phones, and the Internet; domesticating information technology.
Title main entry. Ed. by Robert Kraut et al. (Oxford series in human-technology interaction; 2)
Oxford U. Press, ©2006 326 p. $49.95 (pa)
North American and European researchers in psychology, communications, and sociology explore how the everyday use of mobile phones, computers, and the Internet is changing the lives of their users and those around them. Bringing empirical evidence to the debate, they address factors that have a direct domestic or community effect and that are potentially measurable (once the theoretical and methodological bugs are worked out, of course). Social change, home and family, community, teenage life, and social relationships are the dimensions considered.

HV551 2006-029119 978-1-59370-099-7
Common sense dictionary for first responders.
Fire, Frank L.
PennWell Books, ©2006 295 p. $59.00 (pa)
This volume is a glossary of about 4,200 specialized terms useful for those who respond to emergency situations such as fires and hazardous materials incidents, and for environmentalists and safety engineers as well. Terms relate to electricity, general science, hazardous materials, chemistry, the environment, firefighting, EMS, the material safety data sheet, plastics, protective clothing, radioactivity, shipping regulations, and transportation. The second section consists of a list of abbreviations and acronyms related to these topics. Fire is the author of other books on plastics and hazardous materials and a former teacher with extensive experience in the plastics industry.

HV6115 2006-049390 1-4200-4331-5
Biological influences on criminal behavior.
Anderson, Gail S.
CRC / Taylor & Francis, ©2007 315 p. $89.95
Anderson (criminology, Simon Fraser University) explains the basic concepts of natural selection, behavior theory, and genetics that may apply to current criminal research. Never suggesting crime can be blamed on biology, this undergraduate textbook methodically surveys the results of recent studies on twins and adoption, hormones, fetal development, brain chemistry,
structural brain imaging, diet, and toxins.

JX1974  978-3-527-40690-6
Joseph Rotblat; visionary for peace.
Title main entry. Ed. by Reiner Braun et al.
Wiley-VCH, ©2007  355 p.  $45.00
His family was so poor he originally trained to be a
domestic electrician. He worked his way through
the university system in Poland and became a
leading authority in physics, particularly nuclear
physics. Knowing what nuclear fallout did, he
was committed to peace, a mover shaker along
with Bertrand Russell and a gaggle of Nobel
Laureates and laureates-to-be in the extremely
influential Pugwash Conferences on Science and
World Affairs, named after the town in Nova
Scotia they could all afford (in terms of time as
well as money) to gather in at the same time.
He joined the ranks of the laureates with the
Nobel Peace Prize in 1995. He lived to be 96. He
was adored. Each of the brilliant contributions
to this collection of articles about Rotblat's life
and legacy reflects his light, and the authors
range from Rotblat himself to Mohammed
ElBaradei, Mikhail Gorbachev and Martin Reese.

KF3133  2006-033073  978-1-59031-761-7
Biotechnology and the law.
Title main entry. Ed. by Hugh B. Wellons and Eileen Smith
Ewing.
$189.95 (pa)
Legal experts specializing in biotechnology
law, intellectual property, patent licensing,
and related areas present a clearly written
review of multiple aspects of the latest wave
of better living through science and its legal
ramifications. Following a primer defining
biotechnology and the life cycle and regulation
of biotech companies, contributors treat issues
in obtaining patents, innovation financing
and management, technology creation and
transfer, Federal regulation regarding research,
product approval, and post-approval marketing;
international regulation; patient privacy;
medical reimbursement; and last but not least,
litigation. The final chapter lists biotechnology
resources worldwide; key U.S. Federal acts,
cases, and agencies; and state laws. The
volume also includes a glossary, highlighted
legal practice points, and sample agreements.

SCIEN C (GENERAL)

Q124  2007-295537  3-11-017966-0
The origin of the history of science in
classical antiquity.
Zhmud, Leonid. Trans. by Alexander Chernogolov.
(Peripatet; v.19)
Walter de Gruyter, ©2006  331 p.  $118.95
The study of the history of science has grown
dramatically from the rather faddish classicism
of the eighteenth and nineteenth centuries to the
rich discipline it is today, but its historiography
of science has remained quiet. Zhmud points
out that this is not at all surprising, as the
study of the history of science has always
been, properly, science. He begins what
promises to be a new discipline by evaluating
the period when science and history first
met in antiquity, the first discoverers, the
strange days of heurematography, the theory
and origin of medicine and the example of
mathematics, the Platonic academy, the late
fourth century Lyceum, the history of geometry
from Eudemus of Rhodes, fragments and
commentary on the history of arithmetic and
the origin of number (here comes Eudemus
again), the history of astronomy and a brief
outline of the history of science after Eudemus.

Q125  2006-929619  1-58603-646-7
Science and technology policies for the
anti-terrorism era; proceedings.
NATO Advanced Research Workshop on Science and
Technology Policies for the... (2004: Manchester, England)
Ed. by Andrew D. James. (NATO science series, series V,
Science and technology policy; v.51)
IOS Press, ©2006  191 p.  $144.00
This volume is the product of a September 2004
NATO Advanced Workshop directed by James
(Police Research in Engineering, Science &
Technology at the U. of Manchester, UK), which
was held to "critically consider the science and
technology policies necessary for defence against
terrorism and other threats to security; to assess
the priorities for governments, universities,
national laboratories and industrial firms; to
identify how governments and the science and
technology community can most effectively work
together to enhance our security; and to share
the experiences of policy makers and policy
analysts." Topics include the Israeli experience
with research and development on scientific and
technological applications to terrorism; detection
and decontamination of chemical and biological
agents; US perspectives on homeland security
research and development; the Canadian
research and technology initiative on chemical,
biological, radiological, and nuclear threats;
Effective international cooperation in homeland security technology development; impacts of post-September 11th security policies on US science; the individual and collective roles scientists can play in strengthening international treaties; and national security, terrorism, and the control of life science research.

Q172 978-3-527-40484-1
Competing interactions and patterns in nanoworld.
Vedmedenko, Elena Y.
Wiley-VCH, ©2007 202 p. $150.00
Vedmedenko (applied physics, U. of Hamburg) writes for students as well as researchers with different professional backgrounds in this introduction to systems that display competing interactions, a situation that can significantly impact many aspects of nanoscience. She classifies phenomena by the type of competing interaction involved to better present the underlying principles and universal laws governing the behavior of various systems, covering the basics of self-competition, competition between a short-range and a long-range interaction, competition between interactions on a scale of similar length, interplay between anisotropies and inter-particle interactions, and dynamic self-organization. She provides comprehensive references for each topic. Vedmedenko’s interdisciplinary approach and logical organization makes what is a very complex topic easy to follow, and the examples are useful for a variety of applications.

Q334 2007-274838 978-1-84540-070-5
Artificial consciousness.
Title main entry. Ed. by Antonio Chella and Riccardo Manzotti.
Imprint Academic, ©2007 284 p. $34.90 (pa)
Artificial intelligence being only a first step, engineers are now trying to develop artificial consciousness as experienced by humans, other mammals, and probably some other animals as well. Contributors identified only by name report on the struggle from such perspectives as depicting architecture for synthetic phenomenology, a rational and vision for machine consciousness in complex controllers, and the ensemble and the single mind. Perhaps artificial morality will be next. Distributed in the US by the Philosophy Documentation Center.

MATH, COMPUTERS

QA3 2005-044024 0-8493-3743-7
Mathematical models and methods for real world systems.
Title main entry. Ed. by K.M. Furati et al. (Monographs and textbooks in pure and applied mathematics; 272)
Chapman & Hall/CRC, ©2006 455 p. $161.96
Drawn from materials presented at a symposium of the International Congress of Industrial and Applied Mathematics, these articles focus on mathematics for technology, wavelet methods for real-world problems, classical and fractal methods for physical problems and trends in variational methods. Topics include the challenges anticipated in the next ten years, mathematical models for superconductors, wavelet frames and multi-resolution analysis, trends in wavelet applications, advanced data processes of meteorological issues, gradient catastrophe in heat propagation with second sound, acoustic waves in a perturbed layered ocean, chaos as described using MATLAB in the motion of a satellite under the influence of magnetic torque, convex objective functional for elliptic inverse problems, and convergence and the optimal choice of the relation parameter for a class of iterative methods.

