

Calendar of Events

In January

Tues. Jan. 12, 7pm
[Executive Committee](#)
 Chicago Section

Wed. Jan. 13, 5:30pm
[CO2 Cap and Trade](#)
 Power & Energy

Wed. Jan. 20, 5:30pm
[Building Automation](#)
[Systems](#)
 Industry Applications

Wed. Jan. 27, 6:30pm
[OS Virtualization](#)
 IEEE-Fox Valley

Fri. Jan 29, 11:00am
[Machine Learning](#)
 Signal Processing

Later in 2010

Mon. Feb. 1, 6:45pm
[Consultants Network](#)

Fri-Sat. Feb. 12&13
[Power & Energy](#)
[Conference](#)
 IEEE Region 4

Fri. Feb. 19, 5:30pm
[Washington Awards](#)
 Chicagoland E-Week

Sat. Feb 20, 11:00am
[Engineers Week Expo](#)
 DuPage E-Week

Sat., March 27, 6:30pm
[Awards Dinner Dance](#)
 IEEE-Chicago Section

Sat. April 10, 9:00am
[Productive Meetings](#)
 IEEE-Chicago

Sun-Tues. April 11-13
[Networking, Sensing](#)
[and Control](#)

Thurs-Fri. April 22&23
[Control & Modeling:](#)
[Biomedical Systems](#)
 Control Systems

Sat. April 24, 9:00am
[Leading When Not In Charge](#)
 IEEE-Chicago

Mon-Fri. May 17-21
[Collaborative](#)
[Technologies](#)

Email upcoming events to [Michele Beaulieux](#) for inclusion in the e-Scanfax and IEEE-Chicago website calendars.



Managing Product Design and Development
 McCormick / Kellogg
 Executive Certificate Program

March 21 - 24, 2010
 Northwestern
 University
 Chicago, IL

Register Now!

This Month's Articles

Chair's Corner: Some New Year's Resolutions To Consider . . .

Bill Nartker suggests some resolutions that could help the Section increase its rebate from headquarters this year. [\[more\]](#)

Five IEEE-Chicago Members Elevated to Grade of Fellow in 2010

The IEEE Board of Directors conferred the highest membership grade upon **Thomas Jay Cloonan** of ARRIS, **Chang Liu** and **Kevin Michael Lynch** of Northwestern, **Jafar Saniei** of IIT, and **Dan Schonfeld** of UIC. [\[more\]](#)

Electrical Engineer Once Again to Receive Washington Award

On February 19, **Alvy Ray Smith** will receive the **2010 Washington Award** at the **Chicagoland Engineering Awards Banquet** at University Club of Chicago. [\[more\]](#)

E-Week Expo to Show How Engineering Careers Start In Child's Play

DuPage Area Engineers Week activities will once again include the immensely popular **Engineers Week Expo** on **Saturday, February 20th** at IIT in Wheaton. [\[more\]](#)

IEEE-Chicago Fund Awards First Grant to Mount Prospect Library

The **Mount Prospect Library** will use its **IEEE-Chicago Fund** grant to buy "**Science-to-Go**" kits for children in kindergarten through 6th grade. [\[more\]](#)

IEEE Fellow Dan Schonfeld: Helping Catch Thieves & Read Fuzzy Faxes

UIC Professor **Dan Schonfeld** was cited for his contributions to image and video analysis. [\[more\]](#)

IEEE-Chicago to Offer Management Classes at Harper College in Palatine

In April, the Chicago Section will offer **Positive and Productive Meetings** and **Leading When You're Not In Charge**. [\[more\]](#)

Chair's Corner: Some New Year's Resolutions To Consider . . .**Happy New Year!**

If you're still searching for a **meaningful New Year's resolution**, I can provide you with some ideas. One of the IEEE-Chicago section goals is to increase the Section's 2010 rebate from headquarters by 10% over the 2009 rebate. To achieve that ambitious yet realistic goal, we could use your help. There are three ways to increase the rebate: increase membership, increase senior members, and increase chapter activity, that is, hold more meetings. So, please consider helping out the section by making one of these New Years' resolutions:

- **Invite a colleague to join IEEE.** Recruiting tips and information on Member-Get-A-Member recruiting rewards, including membership discounts, are listed on the [IEEE membership page](#).

