



# IEEE

# MADISON SECTION NEWSLETTER

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*SERVING IEEE MEMBERS OF SOUTH CENTRAL WISCONSIN*

**SEPTEMBER 2009**

## IEEE Madison Section's 100th Anniversary/Fellows Celebration and IEEE Presentation!

**Date/Time:** Friday, September 25, 2009, 5:30 – 7:30 PM (cocktails at 5:00 PM)  
(NOTE—this meeting was previously advertised for September 18th, but has been moved to the 25th.)

**Location:** The Pyle Center, 710 Langdon Street, Madison, WI 53706 (Google map link: <<http://tinyurl.com/nfqe6x>>)

**Menu:** There will be a Chicken, Beef and Vegetarian option available for dinner. The exact menu is listed on the invite - online at <[http://www.bugsoft.com/ieee/files/IEEE\\_Invite.pdf](http://www.bugsoft.com/ieee/files/IEEE_Invite.pdf)>. Cost \$20. (FREE to IEEE Fellows and a Guest)

**RSVP:** by September 20th with payment and dinner selection(s) to David Marca, 4804 Roigan Terrace, Monona, WI 53716. The RSVP card is also online at <[http://www.bugsoft.com/ieee/files/IEEE\\_RSVP.pdf](http://www.bugsoft.com/ieee/files/IEEE_RSVP.pdf)>.

*Non-member guests are always welcome!*



# IEEE

**Celebrating 125 Years**  
*of Engineering the Future*

### IEEE Madison Section's 100th Anniversary Celebration

**Presentation:** Don Bramlett, IEEE Region 4 Director, Bob Parro, IEEE Region 4 Central Region Chair

IEEE Madison Section will be honored with a banner commemorating 100 years of service to Madison area IEEE members. There are only 17 sections in the United States older than we are!

### IEEE Madison Section's Fellow Celebration

**Presentation:** Prof. Willis Long, P.E., IEEE Fellow

The IEEE Madison Section would like to honor the Fellows of its section with a program of their achievements. All Madison section fellows will be listed in the event program, with a presentation to our newest Fellows, Susan Hagness and Parameswaran Ramanathan.

### A Perspective on the Role of IEEE—Past, Present and Future

**Speaker:** Russell Harrison, IEEE-USA Sr. Legislative Representative

2009 has proven to be a banner year for technology engineers. Our elected leaders in Washington have focused on our profession and our issues like never before. Alternative energy, intellectual property, the Smart grid, Medical IT, and basic research have all been at the center of major debates in Congress. K-12 engineering education, small business support and high-skill immigration were also on the table this year. This kind of attention from our elected leaders is usually, but not always, a good thing.

IEEE-USA's Senior Legislative Representative for Grassroots Activities Russell Harrison will explain how all of these debates have impacted the high-tech industry, higher education and the lives of IEEE members. He'll also give us a preview of what to expect the rest of this year and next. He will be helping us celebrate our section's history by putting IEEE into a broader, societal perspective. Our association has helped improve the lives of hundreds of thousands of engineers and their families, but we've also made our country better. Join us for an entertaining discussion of how and what Congress has planned for us next.

### Particle Filtering or Simulation on Complex Biochemical Systems

**Date/Time:** Tuesday, October 6, 2009, 11:45 AM – 1:00 PM  
(NOTE: Tuesday meeting!)

**Speaker:** Dr. Petar M. Djuric, Distinguished Lecturer of the IEEE, Professor, Stony Brook University

**Location:** Rocky Rococo's Pizza, 7952 Tree Lane (Madison Beltline Hwy. at Mineral Pt. Rd.), 608.829.1444

**Menu:** Pizza buffet, salad and soft drinks (\$5.00 members, \$10.00 non-members, free for UW-Madison student members)

**RSVP:** by October 1st to David Marca via e-mail ([dmarca@openprocess.com](mailto:dmarca@openprocess.com)) or call 617.645.1358



## Upcoming 2009 Short Courses for Engineers and Other Technical Professionals

- **Turning Strategy into Action for Engineering Managers and Leaders**  
September 21–23, 2009 in Madison, WI
- **The Engineer in Transition to Management**  
October 5–7, 2009 in Madison, WI
- **Planning and Implementing Microwave Radio for Next Generation Networks**  
November 9–11, 2009 in Madison, WI
- **Preparing for 4G Wireless: Introduction to LTE**  
November 17–18, 2009 in Madison, WI

For further information...

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*Non-member guests are always welcome!*

Particle filtering is a Monte Carlo – based methodology for sequential signal processing. It is designed for estimation of hidden processes that are dynamic and that can exhibit most severe nonlinearities. Also, it can be applied with equal ease to problems that involve any type of probability distributions. Therefore, it is not surprising that particle filtering has gained immense popularity. In this talk, first, the basics of particle filtering will be provided with description of its essential steps. Then some important topics of the theory will be addressed including Rao-Blackwellization, smoothing, and estimation of constant parameters. Finally, a presentation of most recent advances in the theory will be given. The talk will contain signal processing examples which will aid in gaining valuable insights about the methodology.