QA8 2006-049700 978-0-691-12982-2
The mathematician's brain.
Ruelle, David.
Princeton U. Press, ©2007 160 p. $22.95
If mathematicians ran the world, this extraordinary book would be the design document for a whole mathematics curriculum. Students taking geometry, for example, might still learn about the axioms of Euclidean geometry, but the subject would be placed in the context of the more mathematically sophisticated view of geometry as a group of symmetries. This is generally Ruelle’s method: take a subject that is covered in elementary math classes and explain its context—the way professional mathematicians see it. So Euclidian geometry leads to projective and affine geometry, illuminated by Felix Klein’s concept of the role of symmetry in geometry; and Cartesian coordinates leads to algebraic varieties. Ruelle uses these examples to explain some of the great themes of mathematics, such as generalization of problems, the simultaneous roles of formal axioms and human ideas, translation of problems into new forms to apply different tools, and so on. In the course of these explanations he also articulates ideas about philosophical questions such as the definition of mathematics, and the independent reality of mathematical concepts. Finally, the author
shares anecdotes that are a combination of history and gossip about various famous mathematicians. Written with beautiful clarity, this book will give non-mathematicians a feel for how mathematicians think. Yet, for mathematicians, it is raised above "popularization" by the fact that it actually contains mathematical proofs and exercises, rather than merely talking about them. Ruelle is one of the creators of chaos theory and is emeritus, mathematical physics, Institut des Hautes Etudes Scientifiques in France, and visiting professor at Rutgers U.

QA29 2007-927658 978-0-88385-563-8
How Euler did it.
Sandifer, C. Edward. (Spectrum series)
Mathematical Assn. of America, ©2007 237 p. $51.95
Sandifer (mathematics, Western Connecticut State U.) takes a suitably respectful but also jocose tone in this compilation of his 40 monthly chapters about the work of the Swiss mathematician and scientist Leonhard Euler, arguably the possessor of the best brain of the eighteenth century. Well-represented here are Euler’s contributions to geometry, including his enhancements of Pythagoras, number theory, including his work on odd perfect numbers and amicable numbers, combinatorics, including his work on Venn diagrams and orthogonal matrices, and a full range of his work in analysis, one article of which shows how Euler discovered America. Sandifer includes the official list of Euler’s top ten theorems and a number of period illustrations. This is published in commemoration of Euler’s entrance into his fourth century.

QA43 2007-012792 978-0-525-95024-0
Poincaré’s prize; the hundred-year quest to solve one of math’s greatest puzzles.
Szpiro, George G.
Dutton Books, ©2007 309 p. $24.95
A reclusive Russian posted the solution to one of mathematics’s major puzzles on the Internet in 2003, but Grigory Perelman has yet to claim the prestigious and lucrative prizes to which this entitles him. Szpiro (a Jerusalem-based mathematician/author of Kepler’s Conjecture) traces the quest to solve Poincaré’s 1904 problem concerning how an ant on a large surface would know whether it was flat, a round sphere, or bagel-shaped. Notes supply details for those wishing to be more mathematically literate about its implications.

Contemporary issues in database design and information systems development.
Siou, Keng.
IGI Publishing, ©2007 331 p. $99.95
These ten articles describe new approaches and renovations of traditional ones to give designers and managers a better idea of what is happening out there in database design. Their topics include a contextual approach that works toward an ontology for information systems development, an ontological analysis of KAOS using separation of references, an application of UML for modeling the physical design of data warehouses, process mining and intelligent redesign supporting the full BPM life-cycle, efficient placement and processing in shared-nothing data warehouses, factors affecting design decisions for customer relationship management data warehouses, effective processing of XML-extended OLAP queries based on a physical algebra, the differences between the theoretical and practical complexity of UML, data quality and expanded database access control.

Handbook of research on open source software; technological, economic, and social perspectives.
St. Amant, Kirk and Brian Still.
Information Science Reference, ©2007 728 p. $225.00
St. Amant and Still, both of Texas Tech University, compile the latest research from around the world on open source software (OSS) technologies and their educational, economic, organizational, and societal implications. The handbook is divided into seven sections examining factors affecting OSS development, adoption, and use: culture and society; development models and methods for OSS production; evaluation of OSS products and uses; laws and licensing practices; public policy and government perspectives; business approaches and applications; and educational perspectives and practices. Chapter key terms and their definitions are included, with a total of about 350 terms defined. The handbook is useful as a reference for researchers, managers, and policy makers, and can be used as a supplementary text for advanced undergraduate and graduate courses.
Research issues in systems analysis and design, databases and software development.
Siuau, Keng.
IGI Publishing, ©2007 286 p. $99.95
Several of the ten papers in this collection explore modeling methods for active domains, knowledge management, deontic business rules, and organizational memory. Other topics include matching models of different abstraction levels, the application of agile software development at two companies, potential research areas in extreme programming, the adaptation of an agile information system development method, and translation between process modeling languages.

Semantic web-based information systems; state-of-the-art applications.
Title main entry. Ed. by Amit Sheth and Miltiadis Lytras.
CyberTech Publishing, ©2007 317 p. $94.95
An extension of the current World Wide Web, the "Semantic Web" is both a philosophy and a set of technologies aimed at enabling computers and people to better cooperate in the finding and sharing of information. This volume contains twelve contributions by international researchers in academia and industry considering various aspects of the Semantic Web and related information systems. Sample topics include ontology creation methodologies, design principles for versatile Web query languages, and semantic applications for online businesses. CyberTech Publishing is an imprint of Idea Group Publishing.

Parallel and distributed computing; proceedings.
International Symposium on Parallel and Distributed Computing (6th: 2007: Hagenberg, Austria)
Computer Society Press, ©2007 400 p. $247.00
These proceedings of the July 2007 symposium includes 48 papers reflecting the dynamics of this rapidly expanding field, including several case studies, application reports, and a full treatment of the invited talk on knowledge-based platforms for environmental risk management. General topics include parallel computing, with papers on a new execution mechanism for distributed pipeline processing, real-time systems, including a prototype of a social and economically-based resource allocations system in grid computing, grid computing, including a fully distributed active and passive task management system, peer-to-peer computing, including a new iterative method to improve Internet distance estimation, distributed software components, scheduling and load balancing, cluster computing, programming paradigms and related issues, mobile computing, fault tolerance, and scientific computing and simulations.

Understanding MySQL internals.
Pachev, Sasha.
O'Reilly Media, Inc., ©2007 234 p. $49.99 (pa)
Pachev, who was on the original MySQL development team explains structures of its code that developers will find helpful in extending the open-source database software to serve specific purposes. Among those structures are client/server communication, thread-based request handling, concurrent access and locking, storage engines, and replication. Administrators and users will find little of use here.

Emerging free and open source software practices.
Title main entry. Ed. by Sulayman K. Sowe et al.
IGI Publishing, ©2008 288 p. $99.95
Technological, mathematical, economic, business, social, and philosophical and among the aspects of free and open-source software that specialists from around the world consider. They do not attempt to survey or overview the field, but describe the practices that have evolved in their particular milieu or region. The general themes are empirical research, community structures and perception, tools for qualitative development, adoption in public and corporate environments, and case studies of successful and failed projects.

Application of agents and intelligent information technologies.
Title main entry. Ed. by Vijayan Sugumaran.
Intelligent-agent technology, believes Sugumaran (Oakland U.), has come of age to the point where its applications can be useful in a variety of fields such as electronic commerce, supply-chain management, resource allocation, intelligent manufacturing, mass customization, industrial control, information retrieval and filtering, collaborative work, mobile commerce, decision support, and computer games. In this volume, he presents 15 examples of recent research and applications of agents and other intelligent-information technologies.
These include an ontology-based approach to business rules sourcing in supply chain management systems, approaches and tools to optimize and manage clinical processes, agent-based modeling and simulation for explaining the impact of education on malaria healthcare, an intelligent multi-robot system using higher-order mobile agents, instrument validation for strategic business simulation, building sound semantic web frameworks for scalable and fault-tolerant systems, automatic database management, the monitoring and enforcing of online auction ethics, and mail server management with intelligent agents.

QA76.9 978-0-470-02760-8
Advances in fuzzy clustering and its applications.
Title main entry. Ed. by J. Valente de Oliveira and W. Pedrycz.
John Wiley & Sons, ©2007 434 p. $130.00
Once the stuff of which we dreamt, fuzzy clustering is now a mature area of research with new applications and methods of study emerging constantly. This collection of research concentrates on new research and that used to counter traditional issues, focusing on the algorithmic and computational augmentations of fuzzy clustering and on presenting the important and relevant phases of cluster design, including information granules, fuzzy sets in the realization of the human-centric facet of data analysis, and system modeling. Contributors give a solid background, then cover relational fuzzy clustering, Minkowski distance functions, soft cluster ensembles, visualization, algorithms and computational aspects such as fuzzy clustering to fuzzy data and infusion-based fuzzy clustering, fuzzy regression clustering, real-time and dynamic clustering, and a wide range of applications in such areas as exploratory analysis, concept induction and classification.

QA76.9 2007-001277 978-0-470-11486-5
Applied cryptanalysis; breaking ciphers in the real world.
Stamp, Mark and Richard M. Low.
John Wiley & Sons, ©2007 401 p. $85.00
Stamp (computer science) and Low (mathematics, both San Jose State U., California) introduce applied cryptanalytic attacks in a form accessible to motivated upper-division undergraduate students an any technical field of study. They strive to minimize advanced mathematics, and append some they cannot avoid. Even so, they warn that the material is tough and cannot be grasped unless readers solve at least some of the problems provided. The arrangement is by types of ciphers: classic, World War II, stream, block, hash functions, and public key systems. An instructor's manual is available.