- **If appropriate, apply for senior member status.** To be eligible, "a candidate shall be an engineer, scientist, educator, technical executive, or originator in IEEE-designated fields for a total of ten years and have demonstrated five years of significant performance." If you have questions, please contact the Chicago Section's Senior Member Upgrade Chair, [Kenji Suzuki](#) or visit the senior member [web page](#).

- **Help with chapter activities, especially planning and holding meetings.** Some members have expressed interest in becoming involved in new chapters of the [Vehicular Technology Society \(VTS\)](#) and [Women in Engineering \(WIE\)](#). We could also use some assistance with [Graduates of the Last Decade \(GOLD\)](#) and other groups. Please let IEEE-Chicago Section Vice Chair [Jim Phillips](#) or me know if you are interested in helping out.



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ILLINOIS INSTITUTE OF TECHNOLOGY

[2010 International Symposium on Collaborative Technologies and Systems](#) in Chicago in May!

[Marketing Strategy and Communications for Technology Firms Work In Motion](#)

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Thanks,

[William \(Bill\) Nartker](#)
IEEE-Chicago Section Chair

P.S. At our last Executive Committee meeting, we completed the budget, which I'm happy to report is balanced. Final approval will take place at the **January 12th Executive Committee meeting**. All are welcome!

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Five IEEE-Chicago Members Elevated to Grade of Fellow in 2010

The **IEEE Board of Directors** conferred the highest membership grade, that of Fellow, upon five IEEE-Chicago Section members after a rigorous evaluation process. The total number of Fellows selected in any one year does not exceed one-tenth of one percent of the total voting Institute membership. Chicago is indeed honored to have five! They are:

- **Thomas Jay Cloonan**, Chief Strategy Officer of the broadband network technology leader, **ARRIS**, for leadership in development of cable modem termination systems
- **Chang Liu**, Professor of Mechanical Engineering at **Northwestern University**, for contributions to bio-inspired and polymer micro electro-mechanical systems
- **Kevin Michael Lynch**, Professor of Mechanical Engineering at **Northwestern University**, for contributions to robotic manipulation, motion planning, and control of mechanical systems
- **Jafar Saniie**, Professor of Electrical and Computer Engineering at **Illinois Institute of Technology**, for contributions to ultrasonic signal detection, estimation and imaging
- **Dan Schonfeld**, Professor of Electrical and Computer Engineering, Computer Science, and Bioengineering at the **University of Illinois at Chicago**, for contributions to image and video analysis



Dan Schonfeld, honored for contributions to image and video analysis.

The IEEE-Chicago Section will be honoring our five esteemed Fellows at the **IEEE-Chicago Section Annual Awards Dinner on Saturday, March 27** at **Manzo's** in Des Plaines. More details forthcoming, but in the meantime, mark your calendar!

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Electrical Engineer Once Again to Receive Washington Award



Alvy Ray Smith, animation expert

On February 19, **Alvy Ray Smith** will receive the **2010 Washington Award** at the **Chicagoland Engineering Awards Banquet** at University Club of Chicago. The Washington Award, one of the first national engineering awards, is named after the nation's first president who was an engineer.

Smith cofounded or was involved in the beginning of four centers of computer graphics excellence: **Altamira**, **Pixar**, **Lucasfilm**, and **New York Tech**. After that, he became the first Graphics Fellow at **Microsoft**. Smith directed the first use of full computer graphics in a successful major motion picture, **Star Trek II: The Wrath of Khan**, while at Lucasfilm. His team created **Tin Toy**, the first computer animation ever to win an Academy Award, and **Toy Story**, the first completely computer-generated film and also an Academy Award winner. He initiated and negotiated the Academy-Award-winning Computer Animation Production System (CAPS) project between Pixar and **Disney**. Disney now uses this the hardware and software system for the production of all its 2D animated feature films. Smith was also a Regent for four years for the **National Library of Medicine**, where he was instrumental in inaugurating the Visible Human Project. Smith holds a B.S. in Electrical Engineering from **New Mexico State University** and a PhD in computer science from **Stanford University**.

For more information on the Awards Banquet, visit the Chicagoland eWeek [website](#).

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E-Week Expo to Show How Engineering Careers Start In Child's Play

As part of the **2010 National Engineers**



Week, the DuPage Area Engineers Week activities will once again include the immensely popular **Engineers Week Expo** on **Saturday, February 20th** from 11:00 a.m. to 3:30 p.m. at the **Illinois Institute of Technology's Rice Campus** in Wheaton. The theme of this year's event, which seeks to make math, science, and engineering fun and accessible to learners of all ages, is "**Engineering Today's Play into Tomorrow's Careers.**"



At last year's E-Week Expo, IEEE WIE member Sharon Phillips explains the radio waves driving a remote-controlled forklift.

