



# Madison Section NEWSLETTER

Volume 4, Number 8

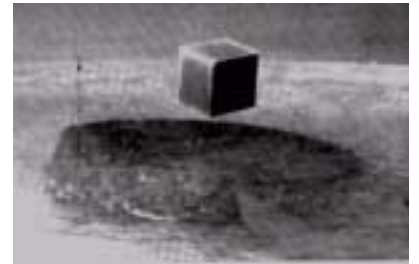
Serving IEEE Members of South Central Wisconsin

November 2001

## **High Temperature Superconductivity: 15 Years and Still Exciting**

*NOTE: this meeting is scheduled for the 2nd Thursday of the month rather than our usual 3rd Thursday!*

- Date/Time:** Thursday, November 8, 2001, 11:45 AM - 1:00 PM  
**Speaker:** Cliff Olson, UW-Madison Synchrotron Research Center  
**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 (cost \$10.00 - Note price increase due to rising facility costs.)  
**RSVP:** by November 5th to Roy Thompson via email (roy.thompson@tdstelecom.com) or call 608/664-4415



*Non-member guests are always welcome!*

Fifteen years ago, the first questions about the cuprate superconductors were whether they were conventional superconductors with a very high transition temperature, or a different class of materials with a different mechanism causing superconductivity. Groups such as ours at the storage ring have pursued that question ever since. Very early, it was clear that the mechanism was different. A tremendous amount of effort around the world has made a great deal of progress, but the detailed mechanism is still not known. In the meantime, applications move forward. In the last year, it has been discovered that Magnesium Diboride is a conventional superconductor with a very high transition temperature. Since this is a simple material, that is inexpensive to produce, it lends itself to interesting speculation about applications.

Cliff Olson is a Senior Physicist with the Ames Laboratory, which is operated by Iowa State University for the US Dept. of Energy. He works at the UW-Madison Synchrotron Radiation Center in Stoughton.

## **Meeting Location & Lunch Prices**

As you can see in the meeting notice above, we have had to raise our lunch fee to account for increased facility costs. Rocky Rococo's has converted their smaller meeting room into a game/party room. The larger meeting room is now the only room suitable for our use. There are many groups that use the meeting room and it is getting very difficult to reserve the room for specific dates unless we reserve far in advance - this is why we've had the last several meetings on the second Thursday of the month rather than our usual third Thursday. We could reserve the room well in advance but we would also like to allow some latitude for speakers that may not be able to present on the third Thursday. Rockys has also started charging a reservation fee for the room and has new minimum requirements for the number of attendees (we pay a per person fee for the lunch buffet). With the new fee structure, we are finding it difficult to break even (Note: we are NOT trying to make a profit on the meetings!). The IEEE Madison Section officers have therefore decided to increase the lunch price from \$8.00 to \$10.00, effective immediately. We are in the process of evaluating other meeting locations and are actively soliciting suggestions from the section membership. Please send suggestions to cheilman@ieee.org.

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## IEEE Madison Section Elections

At the December 2001 monthly meeting, the IEEE Madison Section will conduct its annual officer elections prior to the technical presentation. Nominations may be made at the meeting or beforehand by telephone or via e-mail to the Chair (274-2003, [cheilman@ieee.org](mailto:cheilman@ieee.org)).



Additional candidate nominations are welcome and encouraged for all positions. The nominations to date include:

Chair: Sandy Rotter  
Vice-Chair: Bob Sier  
Secretary: Tom Yager  
Treasurer: John Hicks  
Mem. at Large: John Cortsvet  
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## IEEE Madison Section Mailing List

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If you would like to subscribe, simply send an email to [majordomo@majordomo.ieee.org](mailto:majordomo@majordomo.ieee.org) with "subscribe madison-section" in the body of the message (without the quotes). The subject of the message is ignored and can be left blank. Further instructions can be found on our web page at <http://www.bugsoft.com/ieee/mailling.html>.

## The 8 Skills You Need To Succeed

*Harry T. Roman for IEEE-USA Today's Engineer*

So you want to work in a cutting-edge, high-tech, information-rich company. That's a good goal. How can you reach that goal quickly? Try these eight 'killer skills' - qualities employers consider essential:

### 1. Analyze Information

In an information-rich company, people with good planning, organization and analysis skills will be in key positions to manage, process and interpret the huge flow of internal and external data and information.