QA76.9 2006-033770 1-59904-252-5
Knowledge discovery and data mining; challenges and realities.
Title main entry. Ed. by Xingquan Zhu and Ian Davidson. (Premier reference source)
Information Science Reference, ©2007 274 p. $165.00
The 13 contributions in this collection share experiences with the application of data mining methods to software quality estimation, multimedia computing, biology, clinical trials, finance, and banking. Topics include genome-wide analysis of epistasis, cross-modal correlation mining using graph algorithms, a decision tree for remotely sensed image data, the business impact of predictive analytics, and semantics enhancing knowledge discovery. The final three chapters on traditional data mining algorithms explore the Dempster-Shafer theory for handling imperfect data, self-organized maps for outlier detection, and rough set theory for estimating error rates.

QA76.9 2006-041348 978-0-89871-626-9
Matrix methods in data mining and pattern recognition.
Eldén, Lars. (Fundamentals and algorithms; 04)
SIAM, ©2007 224 p. $69.00 (pa)
Eldén (numerical analysis, Linköping U.) uses as examples handwritten digits, text summarization, pagerank computations made famous by a certain very popular search engine (the name of which is now used as a verb) and face recognition to explain how to use very powerful linear algebra techniques to mine data and recognize patterns. He introduces vectors and matrices in data mining and pattern recognition, then gives more details on vectors and matrices, including their inner products, vector norms and linear independence bases. He explains linear systems and least squares, orthogonality, QR decomposition, singular value decomposition, reduced-rank least squares models, tensor decomposition, clustering and nonnegative matrix factorization. In the next section he applies the abstract to real life, throwing in an exercise on extracting an automatic key word and key sentence, and closes with instructions on computing matrix decomposition, including computing eigenvalues and singular values.
Stochastic relations; foundations for Markov transition systems.
Doberkat, Ernst-Erich. (Chapman & Hall/CRC studies in informatics series)
Chapman & Hall/CRC, ©2007 345 p. $99.95
Doberkat develops the theory of stochastic relations as a foundation for Markov transition systems, investigating such central ideas as congruences and morphisms and applying them to monoidal structure. He also examines bi-similarity and behavioral equivalence under the same framework and puts the general theory of algebras into the context provided by the subprobability factor. He shows that bi-similarity, behavioral, and logical equivalence are the same for general model logics and for continuous time stochastic logic with and without a fixed point operator. Sections include a tutorial on Polish and analytic spaces, measurable selectors, probability measures and categories, and then material on stochastic relations as monads, Eilenberg-Moore algebras for stochastic relations, the existence of semi-pullbacks and interpreting modal and temporal logics.

Temporal and spatio-temporal data mining.
Hsu, Wynne et al.
IGI Publishing, ©2008 279 p. $99.95
Spatio-temporal databases have been the subjects of a significant amount of academic and industrial research, resulting in advances including modeling, indexing and moving of objects and spatio-temporal data. This addresses one of the issues in such research, which is mining topological patterns in such databases by imposing temporal constraints into the process of mining spatial collocation patterns. Using a variety of techniques, including two partition-based algorithms designed by the authors, this gives background and advanced research into mining dense periodic patterns in time series databases, mining sequence patterns in evolving databases, mining progressive confident rules in sequence databases, understanding early works in spatio-temporal mining, mining topological patterns, mining flow patterns, mining generalized flow patterns, mining spatio-temporal trees and graph patterns, and preparing for future advances in the field.
by MAH-3 code, nondegeneracy conditions for different types of grids, application of optimal grid generation algorithms to the volumes of revolution, an algorithm that constructs optimal grids in domains of the “pipeline” type and conservative remapping on hexahedral meshes.

QA460 2006-050969  978-0-691-12526-8
The Pythagorean theorem; a 4,000-year history.
Maor, Eli.
Maor (mathematics, Loyola U., Chicago) traces the history of the most famous geometrical theorem ever, including some of the more interesting of the more than 400 proofs. He places it within the larger philosophical system attributed to Pythagoras, and samples its use down the centuries in science, art, and literature.

QA614 2006-102211  978-3-11-019092-2
Getting acquainted with fractals.
Heinberg, Gilbert.
Walter de Gruyter, ©2007 177 p. $98.00
Heinberg balances the fascinating geometric aspects of fractals with the serious mathematics underlying them at a level accessible to advanced undergraduate students in either discipline. He cites works that provide the next level of detail, and contain exercises. The sections cover fractals and dimensions, iterative function systems, and the iteration of complex polynomials—Julia sets and the Mandelbrot set. The illustrations use color.

ASTRONOMY

QB461 2007-009980  978-0-470-01305-2
Astrophysics; decoding the cosmos.
Irwin, Judith A.
John Wiley & Sons, ©2007 417 p. $70.00 (pa)
Irwin (physics, Queen's U., Canada) opens up astrophysics for undergraduates and others with a bent for examples of theory in practice. She covers signals as they are observed, defined and measured, matter and radiation; signals as they are perturbed, as in the interaction of light with matter and light with space; signals emitted, whether as continuum or line emissions; and the signal decodes in forensic astronomy. Appendices give both undergraduate and graduate students background and the many color plates reveal, among other fascinating things, that Betelgeuse and Rigel can be visible to the naked eye in daylight and a cute dog is a darn good model for a lesson on heat and light.

QB641 2006-016848  0-525-94985-2
Postcards from Mars; the first photographer on the red planet.
Bell, Jim.
Dutton Books, ©2006 196 p. $55.00
Bell led the team that built the “Pancam” cameras installed on the Mars rovers Spirit and Opportunity. The some 100 double-page (and some fold-out) prints collected here depict the preparation of those missions as well as the stark Martian panoramas captured in images both single and composite, both real and false-color. Bell applies his sensibilities as a lifetime landscape photographer to select artful and varied depictions of the texture of the Red Planet. The book is oversize: 11.75x11.75”.

QB801  978-3-527-40602-9
Nuclear physics of stars.
Iliadis, Christian.
Wiley-VCH, ©2006 666 p. $100.00 (pa)
Iliadis (physics, University of North Carolina-Chapel Hill; Triangle Universities Nuclear Laboratory) explains nuclear processes that generate the energy that makes stars shine, covering nuclesynthesis, nuclear energy generation in stars, and other topics at the intersection of nuclear physics and astrophysics. Most equations are derived, and concepts are explained in as simple a manner as possible. The book begins with coverage of basic concepts in nuclear physics and stellar evolution, and progresses with material on nuclear reactions, nuclear processes in stellar plasma, experimental information needed to perform measurements in nuclear astrophysics, and theory of stellar nucleosynthesis. With chapter exercises and 50 pages of reference appendices, the book can be used as a text or reference for undergraduates, graduate students, and researchers in nuclear physics and astrophysics. Students should have taken an undergraduate course in modern physics with elementary coverage of wave functions. An undergraduate course in quantum mechanics or nuclear physics is helpful but not required. Color photos and images are included.

QB806 2006-037043  978-0-8165-2654-3
Protostars and planets V.
Title main entry. Ed. by Bo Reipurth et al. (The University of Arizona space science series) U. of Arizona Press, ©2007 951 p. $90.00
Derived from the Protostars and Planets V conference held in October 2005 on the island of Hawaii, and featuring a focus on the early evolution of the solar system, the chapters of this large volume present the current state of knowledge in the field, co-authored by an

SciTech News
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Published by Jefferson Digital Commons, 2007
international array of 249 scientists. The chapters are grouped into nine major topics: molecular clouds, star formation, outflows, young stars and clusters, and circumstellar disks, among others. Water in the small bodies of the solar system, comparative planetology and the search for life beyond the solar system, and growth of dust as the initial step toward planet formation comprise a small sample of the topics of individual chapters. Each of the chapters includes an abstract and list of references. The volume is authoritative but approachable and will be useful to students as well as specialists in astronomy.

**PHYSICS**

QC173 978-0-19-921486-0

**Liquid crystal elastomers.**
Warner, M. and E. M. Terentjev. (International series of monographs on physics: no.120)
Warner and Terentjev (both U. of Cambridge) examine the phenomena arising when liquid crystals and polymers are combined into a material even more mysterious than its parents. They concentrate on such polymers that are cross-linked into networks: elastomers and gels made from polymer liquid crystals. Much has happened in the field since the cloth edition was published in 2003, but rather than trying to stuff all the new developments between paper covers, they focus on nematic photo-elastomers and smectic elastomers.

