

IESE Assistant Professor Ali Abbas helps young people make better life choices.

## Innovative Educators Teach Decision Skills to Troubled Teens

Non-profit foundation aims to help young people make better choices about their lives.

By Ali Abbas, Nathan Hoffmann, Ronald Howard and Chris Spetzler

Note: This article appeared in the August 2007 OR/MS Today [www.lionhrtpub.com/orms/orms-8-07/frteens.html](http://www.lionhrtpub.com/orms/orms-8-07/frteens.html).

The U.S. Department of Justice recorded 2.2 million juvenile arrests in 2003 [1]. Juvenile courts handled 1.6 million delinquency cases in 2002, up from 1.1 million in 1985. Nearly 25,000 16-year-olds in residential placement have an average stay of 105 days in public facilities, and about 85 percent of teens admitted into a juvenile detention center return at least once. For these young people, becoming involved with the juvenile detention system is a traumatic experience that carries with it the danger of being drawn into a cycle of repeated offenses.

Operations research professionals have received well-deserved attention for their contributions to improving the criminal justice system and making a significant impact on its pressing issues (see for example, Blumstein [2007] and Morgan [2007]). Our focus in this article is on our experience of teaching decision skills to the teens and officers of the Champaign County Juvenile Detention Center (JDC) in Urbana, Ill. The program is led by Ali Abbas, assistant professor of Industrial and Enterprise Systems Engineering at the University of Illinois at Urbana-Champaign (UIUC), in

partnership with the Decision Education Foundation (DEF), a non-profit organization dedicated to helping young people make better decisions about their lives. Ronald Howard, one of the founders of the field of decision analysis, is president of the DEF.

DEF has designed and delivered innovative curricula for at-risk teens as well as programs for academically gifted and mainstream youth (for some recent work on teaching academically gifted teens see Abbas, Reiter, Spetzler and Tani [2004]). A long-time volunteer with the Decision Education Foundation and advisory board member, Abbas was instrumental in creating the partnership between the College of Engineering at UIUC, the Champaign County JDC and DEF.

The program started with an initial visit to meet Connie Kaiser, the superintendent of the Champaign County JDC, to tell her about the possibility of delivering decision-making workshops to teens. A sign posted at the entrance explained the mission of the JDC: "Only kids with the highest risk to harm others are detained for as little time as absolutely necessary, where caring, competent, compassionate staff are helping kids build skills for productive law-abiding lives, and reducing risk to re-offend."

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## Looking Ahead from IESE's new Department Head

Welcome to a new beginning of the Department of Industrial and Enterprise Systems Engineering! With great honor and commitment, I officially became the Head of this young department on August 16, 2007. In the previous two years, under the expert stewardship of the Interim Head, Professor Deborah Thurston, the department has weathered tremendous changes during the merger of the Department of General Engineering and the Industrial Engineering Program, and has

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## From new Department Head, continued

emerged more prepared than ever to build the unit into a top ranked research department in its field. We all owe Deborah our deep gratitude for leading the department through this past transition.

In understanding industrial and enterprise systems engineering, I arrived at the following working definition. Namely, this is an engineering discipline that addresses the innovative application of state-of-the-art engineering methods to formulate and analyze complex systems arising from industrial and business enterprises for the goal of optimal planning and decision-making. Such applications should incorporate sound economic principles and business practice, and leverage the advances of information and computing technologies. Our goal should not stop with an immediate solution of the problems on hand. Instead, we should actively engage in building a solid foundation for the solution methods and creating new knowledge and scholarship with enduring impacts. These are the guiding principles for my vision of the field.

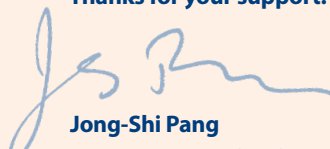
Presently, about half of the tenured and tenure-track faculty in the department consists of pre-tenured assistant professors; to ensure the well-being of the department, it is vital that these junior colleagues excel in their individual disciplines, and most importantly, that they all successfully obtain tenure. Therefore, the utmost priority in my strategic plan for the department in the next few years is to create an intellectually inspiring environment for these junior colleagues so that they can undertake and publish research of the highest quality, and to provide them with broad opportunities for collaborative projects and external funding resources. Included in this plan are the active recruitment of outstanding faculty whose research expertise resonates with those of the junior colleagues and expands the existing strength of the department, and the growth of our graduate

programs, particularly at the Ph.D. level, wherein our plan is to aggressively recruit the best applicants from the very top U.S. and foreign institutions to study in our doctoral programs.

