



The SpartIEEE

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Upcoming Events

- April 5 – Technical Presentation by General Motors. 7:00 pm at the Engineering Building. This event has been organized by IEEE Corporate Relations Chair, John Vilches.
- April 6 – IEEE Spring 2005 South Eastern Michigan Section Conference. See the SEM Website (link below) for details.
- April 14 – Leer, Ford, and Delphi joint presentation at the Engineering Building. This event has been organized by IEEE Blimp Chair, Gavin Mathes.

IEEE Welcomes Back Andy Kim

By Luke Niewiadomski

One weakness facing many of the students working towards their B.S. degree in engineering at Michigan State University is a significant lack of development and awareness regarding outside-the-classroom issues. This involves many aspects including weak interview preparation, unsatisfactory job searching skills, and a lack of understanding of the opportunities available to them here at MSU, such as IEEE.



For the 97 engineering students who attended the presentation from Andy Kim on Monday, Feb. 28th, it will now be much easier to bring themselves further away from this stereotype, and become more prepared for the non-engineering aspects that are so prevalent in any career. With the consistently growing job

competition, sufficient development of the skills addressed in this presentation is becoming more and more crucial each year.

Andy Kim, MSU's 2001-2002 IEEE president, recognized this long before many of us. Despite a poor job market, he was able to land internships at Gateway, Dow Chemical, and Microsoft, and had his pick of Fortune 100 companies post-graduation. Unlike other corporations, IBM offered him the opportunity to move towards his long-term goal of becoming a Senior Leader, and he has remained there for the past two years.



Nearly 100 engineering students were in attendance to hear Andy Kim share his knowledge and advice.

Andy began the presentation by imparting to the audience 14 vital career questions, including “How do I obtain an internship, co-op, or full-time job?”, “How do I find the right job and/or company?”, and “What

IEEE Links

MSU Student Chapter
SEM Website
Region 4 Website
IEEE National Website

Further Information

Wavelengths

A newsletter published eight times per year by the Southeastern Michigan Section of IEEE.

The Institute

A report on news around the IEEE.

IEEE Spectrum Online

The member publication of the IEEE.

What's New @ IEEE For Students

Check out this publication that is written monthly for students.

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Students actively participated in the discussion, including several volunteers who had the opportunity to speak alongside Andy on stage.

in the eyes of employers despite a lack of experience, viewing a promotion as a increase in responsibility and leadership, finding the degree and company that's right for you, and many others.

One subject matter given special attention was, "Why should I get involved outside of class?" Andy, an extremely well-spoken and energetic individual, accredits the development of his 'soft' skills to his involvement in IEEE. He was exceptionally active in the MSU branch for three years, and acted as president during his senior year. The influence this had on his life is too substantial to fully cover here, but he listed 14 realized impacts which included the development of communication and leadership skills, getting to know himself and his abilities, and being able to clearly define his goals.

The MSU IEEE branch would like to thank Andy Kim for this extremely valuable presentation, and look forward to having him back for future events. For more information, including the PowerPoint slides that were used, visit <http://www.egr.msu.edu/ieee>, or email Luke Niewiadomski at niewiad6@msu.edu.

resources are available to me at MSU?" This sparked an interactive discussion (which included six volunteers personally engaging with Andy on stage) covering a wide range of topics.

Issues addressed included getting to know *yourself* as preparation for an interview, standing out



Andy shares his realized impacts of joining IEEE.

Andy shares his realized impacts of joining IEEE.

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2005 SPAC Recap

By Ryan Fitch

On February 21st approximately one hundred and fifty students and faculty were treated to the professional presentations of this year's SPAC. The Student Professional Awareness Conference is a collection of speakers giving non-technical career advice to students. Coordinated annually by the MSU IEEE Executive Board, SPAC is one of the most significant ways for



Jim Watson presents "It's Your Business"

engineering students to connect to the fast moving world of industry. The conference was introduced by Dr. Wolff, the Associate Dean of Undergraduate Studies for the College of Engineering. Next, speakers Jane Monticello, Phyllis Kinsey, and Jim Watson all gave excellent presentations and were very warmly received.

Jane Monticello of EDS spoke about surviving and succeeding in the changing world of IT. Phyllis Kinsey gave a very interesting presentation on the process of pricing, a subject foreign to most engineering students. Finally, our distinguished National IEEE speaker, Jim Watson, gave a truly exceptional speech to the audience. Jim has presented at more than 230 SPAC's during his career and is an amazing public speaker. His presentation, "It's Your Business", focused on the idea of starting up a business and the commitment and skills that would be required. After the presentations, a panel answered audience



A panel consisting of (left to right) Dr. Satish Udpa, Dr. Ramakrishna Mukkamala, Eric Thomas, Jane Monticello, Phyllis Kinsey, Jim Watson, and Dr. Tim Hogan answer questions for students in the audience

questions. The night closed with door prizes including a PDA, two wireless mouse and keyboard packages, a pair of USB memory drives, and several software packages.

This year's SPAC marked the sixth such consecutive event at MSU. It is a testament of the Electrical and Computer Engineering Department's commitment to the student body that they have so consistently supported this event. This conference would also not have been possible without the generous support of our sponsors. All engineering students are encouraged to take part in this educational experience next year!

IBM Presents on Blue Gene/L

By Luke Niewiadomski

As the demand for computing power grows, the performance of the world's fastest and most powerful supercomputers also improves. Topping the list is the newly completed Blue Gene/L, operating at an amazing sustained performance of 70 Teraflops.

IEEE was extremely fortunate to have Senior ASIC Development Engineer, Jim Marcella, come out from IBM in Rochester, MN, to speak about the project. He presented on his role in chip design, as well as applications and the structure of the Blue Gene/L computer.

A detailed printout of the chip layout and an actual compute card from the supercomputer, one of 32,768 needed for an entire system, were also brought to the presentation. Each card contains two application specific integrated circuits, making the grand total of chips required an amazing 65,536. It is this mass amount of parallelism that allows for Blue Gene/L's groundbreaking computing speed, not the clock speed of the chips themselves. How fast is each individual ASIC? Surprisingly the supercomputer uses a PowerPC 440 of only 700 MHz.



Senior Engineer, Jim Marcella, from IBM shares his experiences working on the Blue Gene Project.

The reason for this modest speed is low cost and low power. IBM can also brag about the cooling and floor space requirements (<2,500 sq ft), which are exceptionally low as well.

The six year development of Blue Gene/L just recently made its debut in 2005. The primary goal of this \$100 million project is to predict how DNA chains fold into proteins, a computationally arduous task. New uses have lately been discovered as well, such as financial risk analysis and global climate simulation.

IEEE was also excited to have Semiconductor OEM Operations Manager, C. William Hall, and i Series Software Portfolio Manager, Mike Prochaska, at the event to present on the current status of IBM as a whole. This was equally eye-opening considering the number of places in the technology world IBM occupies. Unbeknownst to many, IBM sells products to almost every major technology-producing company on the planet. Not to mention, they are also working to produce the processors in the upcoming Sony PlayStation 3, Microsoft Xbox 2, and Nintendo GameSphere.

For more information check out <http://www.ibm.com> and <http://www.research.ibm.com/bluegene/>.