With solid logical and analytical skills, you will be able to understand the significance of the information and recommend action.

## 2. Convert Information Into Knowledge

All innovative companies strive to convert raw data and corporate-gathered information into saleable products and services. Executives use this knowledge to help them gain competitive and strategic advantage over other companies. Significant value is placed on individuals who can convert data and information into knowledge, and do it quickly, efficiently and consistently.

One key to mastering this conversion process is learning to use the computer as a tool to transfer, analyze, interpret and integrate the massive amounts of data passing across your desk.

## 3. Sell New Ideas to Management

The ability to implement new ideas and concepts is the real measure of your success. To bring your ideas to fruition, you must be proficient in selling your ideas to the executive who can grant you access to the necessary corporate resources.

Remember - no one will give poorly packaged and presented ideas the time of day, regardless of how promising they may appear. Be sure you can skillfully present:

- Market analyses for the proposed idea
- Pricing and marketing information
- Timing related to return on investment

## 4. Communicate Concepts Clearly and Succinctly

This skill is a 'biggie.' Careers have been - and continue to be - severely jeopardized because of poor communication skills. In fact, without them, you could potentially stop your career in its tracks. You must be articulate.

Today's managers often judge employees by how well they express themselves, both orally and in writing. Managers need condensed kernels of information around which to base their decisions. They don't have time to wade through endless pages of reports or be intrigued with dazzling, yet long-winded analyses. You can provide additional information, but only after an initial, succinct briefing.

Keep in mind that as an employee, you are an ambassador of your department and company, whether you are making an internal presentation, meeting with clients, giving a paper at a conference, or talking and interacting with members of the public or regulatory agencies. Communication skills are the absolute foundation for all the other skills you will need. Don't be sidelined because of poor communication skills.

## 5. Plan For Timely Commercialization

Getting new products to market is the way companies sustain their cash flow and generate new sources of it. Timely implementation begins with people who know how to plan, organize and execute the commercialization process.

Knowing how to plan well allows you to handle a variety of different projects. It is also a skill that senior managers value. It sends a clear signal that you know how to use precious corporate resources efficiently and effectively.

## 6. Be A Team Player

Teamwork and collaboration among corporate departments has become a mainstay of industry problem solving. Team members

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- **Basic Telephony and Digital Switching**  
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For further information...

Web: <http://epdweb.engr.wisc.edu> or E-mail: [danbeck@engr.wisc.edu](mailto:danbeck@engr.wisc.edu)

must possess excellent communication skills, present new ideas effectively, and resolve to act together to address corporate problems and needs.

Articulate leaders connect their team members and their assigned tasks to the big corporate picture. Selecting the right mix of team members is as important as formulating the problems the team must address. Strive to become an effective leader, who knows how to select the right team members for the best fit.

## 7. Do Multi-Dimensional, Integrated Problem Solving

Making sound business decisions requires more than just the technical and economic aspects of a problem. The environmental, safety, social, political, and regulatory considerations of a new product are also important. Employees need a balanced education so they can make tough choices from a multi-dimensional selection of options.

Employees who can think and reason problems on multiple levels simultaneously are essential in today's complex decision-making environments. Are you well rounded and capable of multi-dimensional, integrated problem solving? Can you see the parts of a problem and the whole problem at the same time? Do you know how to ask the tough questions that will define and bound the problem for analysis?

## 8. Seek Learning Opportunities

As an employee in today's high-tech industry, your learning must be constant. Continually improve or rejuvenate your skills to meet new corporate challenges. Motivate yourself to learn, enjoy the challenge of new experiences, and develop a life-long discipline to seek learning opportunities.

With these skills and abilities, rewarding positions in one of today's progressive companies will be yours for the taking. It's up to you to continue honing your skills, building your knowledge, and setting ever-higher goals.



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**For more information, contact John Hicks at (608) 233-4875 or [jhicks@facstaff.wisc.edu](mailto:jhicks@facstaff.wisc.edu).**

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