This newsletter reports some of the latest activities within the department, covering the research, honors and awards of faculty, students and alumni news. Our undergraduate population continues to rise, to 658 as of fall 2007; our graduate population is 65, with the number of applicants tripling that from a year ago. Our students continue to achieve high honors and distinctions and excel in outside curriculum activities, some of which are reported herein. They also obtain good job placements. Our faculty continues to excel in their research, winning best paper awards for their publications, receiving federal grants to support their projects and giving invited lectures at national and international conferences.

In conclusion, I am very honored to be offered my present position. There have been many distinctive traditions and remarkable accomplishments in the department's past. My mission is to lead the department to new heights, aligning them with the pre-eminence of our sister engineering departments on campus as well as with the overall reputation of this great research institution. With the help of our outstanding faculty, gifted and talented students and devoted alums and friends, I look forward to a bright future of the department and many exciting things that we will do together.

**Thanks for your support!**



**Jong-Shi Pang**  
*Department Head and Caterpillar Professor*

**IESE News Fall 2007**  
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Hadra Gustafson, *Coordinator of Development and Alumni Relations*  
Dawn Sandone, *Director of Development*  
Sarah B. Williams, *Copy Editor*  
Scott Pacey, *Designer*

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For more information or to submit news items or articles of interest contact:  
Hadra A. Gustafson, *Coordinator of Development and Alumni Relations*  
117 Transportation Building, MC-238  
104 S. Mathews Avenue  
Urbana, IL 61821  
(217) 333-0140  
(217) 244-5705 FAX  
[hgustafs@uiuc.edu](mailto:hgustafs@uiuc.edu)

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## IESE Ph.D. student selected for TEAM USA

By Hadra Gustafson

IESE Ph.D. student **Craig Robinson** competed in the Hamburg BG Triathlon World Championships September 2, 2007, finishing 30th in his age group and 152nd overall.

The 2007 weekend consisted of three days of competition, transforming the city centre into a unique triathlon arena. The highlights of the event include the swimming exit and the finish in front of Hamburg's historic City Hall. Last year's event attracted 6,600 registered competitors, 1,500 kids, 160 elite athletes and 310,000 spectators lining the course.

"All in all I was happy with my performance," Robinson said. "However, as soon as I crossed the finish line I started to think about how I could go faster next year."

The ITU Age Group World Championship course consists of a 1,500-meter swim, a 40-kilometer bike ride and a 10-kilometer run. In August, Craig traveled to Portland, OR where he raced at the U.S. Age Group

Nationals, the sole U.S. qualifier for the World Championship Triathlon. He placed 15th in his age group and 60th overall qualifying him for the upcoming World Championship. He met his goal to raise \$3,000 to cover all expenses for the race.

Craig is the treasurer of the University of Illinois Urbana-Champaign Triathlon Club and enjoys teaching people about triathlons. He plans to graduate in December 2007 with a PhD in Control Systems and has a broad academic background as result of an undergraduate degree in Civil Engineering and a master's degree in control systems. He is in charge of the Convergence Lab at UIUC.

For more information about Craig's research, visit [decision.csl.uiuc.edu/~clrobsn/Research.shtml](http://decision.csl.uiuc.edu/~clrobsn/Research.shtml).

For more information about the Hamburg BG Triathlon World Championships, visit [www.hamburgcityman.de/championships/informationen.php?lang=en](http://www.hamburgcityman.de/championships/informationen.php?lang=en)



## Illinois Student Wins \$30,000 Award for Neuroscience Innovations

### Michael Callahan Wins the Inaugural Lemelson-Illinois Student Prize for Inventiveness and Innovation



**Michael Callahan** possesses the ability to speak and share his thoughts and ideas with others. This ability to communicate serves as the motivation behind Callahan's latest innovation. The 24-year-old winner of the first \$30,000 Lemelson-Illinois Student Prize hopes to give disabled people back the ability to speak for themselves.

Callahan received the prestigious award for a variety of innovative endeavors, including a device that turns unspoken thoughts into spoken words and a "mind-controlled" wheelchair.

"The goal of this award is to recognize the outstanding innovation and invention of the students at the University of Illinois," said Andrew Singer, director of the Technology Entrepreneur Center in the College of Engineering. "The University has an extensive history of innovation, and Michael Callahan is a great example of the type of student we wish to honor with this award."