QC174 978-3-527-40687-6

**Quantum theory of optical coherence; selected papers and lectures.**
Glauber, Roy J.
*Wiley-VCH*, ©2007 639 p. $165.00
This work compiles the most renowned and groundbreaking articles and lectures by Nobel Laureate Roy J. Glauber. It includes his lectures held at the Les Houches summer school in 1964 on “Optical Coherence and Photon Statistics,” which has been a milestone for generations of students and researchers. Some other topics addressed are the quantum theory of optical coherence, correlation functions for coherent fields, quantum theory of parametric amplification, photon statistics, and coherence and quantum detection. Amplifiers and attenuators, the quantum mechanics of trapped wavepackets, superfluorescence, and density operators for fermions are some others areas examined. A foreword gives a brief overview of Glauber’s career and accomplishments. Glauber is affiliated with Lyman Laboratory at Harvard University. The book can be used not only as a reference for experts, but also for graduate students and beginning researchers who wish to gain insight into the basic theories of the field.

QC454 2007-011030 978-0-470-06978-3

**A practical guide to magnetic circular dichroism spectroscopy.**
Mason, W. Roy.
*Wiley-Interscience*, ©2007 223 p. $125.00
Mason (chemistry and biochemistry, Northern Illinois U.) explains magnetic circular dichroism (MCD) spectroscopy and its use in the interpretation of molecular electronic spectra. The presentation is descriptive to help the reader visualize the optical spectroscopic effects of MCD measurements. The text begins with discussions of polarized light and the theoretical framework and includes lengthy chapters of case studies. Chapters on magnetic vibrational circular dichroism (MVCD) and x-ray magnetic circular dichroism (XMCD) and magnetic linear dichroism spectroscopy round out the book. Familiarity with wave properties of light, quantum chemistry, electronic states, and molecular structure is assumed. Scientists and graduate students in spectroscopy, organometallic chemistry, nanotechnology, and bioinorganic chemistry are the intended audience for the book.

QC485 2005-031796 978-1-59454-793-5

**Frontiers in cosmic ray research.**
Title main entry. Ed. by Igor N. Martsch.
Physicists, most in eastern Europe and Russia, report their own research and that of others into cosmic rays. Among their topics are primary cosmic ray studies based on atmospheric Cherenkov light techniques at high-mountain altitude, possible sources and spectra for ultra-high energy cosmic rays, and the search for cosmic antimatter.

**CHEMISTRY**

QD39 978-1-58488-687-7

**Self assembly; the science of things that put themselves together.**
Pelesko, John A.
*Chapman & Hall/CRC*, ©2007 307 p. $59.95 (pa)
The science of self-assembly offers the most promising route available to true molecular nanotechnology, proclaims Pelesko, and explains how it works in the natural world, engineered systems, and the future. He does not expect readers to be specialists in any particular field. Exercises are included for use in courses or for self-study.
Computational organic chemistry.
Bachrach, Steven M.
Wiley-Interscience, ©2007 478 p. $110.00
Bachrach (chemistry, Trinity U., Texas) provides a practical overview of computational methods and applications in organic chemistry that predict the structure and activity of organic molecules. Along with a very accessible text that steps briskly through the topics, and concise illustrations that work very well with the text, Bachrach offers extensive case studies, showing how certain methods work best in certain situations. He describes quantum mechanics for organic chemistry, fundamentals of organic chemistry, pericyclic reactions, diradicals and carbenes, organic reactions of anions, solution-phase organic chemistry, and organic reaction dynamics, all of which he punctuates with personal interviews with leading lights in the field. The result is definitely for majors but even some non-majors will find the approach accessible.

Monomer and polymers research frontiers.
Title main entry. Ed. by Alberto D’Amore and Gennady Zaikov.
Nova Science Publishers, ©2007 152 p. $89.00
The 12 papers in this collection investigate the radical polymerization of methyl methacrylate initiated with threefold systems, the influence of media on radical copolymerization, and linear multiparametric equations for generalizing the effects of solvent-polymer interaction. The Russian researchers also explore thermo-mechanical destruction of polypropylene, polymer nanocomposite reinforcement, the fractal-like kinetics of the re-esterification reaction with a catalyst, and the structure and thermo-oxidation of polymer blends of isotactic polypropylene and triple ethylene propylene diene.

Peptide characterization and application protocols.
Title main entry. Ed. by Gregg B. Fields. (Methods in molecular biology; 386)
Humana Press Inc., ©2007 342 p. $99.00
Fields (chemistry and biochemistry, Florida Atlantic U.) assembles 13 chapters by researchers from the US and Europe who discuss the characterization of peptides and their applications for the study of biochemical systems. They present the most recent advances in selected analytical techniques, including a comprehensive updating of high-performance liquid chromatography for the purification and evaluation of peptides. Mass spectrometry, the synthesis and characterization of membrane peptides, and specific applications are described, such as conformationally constrained peptides, drug and siRNA delivery, and peptides as imaging, anti-aggregatory, and antimicrobial agents.

Aperiodic crystals; from modulated phases to quasicrystals.
Janssen, Ted et al. (International union of crystallography book series; 20)
Oxford U. Press, ©2007 466 p. $150.00
The discovery of quasicrystals spurred interest because they show sharp diffraction spots and a rotation symmetry that is not crystallographic in the sense of compatibility with lattice periodicity. Thus they are well ordered but aperiodic, meaning that standard techniques for the determination of their structures and physical properties, very often based on the presence of a Brillouin zone, are not applicable. New techniques were required for these determinations, spurring developments in chemistry, physics, crystallography, and even mathematics. In this work aimed at materials scientists, physicists, and crystallographers, Janssen (theoretical physics, U. of Nijmegen, the Netherlands), Chapuis (physics, Ecole Polytechnique Fédérale de Lausanne, France), and Boissieu (Laboratoire de Thermodynamique et Physico Chimie Métallurgique, France) provide a unified view of this now mature field, with applications in quasicrystals and modulated phases, assuming only a basic knowledge of solid state physics and crystallography.
BIOLOGY

QH366 2007-010767 978-0-87969-684-9

Evolution.
Title main entry. Ed. by Nicholas H. Barton et al.
Cold Spring Harbor Lab., ©2007 833 p. $100.00
In this text for undergraduate courses in evolution, Barton (evolutionary genetics, University of Edinburgh) integrates concepts from molecular biology, genomics, and human genetics with traditional studies of evolutionary processes. The first section of the text offers an overview and history of evolutionary biology. Three more sections cover the origin and diversification of life, evolutionary processes, and human evolution. Chapters found only a companion web site deal with techniques and models used in studying evolutionary biology. While the lively art program offers color photos, illustrations, and diagrams on every page, pedagogical features are limited to chapter and within-chapter summaries. Designed as a text for undergraduates, the book may also be of interest to biologists seeking a current account of evolutionary theory and mechanisms.

QH434 978-1-904455-14-1

Bacteriophage; genetics and molecular biology.
Title main entry. Ed. by Stephen Mc Garth and Douwe van Sinderen.
Caister Academic Press, ©2007 343 p. $300.00
Scientists in a wide range of medical and biological disciplines, from universities and companies around the world review the understanding of bacterial viruses, or bacteriophages, as it is informed by recent insights from genomics. They consider bioinformatics and genomics, food fermentations, medicine, the Western perspective, host interaction in lactic acid bacteria, the transfer of DNA from phage to host, phages and their contributions to host cell phenotype, the release of progeny phages from infected cells, and other topics.

QH462 2006-019843 978-1-60021-320-5

New research on genomic instability.
Title main entry. Ed. by Eleanor J. Glasgow.
Nova Biomedical Books, ©2007 302 p. $129.00
Many cancer biologists now believe that genomic instability not only initiates carcinogenesis, but also allows the tumor cell to become metastatic and evade drug toxicity. This collection presents current work in this area of cancer research, by contributors in the US, Germany, the Slovak Republic, Australia, Croatia, Japan, and Georgia. Topics covered include spontaneous and induced chromosomal instability in patients with carcinoma of cervix uteri, genomic instability of the APC gene found in glioblastoma, radiation hormesis and the control of genomic instability, how a cell defends itself against genomic instability caused by chromium, and genotoxic stress and apoptosis. Information on the editor is not provided.

BOTANY

QK142 2006-026090 978-0-8165-2588-1

The ribbon of green; change in riparian vegetation in the southwestern United States.
Webb, Robert H. et al.
U. of Arizona Press, ©2007 462 p. $75.00
Popular and scientific publications have warned since the 1970s that about 90% of vegetation along rivers and streams in the southwestern US has been lost, and political policy has been enacted to deal with the emergency. Hydrologists Webb and Stanley A. Leake, and botanist Raymond M. Turner, currently or formerly with the US Geological Survey, check into the claim, and find that it goes back to a single paper concerning a single unusual site. Seeking broader evidence, they look at long-term changes, particularly investigating whether there has in fact been a net loss of woody riparian vegetation. They find change in the vegetation, but not overall loss.