Women In Engineering (WIE) members interested in volunteering are requested to contact [Sharon Phillips](#). The Expo is free and open to the public. For more information, visit the DuPage E-Week [website](#).

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IEEE-Chicago Fund Awards First Grant to Mount Prospect Library



IEEE-Chicago Executive Committee Member John Zulaski gives the envelope to Mount Prospect Library Youth Technology Librarian Brad Jones while Mount Prospect Library Deputy Director Cathy Deane looks on.

The **Mount Prospect Library** will use its **IEEE-Chicago Fund** grant to buy a circulating collection of "**Science-to-Go**" kits, which will provide age appropriate engineering activities for children in kindergarten through 6th grade. Possible topics for kits include electricity, renewable energy, static electricity, simple machines, early structures, and straw rockets. The kits will include equipment and information necessary to conduct simple experiments. And as a part of the project, the library will develop a collection of print and audio-visual materials to support the experiments.

The kits will support the application of science and engineering into everyday life. The kits will provide teachers, homeschoolers, and other caregivers access to material that might otherwise be unavailable to them due to its expense. The library provides a perfect avenue for sharing equipment among multiple users. Science fair projects present challenges to many students, and it is difficult to obtain the equipment needed to develop experiments.

If you'd like to see IEEE-Chicago continue to promote engineering in such worthy ways, please consider giving to the **IEEE-Chicago Section Fund**. You can donate [on-line](#). (After filling in the initial form, click continue. Then designate the IEEE-Chicago Section Fund.) Or, if you know of a local educational or history program that is promoting technology professions and is in need of funding, on the Chicago Fund tab at the top of this page for more information.

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IEEE Fellow Dan Schonfeld: Helping Catch Thieves & Read Fuzzy Faxes

Have you ever wished you could read a fuzzy fax? Or wished your conference call could be a virtual videoconference? Or maybe you've been hoping the police could catch the thief who stole your car. **Dan Schonfeld**—Professor of Electrical and Computer Engineering, Computer Science, and Bioengineering at the **University of Illinois at Chicago (UIC)**—was elevated to IEEE Fellow for the work he is doing that will help solve those problems. His citation is "for contributions to image and video analysis."

Schonfeld's work on image analysis, or the fuzzy fax problem, began with the PhD thesis of a fellow **IEEE Fellow, Petros Maragos**, which "presented a bunch of

interesting problems.” Maragos answered some, but left some open. Intrigued, Schonfeld started working on the open ones. His initial interest, he says, “was purely mathematical.” The **U.S. Office of Naval Research (ONR)** learned of Schonfeld’s research developing a nonlinear tool for recovering and restoring original images from degraded or contaminated ones and provided a grant to work on detecting floating mines.



Examples of the many special effects used to transition from one film clip to the next.

Schonfeld was also cited for his work in video segmentation. Previously, each new special effect that Hollywood developed to blend one film segment into the next required a new [algorithm](#) to separate. Not knowing which special effect was used required running all the algorithms, albeit simultaneously. Schonfeld created an algorithm that could detect where a segment began and where it ended no matter what special effect was used to blend it into the next. He applied the principles of change detection theory, a statistical methodology originally developed to detect the initial rumblings of a stock market crash. He substituted vectors, representing video frames, for stock prices in his time series analysis. Video segmentation is a crucial building block for analyzing videos whether reviewing thieves caught on security cameras or creating virtual videoconferences.

For Schonfeld, being named an IEEE Fellow means “belonging to a distinguished group of people.” At UIC, one of Schonfeld’s departments, the Department of Electrical and Computer Engineering, has 11 active and, including emeritus, 13 faculty members of the 29 tenure track professors who are IEEE Fellows. That is, indeed, distinguished company!

The work of the other four new IEEE-Chicago Fellows will be profiled in upcoming issues of e-Scanfax.

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IEEE-Chicago to Offer Management Classes at Harper College in Palatine

In April, the Chicago Section will offer two Saturday morning classes taught by **Marianne Rowe-Dimas: Positive and Productive Meetings** on April 10th and **Leading When You’re Not In Charge** on April 24th. For more detail, visit the IEEE-Chicago calendar by clicking on the tab at the top of this page. For questions and registration, call Harper College at 847.925.6300.

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