Petar M. Djuric received his B.S. and M.S. degrees in electrical engineering from the University of Belgrade, in 1981 and 1986, respectively, and his Ph.D. degree in electrical engineering from the University of Rhode Island, in 1990. From 1981 to 1986 he was a Research Associate with the Institute of Nuclear Sciences, Vinca, Belgrade. Since 1990 he has been with Stony Brook University, where he is Professor in the Department of Electrical and Computer Engineering. He works in the area of statistical signal processing, and his primary interests are in the theory of modeling, detection, estimation, and time series analysis and its application to a wide variety of disciplines including wireless communications and biomedicine. Prof. Djuric has served on numerous committees for the IEEE and has been invited to lecture at universities in the United States and overseas. For the years 2008-2009 he has been elected Distinguished Lecturer of the Signal Processing Society. He was the Area Editor for Special Issues of the Signal Processing Magazine and Associate Editor of the IEEE Transactions on Signal Processing. He has also been on the Editorial Boards of several journals including the IEEE Transactions on Signal Processing, the IEEE Journal of Special Topics in Signal Processing, Digital Signal Processing, Journal of Applied Signal Processing, Signal Processing, and Journal on Wireless Communications and Networking. In 2007, he received a paper award for a paper published in the Signal Processing Magazine. Prof. Djuric is a Fellow of IEEE.

## IEEE Madison Section Officer Nominations

At the December 2009 monthly meeting, the IEEE Madison Section will conduct its annual officer elections prior to the technical presentation. The positions include chair, vice-chair, secretary, treasurer, and multiple member-at-large positions. Job descriptions can be found online at [http://www.ieee.org/web/geo\\_activities/units/Resources/Officer\\_Training/job-desc.html](http://www.ieee.org/web/geo_activities/units/Resources/Officer_Training/job-desc.html). Nominations may be made via e-mail to the one of the nominating committee members: Sandy Rotter, [rotter@ieee.org](mailto:rotter@ieee.org) or Clark Johnson, [clarkjohnson@cpinternet.com](mailto:clarkjohnson@cpinternet.com). Additional candidate nominations are welcome and encouraged for all positions.

The nominations to date include:

Chair: Shazia Ahsan  
Treasurer: David Marca

## Sh-h-h-hh! Hidden Job Market Secrets Revealed

*By Debra Feldman*

Today's job market is extremely tight. In my 20-plus years of senior management consulting, unrelenting tenacity remains the single best way to beat the odds of landing a new career opportunity that will be both satisfying and hold promise for future growth and advancement. Unrelenting tenacity means persistence, yes, but it also means looking for creative ways to attract employers' attention and to be remembered when a potentially appropriate challenge arises. In today's competitive market, it's not just what you know or even who you know, but who you know with the necessary authority to hire, who knows what you know and how you can contribute to the organization's success.

With few open positions advertised through traditional outlets, and search firms lacking jobs to fill, the best way to land a new job today is to find the opportunities that are not advertised — the jobs that exist within the Hidden Job Market.

The only way to find out about unadvertised job openings is through connections. The value of relationships for sourcing a new job is greater now because it's these contacts that provide leads, open doors, set up meetings and foster a sense of trust and reliability between you and a prospective employer. Regardless of what you may find on job boards or corporate employment Web sites, companies continue to hire on a very selective basis, relying increasingly on personal referrals — not applications — to find new employees. Having the right inside connections will give you a distinct competitive advantage over those who do not because you will have access to information, as well as a recommendation from a trusted source to help ease you past the gatekeepers who get paid to keep job seekers at arm's length. Having connections can accelerate your campaign progress and help to develop the key relationships that will put you among the first to learn about openings. If the timing is right, you might even have a chance to help an employer craft a job description which suits you perfectly so that you outclass other applicants and land the offer.

#### What is the Unadvertised or Hidden Job Market?

Positions that are not advertised to the general public and not included on the company employment Web site are the Unadvertised or Hidden Job Market. The hidden job market also includes jobs that are not posted online or printed in the classifieds. These employment opportunities are usually accessed through an inside connection who is aware of an opening, or need, before the job is officially announced. The only people "in the know" about these openings are those with an inside connection. These job leads are passed along through a network of linked contacts. Such organizational needs or career opportunities may be produced by circumstances such as a leave of absence, unexpected retirement, employee resignation or termination, mergers and acquisitions activity, new products or services, opening of a new

facility or territory, internal reorganization, etc. They may represent an existing position within the corporate structure, or be created for the right person at the right time. Another example of the unadvertised or hidden job market is when an incumbent is reassigned or let go in order to hire a specific individual; this transaction may not appear as an open position or only after the deal is closed.