QK725 2006-026442 978-1-4051-4939-6

Plant mitochondria.
Title main entry. Ed. by David C. Logan. (Annual plant reviews; v.31)
Logan (biology, U. of St. Andrews, Fife, UK) assembles 10 chapters that review recent advances in the study of plant mitochondria for plant scientists, cell and molecular biologists, and biochemists. Scientists and researchers from Europe, the US, and Australia show the complex biology of plant mitochondria from a cell biological, biochemical, and molecular biological perspective. They describe the emerging field of plant mitochondrial dynamics; the dynamic mitochondrial genome, including expression and control; the sequence and structural determinants for protein import; the interplay between nuclear and mitochondrial gene expression; electron transport; metabolism; cytoplasmic male sterility; and plant programmed cell death.
et al.: Full Issue: vol. 61, no. 4

Senescence processes in plants.
Title main entry. Ed. by Susheng Gan. (Annual plant reviews; v.26)
Plants have a plan for getting old, which involves a massive operation of programmed cell death and nutrient recycling. This requires a whole new set of gene expression, which cells must maintain enough machinery to carry out at the same time they are shutting down the power and taking out the recycling. The whole process is a bother in agriculture, because aging plants—especially leaves—are not as productive as young ones. Here biologists from North America and Europe look at the molecular and cellular mechanisms of the phenomenon to help other scientists seek a way to stop it.

Plant solute transport.
Title main entry. Ed. by Anthony Yeo and Tim Flowers.
The movement of dissolved material within plants is examined by European and Australian biologists at levels from the molecular to the ecological and agricultural. Their goal is to fill a gap for graduate students and researchers between general texts on plant physiology and detailed studies of specific topics such as membrane transport. Among their topics are the driving forces for water and solute movement, membrane structure, transport from root to shoot, water-limited conditions, and desiccation tolerance.

ZOOLOGY

Cockroaches; ecology, behavior, and natural history.
Bell, William J. et al.
Johns Hopkins U. Press, ©2007 230 p. $100.00
Describing itself as a “grandchild” of The Biotic Associations of Cockroaches (by Roth and Wilson, 1960), this volume updates the previous work, but narrows its focus to non-domestic cockroach species and strives to present its information within ecological and evolutionary context. Chapters describe the extreme diversity of the morphology, locomotion, diets, and habitats of the 4000 species of Blattaria. They also provide overviews of the mating strategies, reproduction, and social behavior of cockroaches, as well as discussion of termites as social cockroaches and the ecological impact of cockroaches. Also discussed are microbes as the “unseen influence” on cockroach ecology and evolution. The text is illustrated with black and white photographs, drawings, and charts.

Neuroergonomics; the brain at work.
Title main entry. Ed. by Raja Parasuraman and Matthew Rizzo. (Oxford series in human-technology interaction)
Oxford U. Press, ©2007 430 p. $89.95
Neuro-ergonomics builds on neuroscience, human factors psychology, and engineering to enhance the understanding of brain function and behavior in the complex tasks of everyday life. Practitioners in this new field, almost all in the US, offers an overview of it, discussing such aspects as event-related potentials, cerebral hemodynamics and vigilance, sleep and circadian control of neuro-behavioral functions, neural engineering, artificial vision, and medical safety.

Perceptual coherence; hearing and seeing.
Handel, Stephen.
Oxford U. Press, ©2006 469 p. $89.95
Handel (emeritus, psychology, U. of Tennessee, Knoxville) has written a substantial text on the correlation between hearing and seeing in sensory perception that will be useful to the researcher as well as in the upper undergraduate and graduate-level classroom. Maintaining a tight focus on the two senses’ shared aspects throughout the discussion, Handel presents chapters on transformation from information to perception, the characteristics of auditory and visual scenes, the perception of motion, and segmentation, among other topics. Visual color and auditory timbre are treated as complementary topics in two separate chapters.

Chemical biology; from small molecules to systems biology and drug design; 3v.
Title main entry. Ed. by Stuart L. Schreiber et al.
Wiley-VCH, ©2007 1205 p. $625.00
The three volumes of this authoritative resource present up-to-date coverage in chapters that describe theoretical and practical aspects of the field. Initial chapters describe the development of theory, the use of small molecules to unravel biological mechanisms, developments in engineering control over protein function through chemistry, and the control of protein-protein interactions. Vol. 2 contains chapters that include diversity-oriented synthesis, synthesis of large biological molecules, advances in sugar chemistry, and chemical informatics. The final volume contains 13 chapters, with drug discovery, target families, and genome and
proteome studies among the main topics. The volume’s three editors are Schreiber (chemistry and chemical biology, Harvard U.), Günther Wess (R&D management, Johann von Goethe U., Frankfurt, Germany); and Taun M. Kapoor (chemistry, Rockefeller U.). The 99 contributors are specialists at universities and pharmaceutical companies in the U.S. and Europe; one is in Japan.

QP625 978-0-19-929918-8
Ancestral sequence reconstruction. Title main entry. Ed. by David A. Liberles.
Oxford U. Press, ©2007 252 p. $100.00
Liberles (molecular biology, U. of Wyoming) assembles 19 chapters drawn from the meeting, “Using Ancestral Sequence Reconstruction to Understand Protein Function,” held in Kristineberg, Sweden, in March 2005. Following a historical and scientific overview of ancestral sequence reconstruction, the use of the technique to applications of drug design and substitutional mapping is discussed. Further chapters cover experimental methodology, and experimental synthesis of ancestral proteins, with specific topics addressing, for example, standard approaches for reconstruction, limitations and considerations, covarion or heterotachous processes, the reference species tree and how different typologies can affect reconstructed sequences, converting sequences to proteins, and biological questions across different evolutionary depths. Contradictory views are presented to show the ongoing debates in the discipline. Contributors are scientists working around the world in fields such as genetics, biology, and bioinformatics. The volume is meant for graduate students and researchers in molecular biology and evolution, and evolutionary bioinformatics.

QP751 2006-036489 978-0-8493-9079-1
Sports nutrition; fats and proteins.
Title main entry. Ed. by Judy A. Driskell.
CRC / Taylor & Francis, ©2007 383 p. $99.95
Many recreational, collegiate, and professional athletes consume more fat and protein than required to meet their needs, according to Driskell (nutrition and health sciences, U. of Nebraska). Expert contributors to 16 chapters review the types, quality, and quantity of these energy-yielding macronutrients that influence health and performance. Following an introductory chapter on athletes’ balanced nutrient requirements for optimal performance, authors present in-depth profiles on particular nutrients and popular supplements, e.g., glucosamine, various amino acids. The ethics of taking performance-enhancing aids is discussed in regard to creatine. Lastly, intake guidelines are presented for different energy levels for women and men.

MICROBIOLOGY

QR177 2006-018903 1-60021-298-0
Multidrug resistance-associated proteins.
Title main entry. Ed. by Christopher V. Aiello.
Nova Science Publishers, ©2007 251 p. $129.00
As more drug-resistant strains of disease come to light, researchers are scrambling to find alternatives while trying to keep up with the latest research of others in the field. This collection of nine papers describe that research with a number of studies, covering the role of glutathione in the function and gene regulation of GS-X pump and multi-drug resistance proteins, gene-messenger RNA in gliomas by means of realtime RT-PCR, predictions of therapeutic responses to chemotherapy and monitoring of effects of MDR-modulation with radiotracers in malignant tumors, proteins associated with multi-drug resistance and their profiles in childhood and adult cancer and efflux of organic anions at the blood-brain and blood-cerebrospinal fluid barriers, the role of proteins with multi-drug resistance in neurological disease, neurofilaments as the central core of axonal damage in multiple sclerosis, pseudoxanthoma elasticum's move toward possible functions and an herbal alternative for cholestatic liver disease.

QR184 978-0-470-02755-4
Decoding the genomic control of immune reactions.
Title main entry. (Novartis foundation symposium; 281)
John Wiley & Sons, ©2007 218 p. $160.00
Judging from this collection of reports on recent research, great progress is being made toward using the genome sequences of humans, mice and other vertebrates to solve key problems in immunological disease and chronic infections. However, researchers are finding a barrier in the identification of key sequences and circuits controlling the relevant immune reactions. Drawn from material presented at the Novartis Foundation Symposium entitled “Decoding the Genomic Control of Immune Reactions” held in Canberra in March 2006, this collection covers transcriptional regulatory networks in macrophages, molecular pathways and their role in human disease, specifying the patterns of immune cell migration, human monogenic disorders and their relationship with specific
infections, the genetic control of susceptibility to a strain of tuberculosis, disorders resulting from defective LAT signalosomes, smallpox and mousepox, strategies for phenotype detection and subsequent mapping and cloning, genetic control of host-pathogen interactions, systems genetics, and regulation of the immune system.

TECHNOLOGY (GENERAL)

T0 2005-027648 0-8247-2964-1
Using the engineering literature.
Title main entry. Ed. by Bonnie A. Osif.
Routledge, ©2006 614 p. $215.00
Osif (Engineering Reference and Instruction Librarian, Pennsylvania State U.) has prepared this reference to guide readers to engineering information resources with the goal of avoiding information overkill by pointing to good resources in a wide variety of formats that address most needs. The 19 contributed chapters, written by "front-line" librarians, cover resources in general engineering, aeronautical and aerospace engineering, architectural engineering, bioengineering, chemical engineering, civil engineering, computer engineering, electrical and electronics engineering, engineering education, environmental engineering, history of engineering, industrial and manufacturing engineering, materials science and engineering, mechanical engineering, mining engineering, nuclear engineering, petroleum engineering, and transportation engineering.

T55 2007-001818 978-0-86587-155-7
Changing safety's paradigms.
McKinnon, Ron C.
Government Institutes Inc., ©2007 212 p. $79.00 (pa)
Industrial safety, America-style, may be its own worst enemy, claims consultant McKinnon. He is especially concerned about how American workplace safety practices translate under globalization, and proves his point by showing how 20 safety paradigms have already turned out to be dangerous myths in the US, let alone around the world. What is startling here is McKinnon's evidence that such maxims we have repeated like mantras for generations such as "safety is first" and "no blood, no foul" can be killers and in fact injure or kill over four million people each year in the US. As he works through the safety paradigms we have understood to be true and actually practiced, we come to understand that safety and security are not the same thing, that injuries measure safety performance, and that discipline does not make people work safely. He readily supplies truly safe substitutes.

ENGINEERING (GENERAL, CIVIL)

TA9 978-3-527-31220-7
Rules of thumb in engineering practice.
Woods, Donald R.
Wiley-VCH, ©2007 458 p. $115.00
Woods (emeritus chemical engineering, McMasters U., Canada) explains how engineers can use rough guesses based on experience to obtain approximations that will allow them to decide whether more precise calculation is necessary. Far from leading to a neglect of fundamentals, he says, it keeps engineers acutely aware of orders of magnitude and common sense interpretations. Using his own field as an example, he discusses the basics of rules of thumb, then looks at applying them in transport, homogeneous and heterogeneous separations, reactors, size reduction and enlargement, and other areas.

TA355 2006-100169 978-1-4200-5321-0
Vibration damping, control, and design.
Title main entry. Ed. by Clarence W. de Silva. (Mechanical engineering series)
CRC / Taylor & Francis, ©2007 634 p. $119.95
With case studies and examples, the contributors of these articles work systematically from theory to applications so practitioners as well as students can produce mechanical engineering projects with better product quality and more economical operation. The contributors include summaries for each topic so readers can quickly find what they need to know about design for vibration damping and control, damping theory, experimental techniques, structure and equipment isolation, structural dynamic modification and sensitivity analysis, fluid-induced vibration, instrumentation, and statistical energy analysis. Articles on acoustics cover sources of noise, sound levels and decibels, hearing and psychological effects, noise control criteria and regulations (including design of acoustic absorption) and building in reactive mufflers. Some of the applications that deserve a chapter all to themselves include vibration in rotating machinery, regenerative chatter in machine tools, and helicopter rotor tuning. The illustrations are very clear and helpful.
TA418 2006-018539 978-1-60021-291-8
New topics in nanotechnology research.
Title main entry. Ed. by Matthew F. Ginobili.
Nova Science Publishers, ©2007 249 p. $129.00
Along with mainstream biomedical and consumer applications, nanotechnology (which is actually a very broad description of a variety of activities at the level of atoms and molecules) has great potential in drug delivery, gene therapy, and drug discovery techniques. These seven articles describe aspects of nanotechnology, including the use of epitaxial oxides on semiconductors for applications in nanoelectronics, new methods for optimization of semiconductor nanostructures based on optimal control theory, epitaxial metallic nanostructures and their relationship with characterization and electron transport properties as well as other nanotechnologies, principles and applications of carbon nanotube and polymer nanocomposites, preparation of nanomaterials in the presence of branched molecules, progress in the synthesis of II-V group nanocrystals through solution routes, and laser-induced phase transformation in nanocrystalline silicon thin films.

TA455 2007-002982 978-1-56990-405-3
Handbook of engineering biopolymers; homopolymers, blends, and composites.
Title main entry. Ed. by Stoyko Fakirov and Debes Bhattacharyya.
Hanser Gardner Pub., ©2007 896 p. $199.95
Fakirov (polymer chemistry, Sofia U., Bulgaria) and Bhattacharyya (advanced composite materials, U. of Auckland, New Zealand) have been working jointly on wider applications of a newer type of polymer composite or "green plastic" called microfibril-reinforced composites. Driven by increasing environmental concerns and new European Union legislation, international experts contributed to the 28 chapters contained in this handbook. The book reviews physicochemical properties, mechanical behavior, and commercial feasibility of composite alternatives made up at least partly of biodegradable, renewable plant-based fibers as substitutes for petroleum-based synthetic polymers. The natural fibers studied include starches, cellulose, hemp, gelatin, soy, and silk. The volume commemorates Dr. Fakirov’s 70th birthday.

TA460 978-3-527-31537-6
Fatigue crack propagation in metals and alloys; microstructural aspects and modelling concepts.
Krupp, Ulrich.
Wiley-VCH, ©2007 287 p. $115.00
Analysis of crack initiation and early crack propagation is imperative in the study of metal fatigue. Conducted at the microscale level, the behaviors observed here closely explain how the material will function and look across its lifetime. However it is impossible to conduct analysis with non-destructive methods such as ultrasonic inspection, so improvements in the techniques available are always welcomed. Krupp (engineering metallic materials, U. of Applied Sciences, Osnabruck, Germany) uses his experience as a practitioner to organize his material logically according to real-world needs and situations, introducing the basic concepts of metal fatigue and fracture in the engineering design process, experimental approaches to crack propagation, including the newest methods, physical metallurgy of the deformation behavior of metals and alloys, initiation of microcracks, and modeling crack propagation accounting for microstructural features. This volume is well illustrated and can serve as both a professional reference and a classroom text.

TA462 2006-014876 978-0-8493-8243-7
Fundamentals of metallic corrosion; atmospheric and media corrosion of metals.
Schweitzer, Philip A. (Corrosion engineering handbook; 2d ed.)
CRC / Taylor & Francis, ©2007 727 p. $99.95
Essential for choosing materials that will withstand environmental and process conditions, the understanding of corrosion is essential for successfully designing, using and maintaining equipment and structural components. This reference, which provides complete coverage of the science underlying corrosion in metals and alloys, concentrates on such atmospheric corrosives as compounds containing sulfur, nitrogen and chlorine and natural media such as water, acids, salts, organics and gases. It devotes significant space to metal types and their alloys, including nickel alloys, copper, copper alloys, aluminum, titanium, zinc, lead, other nonferrous materials and alloys and especially stainless, ferritic and martensitic steels. It includes the effects of indoor and outdoor pollutants on materials, comparability data and the resistance of coatings. Users
will find the illustrations and tables easy to use and the index is particularly helpful.

TA660 2007-017552 978-1-56347-917-5
Highly flexible structures; modeling, computation, and experimentation. (CD-ROM included)
Pai, P. Frank. (AIAA education series)
Am. Inst. of Aero. & Astro., ©2007 742 p. $129.95
Highly flexible structures as discussed in this work by Pai (mechanical and aerospace engineering, U. of Missouri-Columbia) are nonlinearly elastic structures designed that have applications from space structural systems to home appliances. He describes the modeling and computational analysis of highly flexible structures and presents experimental techniques for measuring large static and/or dynamic deformations of highly flexible structures. His graduate-level treatment is intended to close the gap between engineers and applied mathematicians. It presents mathematically consistent and systematic derivations of geometrically exact theories for one-dimensional and two-dimensional structures, solution techniques based on the multiple shooting method for computing numerically exact solutions, fully nonlinear finite element analysis of static and dynamic deformations, and the experimental methods mentioned above. The CD-ROM contains programs for solving example problems, finite element solution sequences, function files of types of linear and nonlinear finite elements, a variety of functions, and video files showing experiments.

TA705 2006-052993 1-4200-5250-0
Geologic hazards; a field guide for geotechnical engineers.
Hunt, Roy E.
CRC / Taylor & Francis, ©2007 323 p. $89.95
Hunt (geosciences, University of Pennsylvania) explains how to recognize, and understand, and minimize various geological hazards in this text/reference for engineers. Using general concepts rather than rigorous mathematical analyses, the book covers the prediction of slope failures through recognition of geologic and other factors that govern failure, and describes measures for dealing with slopes that are potentially unstable. Specific topics covered include the design and construction of stable cut slopes and side-hill fills, the stabilization of failed slopes, determining the potential for surface movements, and earthquake causes and surface effects. An appendix briefly reviews Earth's geological history. B&W photos are included.