#### Who Is Aware of Potential Opportunities in the Hidden Job Market?

The Hidden Job Market is accessed through people who know about openings, plans and employer needs. These individuals are primarily employees, consultants, former employees, and may also include vendors, customers, business partners and others with connections to company insiders. Today, social networking sites, personal and corporate blogs, online and in-person career support groups and alumni networks are becoming recognized sources of information about unadvertised opportunities. Relevant news and leads are passed among contacts (by word of mouth, electronically and verbally) along with recommendations and endorsements fueling networking introductions and unofficial recruiting. Employers have always relied on their networks to source talent, especially at the more senior levels. Recruiting is not just the domain of HR, recruiters and advertising. In today's economy, networking as a major recruiting method is an increasing trend. The employer's network may be faster, cheaper and more effective than advertising or delegating this to the HR department or an external recruiter.

#### How to Identify Opportunities in the Unadvertised or Hidden Job Market?

Abundant free research data are available on the net and in traditional media that can be used to define potential employers. Focus your efforts on those companies considered most likely to value your qualifications (e.g., direct competitors) and who will appreciate your initiative in introducing yourself. Personal and business contacts may also have suggestions about choosing target employers and recom-

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mentations for additional contacts.

In today's highly competitive job market, it's important to differentiate yourself and demonstrate that you are a go-to expert, and a low-risk hire who can be trusted and 100 percent reliable. Do your homework and be fully prepared to present yourself as a unique value proposition that will provide solutions, positively impact the bottom line, complement the corporate culture and otherwise be an asset that fits in from the beginning.

Preparation to enter the hidden job market involves a lot of work and skills which may not be in every candidate's repertoire — a combination of sales and marketing (including cold calling), research, public relations and project management. Networking with the intent of accessing potential job leads accelerates the job search process better than any other method. Learning and practicing how to Network Purposefully™ is the best way to penetrate the Hidden Job Market.

### Why Focus on the Unadvertised or Hidden Job Market?

Networking may not come naturally to some job candidates, but today's job market demands extraordinary efforts to command employers' attention and cultivate their genuine interest in a prospective team member. If you are not getting enough positive responses from your job search efforts, it's time now to increase activities designed to identify unadvertised jobs by spending more time networking than applying online, attending job fairs, and sending out resumes.

For those looking for a new career challenge today, it is not just what you know or even who you know, but who knows what you know. This means that you have to offer prospective employers what they need, when they need it, on acceptable terms, and make certain that you stay in touch and are remembered when changes create new, appropriate opportunities.

Traditional methods like submitting credentials, relying on recruiter initiatives and responding to an advertisement are less effective than cold calling, Web 2.0 tactics (e.g., selectively participating in forums, blogging activities, social networking sites, increasing search visibility, alumni groups, etc.) and networking purposefully, all of which have proven to generate job leads including unadvertised positions in the hidden job market.

Following are a few steps to jump start your campaign targeting the unadvertised or hidden job market:

1. Assemble a list of target employers. Conduct research to identify prospective target companies that match selection criteria based on industry, ranking, reputation, future growth, location, size, ownership status, etc. Reference librarians, search engines, online and print directories, trade associations, job search sites, business publications, online forums are a good place to start accumulating knowledge and create the list which will be refined as the project moves forward.
2. Develop a remarkable value proposition to command attention from employers. Generate trust and show an ethical character. Define yourself as a go-to expert. Because change is constant, it's necessary to maintain an active, constant presence on the decision-maker's radar. The trick is to courteously remain front and center as the reliable solution to be remembered as new needs or challenges surface. Craft a customized (not an industry-generic) message that shows you did your homework, with details and language and examples which complement the corporate culture and style.
3. Be proactive! Initiate contact with the hiring decision-maker. The preferred method is to obtain an introduction through mutual contact such as a company insider, a former or current employee, trusted colleague of a hiring decision-maker, respected consultant or professional advisor.
  - a. Network Purposefully™ to develop relationships designed to establish referrals and access insider information. If you don't have a common contact, cold calling is an effective means to get attention and start a conversation if the value proposition is compelling and meaningful to the recipient.
  - b. Before there was the Internet, cold calling was one of the few choices eager candidates had at their disposal. With the masses resorting to online options and hiding behind e-mail messages, those who brave corporate gatekeepers to reach out to employers are more likely to be noticed as serious about getting inside a company, and being apt to take initiative in the future to get things done.

4. Follow up on a regular basis. Polite persistent pings move the process forward. Offer assistance. Share an idea. Send a link. Stay on the decision-maker's radar. Build trust and encourage interaction beyond the first contact. Networking is all about being generous, not merely getting names to contact. Networking won't be productive unless it involves two-way relationships. It may take some creative thinking, but look for ways to be supportive.

Building a network purposefully is an investment that can create long-term career insurance, providing leads to new challenges as well as important business resources, professional support and advice. The emphasis is on promoting a mutually beneficial relationship where each party makes the effort to keep in touch and help each other however they can.

*Debra Feldman, founder of Job Whiz, is an executive talent agent with more than 20 years of senior management consulting experience. She uses networking to identify and connect candidates with unadvertised new career opportunities in the hidden job market. For more information, visit [www.JobWhiz.com](http://www.JobWhiz.com), and to contact her, visit [www.jobwhiz.com/contact.php](http://www.jobwhiz.com/contact.php).*

Comments may be submitted to [todaysengineer@ieee.org](mailto:todaysengineer@ieee.org).

Opinions expressed are the author's.



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