ENVIRONMENTAL TECHNOLOGY

TD657 2006-000885 0-471-72177-8
Stormwater management for land development; methods and calculations for quantity control.
Seybert, Thomas A.
John Wiley & Sons, ©2006 372 p. $120.00
Stormwater can be deadly, and judicious design and management of stormwater systems is an integral part of land development. However, many texts go beyond a working knowledge of algebra, trigonometry and geometry and are thus inaccessible to some decision-makers in the development process. Here Seybert (engineering, The Pennsylvania State U., Wiles-Barre) provides a readable and usable guide to controlling stormwater, focusing on the practical. He begins with elementary fluid properties and basic statics, proceeding to fluid flow, open channel flow and basic hydrology. He explains watersheds, soils, and rainfall, travel time, runoff depth and peak flow and then describes ways of understanding and dealing with stormwater in the field, including the use of hydrographs, routing methods, drainage conveyance and control, and because trouble never runs by itself, multiple-event detention design. Engineers will find this valuable in design but also in helping to explain to non-specialists why stormwater matters.

BUILDING CONSTRUCTION

TH420 2007-009080 978-0-7844-0884-1
Seismic rehabilitation of existing buildings.
Title main entry.
Am. Society of Civil Engineers, ©2007 411 p. $160.00 (pa)
The Structural Engineering Institute of the American Society of Civil Engineers presents their nationally applicable standards for the seismic rehabilitation of buildings, together with commentary explaining the presented technical requirements. Covering both the overall structure of a building and nonstructural components, the standards are arranged such that four analysis procedures can be used: linear static procedure, linear dynamic procedure, nonlinear static procedure, and nonlinear dynamic procedure. In presenting the standards, both the International System of Units and customary units have been employed.
MECHANICAL ENGINEERING & MACHINERY

TJ163 2006-024895 0-8493-1730-4
Handbook of energy efficiency and renewable energy.
Title main entry. Ed. by Frank Kreith and D. Yogi Goswami.
(Mechanical engineering series)
CRC / Taylor & Francis, ©2007 -- p. $169.95
The 28 contributions in this engineering handbook outline strategies for conserving energy in commercial buildings, residences, and manufacturing plants, and describe technologies and generating and storing energy from renewable sources. Topics include HVAC control systems, compact heat exchangers, cogeneration, concentrating solar thermal power, biomass conversion processes, geothermal power generation, and fuel cells. The opening chapters discuss current energy policies, economic assessment methods, the outlook of U.S. energy markets, the next generation of coal and nuclear power plants, and threats to infrastructure security.

TJ213 2006-102035 978-0-470-02963-3
Foundations of fuzzy control.
Jantzen, Jan.
John Wiley & Sons, ©2007 209 p. $100.00
With its tutorial format and sympathy for the novice, this introductory text takes into consideration the wide range of consumer, industrial and financial applications in its examples and case studies. It systematically analyzes several fuzzy proportional-integral-derivative (PID) control systems and state space control and also takes on self-learning control mechanisms while covering fuzzy reasoning, fuzzy control, linear and non-linear fuzzy PID control, stability analysis by describing functions, and supervisory control. One of the best features is a simulation study of a car-ball balancer in which readers design a crisp PID controller and then replace it with a linear fuzzy, then a non-linear, and fine-tune the result.

ELECTRICAL ENGINEERING, ELECTRONICS, NUCLEAR ENGINEERING

TK151 978-1-59693-244-9
Electrical engineering; a pocket reference.
Heinz, Schmidt-Walter and Ralf Kories.
Artech House, ©2007 666 p. $69.00 (pa)
Comprehensive enough to be a desk reference but still fairly compact, considering the scope of the subject matter, this professional and student guide provides the basics of electrical engineering and also covers telecommunications, computer engineering and a range of other engineering disciplines. This is fully loaded with appendices that contain useful data on standards, electrical and physical data on materials and even a list of common acronyms. Rather than relying extensively on cross-references that cause more pawing than reading, the authors have organized materials in the same sequence in which students learn them and supplement text extensively with illustrations and tables. They also supply useful equations, graphics and illustrations and supply a very comprehensive index. The result should be seen on many engineers’ desks, well-thumbed.

TK5102 978-0-470-02738-7
Digital alias-free signal processing.
Bilinskis, Ivars.
John Wiley & Sons, ©2007 430 p. $150.00
Digital alias-free signal processing (DASP) is a technique for overcoming the problems of aliasing at extended frequency ranges. In this book, Bilinskis (Institute of Electronics and Computer Science, Latvia) covers the theory and techniques behind DASP. After an introductory chapter on signal digitizing and digital processing, chapters are organized in two sections on digitizing and processing, with material on different types of sampling, related sampling issues, and methods for complexity reduced designs. Examples present engineering applications using these techniques in areas including spectrum analysis, waveform reconstruction, and estimation of various parameters. The readership for the book includes practicing engineers and researchers working on the development of digital signal processing applications at extended frequencies, as well as electrical and computer engineering graduate students taking courses in signal processing or digital processing.

TK5103 2006-003478 978-1-59454-883-3
Adaptation techniques in wireless multimedia networks.
Title main entry. Ed. by Wei Li and Yang Xiao. (Wireless networks and mobile computing; v.6)
Nova Science Publishers, ©2007 357 p. $129.00
Fifteen invited papers are presented by the editors (of the U. of Toledo and the U. of Alabama) with the aim of providing a reference to current activities and findings in the relevant technical fields of next generation heterogeneous and adaptive wireless and mobile communication systems. Among the topics addressed are link adaptation techniques for carrier sensed multiple access based wireless

November 2007

SciTech News

TK5105 978-1-59994-189-9
Building web applications with SAS/IntrNet; a guide to the application dispatcher.
Henderson, Don.
SAS Institute, ©2007 352 p. $61.95 (pa)
One of the components of SAS/IntrNet software, the Application Dispatcher enables programmers to build dynamic applications that can access the power of SAS from a Web browser. This guide for experienced SAS programmers describes some less-well-known features they can use to make their tasks easier. Most of the examples given in the book are also available in a sample environment that may be downloaded from a companion Website. Consultant Henderson was one of the original developers for the SAS/IntrNet Application Dispatcher.

TK5103 978-0-470-03464-4
Personal content experience; managing digital life in the mobile age.
Lehikoisen, Juha et al.
John Wiley & Sons, ©2007 357 p. $85.00 (pa)
Lehikoisen et al. discuss issues in the personal content experience and tools for analyzing applications, services, and user interfaces from a consumer-oriented view. They aim to identify aspects of personal content that are critical for the general public and the consequences to the system, application, and user interface design. They introduce and explore issues such as context capture, user interfaces for continuous mobile use, UI design for mobile media applications, metadata magic, virtual communities, and ontologies. In addition to presenting a mobile prototype software framework, other topics they discuss include user interactions and behavioral patterns and understanding personal content from different viewpoints. The book is intended for practitioners in mobile industry and digital content management, media-intensive application developers, content creators and distributors, academic researchers, and lecturers in computer science and multimedia.

TK5105 2006-027708 1-59904-096-4
Advances in universal web design and evaluation: research, trends and opportunities.
Title main entry. Ed. by Sri Kurniawan and Panayiotis Zaphiris.
Idea Group Publishing, ©2007 304 p. $94.95
The goal is to work towards a design of the World Wide Web that will make it accessible to people with disabilities, older people, children, people whose first language is not English and whose cultures and backgrounds are different from those of Web developers, and people using outdated hardware and software. Researchers and practitioners in fields clustering around information, computers, communication, and education describe new technology that they think will help.

TK5105 978-0-471-70355-6
Title main entry. Ed. by Christos Douligeris and Dimitrios N. Serpanos.
Wiley-Interscience, ©2007 572 p. $85.00
Researchers and practitioners in computer and information sciences report on the current ability to protect both sensitive data on computer networks and the integrity of the network itself, and explore promising and interesting possibilities on the horizon. Among their topics are intrusion detection versus intrusion protection, secure multi-casting, mobile telecom networks, and securing digital content.

TK5105 2006-027712 978-1-59904-168-1
Web services security and e-business.
Idea Group Publishing, ©2007 394 p. $94.95
Focusing on the needs of businesses that rely on the web for marketing, communications and sales, this collection of articles offers professional-grade techniques, algorithms, protocols and tools that authenticate, control access, and set availability, while maintaining privacy and confidentiality. Topics include wireless LAN loopholes, web security using a neural networks, security and privacy in RFID systems, mobile code, key generation for secure multicast communication protocols, security in mobile agent systems, intrusion detection systems, authentication using zero-knowledge proofs, attacks and countermeasures on web services, verifiable encryption of digital signatures, business intelligence security, chain
signatures, distributed intrusion detection, generic algorithms, watermarking, electronic bills and off-line messaging, watermarking using redundant residue number systems, propagation and delegation of rights in access controls and risk assessment techniques, IPsec overhead in dual stack IPv4/IPv6 transition mechanisms and an approach to intentional modeling of web services security risk assessment.

TK7871 978-1-59693-132-9
CMOS RFIC design principles. (CD-ROM included)
Caverly, Robert.
Artech House, ©2007 435 p. $129.00
In this book/CD-ROM package, Caverly (Department of Electrical and Computer Engineering, Villanova University) offers a practical reference on designing elemental and advanced CMOS RF integrated circuits. The first portion of the book is a review of RF system fundamentals. The second portion covers elemental CMOS RF circuits such as low-noise amplifiers, gain amplifiers, mixers, and oscillators, with ideal circuit topologies discussed first and then merged with nonideal CMOS circuit elements. The third portion of the book looks at more advanced CMOS RF integrated circuits such as voltage-controlled oscillators, phase lock loops, and power amplifier architectures. The CD-ROM contains demonstration versions of CAD tools, CAD layouts, and measured RF data on select RFICs. The book addresses the needs of RF, wireless, and microwave circuit designers, both professionals and students.

TK7874 2006-016693 1-60021-184-4
Josephson junction and superconductivity research.
Title main entry. Ed. by William J. McCann.
Nova Science Publishers, ©2007 180 p. $129.00
The Josephson junction is a type of electronic circuit capable of switching at very high speeds when operating at temperatures approaching absolute zero. As such it combines the fields of superconductivity, materials science and electronics. In these seven papers contributors describe their research in facets of Josephson junctions, including progress in fabrication techniques for circuits of small capacitance, the order parameter symmetry of unconventional superconductors by Josephson effects, annular Josephson tunnel junctions that monitor causal horizons, non-equilibrium phase diagrams of current-driven arrays, Josephson vortex behavior in certain superconducting ceramics under a low frequency magnetic field, thermomagnetic shock waves in the vortex stage of Type-II superconductors and finite temperature effects on the quantum phase transition in disordered d-wave superconductors.

TK7871 978-0-86341-617-0
Low power and low voltage circuit design with the FGMOS transistor.
Rodriguez-Villegas, Esther. (Circuits, devices and systems series; 20)
IET, ©2006 304 p. $109.00
In a world in which consumers want their electronic devices ever smaller, more complex, and easier to keep charged, power efficiency has become a major gating factor to progress. Rodriguez-Villegas (electrical and electronic engineering, Imperial College, London) gives designer what they need to know when working in low voltage and low power (LV/LP) circumstances, especially those involving the floating gate MOS (FGMOS). She begins by describing the reasons the issue is critical and the analog and digital techniques used to reduce power consumption, then covers the FGMOS transistor, circuit applications and design techniques, low-power analog continuous-time filtering based on the FGMOS in various regions (inversion ohm and saturation and weak inversion), low power log-domain filtering, and low-power digital design based on the FGMOS threshold gate. Distributed in the US by Books International.

TK7874 2006-101011 978-0-8493-8528-5
Nano and molecular electronics handbook.
Title main entry. Ed. by Sergey Edward Lyshevski. (Nanoscience, engineering, technology, and medicine series)
CRC / Taylor & Francis, ©2007 -- p. $129.95
When solid-state microelectronics development hits a wall, other paths will get more attention; but this volume brings together 26 contributions from researchers (primarily, but not exclusively US-based) who are already thinking ahead. Their investigations involve the profound differences that molecular electronics involves at every level of research and application. Contributions are arranged in sections dealing with the device- and system-level, nanoscaled electronics, biomolecular electronics and processing, and device-level modeling and simulation. Editor Lyshevski (U.S. Air Force Research Laboratories and Naval Warfare Centers) is a prolific author and an expert in the synthesis, design, application, verification, and implementation of aerospace, electronic, electromechanical, and naval systems.
MOTOR VEHICLES, AERONAUTICS, ASTRONAUTICS

TL154 2007-001235 978-1-56990-406-0
Plastics in automotive engineering; exterior applications.
Title main entry. Ed. by Rudolf Staub and Ludwig Vollrath.
Hanser Gardner Pub., ©2007 407 p. $129.95
Stauber (BMW Group, Germany) and Vollrath (VDI-Gesellschaft Kunststofftechnik, Germany) provide an overview of current plastic polymer applications for automotive exteriors in European car manufacturing. The volume describes body applications for lightweight design, material concepts and process technologies, modeling and rapid prototyping, and joining and bonding techniques. It also presents case studies of design, production, and performance for structures and body panels; front modules, crash elements, and safety concepts; roof modules and hardtops; automotive glazing; and acoustics and aerodynamics. Future volumes are planned that will address applications in the car interior and in the engine compartment and assemblies.

TL782 978-1-56347-703-4
Fundamentals of hybrid rocket combustion and propulsion.
Title main entry. Ed. by Martin J. Chiaverini and Kenneth K. Ku. (Progress in aeronautics and aeronautics; v.218)
Am. Inst. of Aero. & Astro., ©2007 648 p. $119.95
Chiaverini, a propulsion engineer, and Ku (mechanical engineering, The Pennsylvania State University) bring together respected experts in the field of hybrid rockets in this text/reference for industrial designers, propulsion steam analysts, test engineers, academic researchers, and graduate and advanced undergraduate students in chemical propulsion. Coverage encompasses fundamental aspects of hybrid combustion, theoretical and experimental approaches to solid-fuel regression rate characterization, and both analytical and numerical modeling of hybrid rocket internal flow fields. Other areas covered include transient hybrid rocket combustion, scaling effects relevant to hybrid motors, practical applications, and challenges for continued advancements in the field. B&w photos are included.

CHEMICAL TECHNOLOGY

TP244 2006-036086 978-0-470-02725-7
Aerosol sampling; science, standards, instrumentation and applications.
Vincent, James H.
John Wiley & Sons, ©2007 616 p. $155.00
Vincent (environmental health sciences, University of Michigan) provides an account of aerosol sampling as it is applied to the measurement of aerosols that are ubiquitous in both indoor and outdoor occupational and living environments. Early chapters describe the physical science underpinning the process of aerosol sampling. Later chapters present the basis of standards for aerosols, including in particular the link with human exposure by inhalation, and cover the development of practical aerosol sampling instrumentation. Final chapters describe the performance of sampling instruments in the field in both ambient and occupational atmospheric environments. The readership for the book includes researchers and practitioners in occupational and environmental health and hygiene, aerosol scientists and engineers, and graduate students in these fields. In addition, the book will be of interest to environmental and occupational epidemiologists, atmospheric scientists, and occupational and environmental health policy specialists.

TP371 2006-027648 978-0-8138-2968-5
Advances in thermal and non-thermal food preservation.
Title main entry. Ed. by Gaurav Tewari and Vijay K. Juneja.
The technology of food preservation has advanced far beyond the thermal technique of cooking with fire and non-thermal techniques such as pickling. In this volume, Tewari (CEO and president, Tewari De-Ox Systems, Inc.) and Juneja (supervisory microbiologist and lead scientist for the US Department of Agriculture's Eastern Regional Research Center) present 13 paper that describe advanced thermal and non-thermal techniques of food preservation and place a special emphasis on considerations of commercialization of said techniques. In the realm of thermal techniques, contribution discuss thermal processing of liquid foods with or without particulates, aseptic processing, microwave and radio-frequency heating, novel thermal processing technologies, and sous-vide ("under vacuum") and cook-chill processing of foods. Nonthermal techniques discussed include active packaging, ozone
treatment, electronic pasteurization, high-pressure processing, and pulsed electric fields.

**MANUFACTURES**

TS1925 2007-008123 978-0-8155-1528-9
Compounding precipitated silica in elastomers.
Hewitt, Norman.
*William Andrew Publishing, ©2007* 580 p. $249.00
Hewitt (formerly of PPG Rubber Research) provides an overview of the chemical principles of silica compounding. Following a description of precipitated silica properties and their relationship to elastomer processing and reinforcement, chapters describe methods for compounding silica in natural rubber, emulsion styrene butadiene rubber, solution styrene butadiene rubber, ethylene propylene rubbers, neoprene, and nitrile. Each of these chapters discuss crosslinking or acceleration systems, zinc-free curing, surface area effects, and processing characteristics and provide comparison discussion of compounding using carbon black instead of precipitated silica. Further, they look at applications relevant to tear and aging resistance, adhesion, and low rolling resistance in tire treads. Each chapter also contains formulary recommendations for silica-reinforced compounds over a range of hardness.

**FOOD SCIENCE**

TX360 2007-003464 978-0-8493-1473-5
Nutrition in public health; principles, policies, and practice.
Spark, Arlene.
*CRC / Taylor & Francis, ©2007* 552 p. $119.95
The purpose of Spark (Hunter College) in writing this book was to provide public health professionals with an overview of the field of public health nutrition, with a focus on the US government’s role in determining nutrition policy and practice. She covers the principles of the field in chapters discussing the population of the United States, nutritional epidemiology, food and nutrition surveys for monitoring public health, programs to reduce disparities in the prevalence of diet-related chronic disease, weight control challenges and solutions, and special populations issues. She then discusses food and nutrition politics, policy, and legislation in the United States and the federal government’s food and nutrition guidance systems. Finally, she addresses the practice of public health nutrition in five chapters that present the tools for conducting a food and nutrition assessment of a community, designing and carrying out a social marketing campaign, writing grant proposals, and creating programs to promote food security and ensure the safety of the food supply.
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