#### Spoken Word

Callahan's most recent invention is a device called the Audeo, which translates neurological signals into spoken words or commands for other

Michael Callahan (left) accepts the Lemelson-Illinois Student Prize from Ilesanmi Adesida, Dean of the College of Engineering.

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## Alumni at Work

### Ph.D. Graduates Accept Positions



**Nikhil Choptra**, the third SEE Ph.D. to graduate, has accepted a faculty position in Mechanical Engineering at the University of Maryland–College Park. He will have a joint appointment with their Institute of Systems Research (ISR). Choptra's broad research goal is to develop a fundamental understanding of synchronization and control of networked dynamical systems interacting across unreliable communication networks. This work is important in numerous practical applications, such as sensor networks, unmanned air vehicles, and robot networks. As part of his research efforts, he plans to use the paradigm of passivity-based control to study synchronization and control of semi-autonomous telerobotic networks, develop strategies for distributed sensing, estimation and control of robot networks and coverage control by Unmanned Aerial Vehicles (UAVs). He is also interested in investigating the synchronization phenomena in networks of biological oscillators, such as the Kuramoto model. He has successfully used passivity-based control to solve synchronization and coordination problems in bilateral teleoperation, multi-robot networks and the exponential synchronization problem in Kuramoto oscillators.



**Benjamin L. Ervin**, the most recent graduate of the SEE Ph.D. program, accepted a technical staff position at MIT Lincoln Laboratory. His initial position will be in the Bio-defense Systems Group. As part of this interdisciplinary team, he will help develop and analyze strategies for the defense against biological and chemical terrorism aimed at military and civilian targets. His doctoral work was on developing a methodology for monitoring corrosion in reinforced concrete using guided ultrasonic waves. Ervin received both his M.S. and B.S. in General Engineering at the University of Illinois at Urbana-Champaign.

### Alum Named University of Connecticut Dean of Engineering

**Mun Young Choi**, BSGE '87, accepted a position as Dean of Engineering at the University of Connecticut (UConn) effective January 2008. Choi began his academic career at the University of Chicago and then Drexel. Choi grew up in Rockford, IL and did his senior project with Professor Henrique Reis.

Dr. Choi received his M.A. and Ph.D. degrees from Princeton University in 1989 and 1992, respectively, in the field of mechanical and aerospace engineering. He currently serves as Associate Dean for Research and Graduate Studies in the College of Engineering, and as Department Head of Mechanical Engineering and Mechanics, both at Drexel University in Philadelphia.

Dr. Choi's current research interests focus on the effects of sooting and radiation on droplet combustion, and soot diagnostic techniques. In collaborations with researchers at NIST and Sandia National Laboratory, Dr. Choi has measured optical and physical properties of soot produced from various-scale flames and fires. Other investigations involve research on spherically-symmetric droplet combustion and have enhanced the understanding of how sooting and radiation behaviors influence droplet burning characteristics. His experiments on droplet combustion are slated to be conducted aboard the International Space Station. Many of his studies focus on understanding the performance characteristics of alternative liquid hydrocarbon fuels and additives typically used in automotive and jet engines.



### Alum Named ISE Chair at University of Florida

**Joseph Hartmann**, BSGE'92, recently moved from Lehigh University to become the Chair of the Department of Industrial and Systems Engineering at the University of Florida at Gainesville, starting this Fall semester. For additional information regarding Joseph's research please visit <http://www.ise.ufl.edu/hartman/>



## New Job Board for IESE Students and Alumni

The Institute of Industrial Engineers has launched a job board and job resource center for students and alumni from the IESE Department at the University of Illinois. View and apply for positions and internships, receive resume help, salary calculators and relocation tools. Alumni can post jobs and review resumes for IESE engineers.

To learn more about setting up an employer account or to post jobs to the board, contact [ie.uofi@gmail.com](mailto:ie.uofi@gmail.com). Visit the job board at [www.uiuc.edu/ro/ie](http://www.uiuc.edu/ro/ie). Click on "Job Resource Center."



## IESE Student Societies: Networking Outside the Classroom

IESE has several active student organizations that provide networking, leadership and mentoring opportunities with current students, faculty and alumni. To learn more about the student organizations visit the following Web sites.

**Alpha Pi Mu** (Industrial Engineering Honor Society)

<https://netfiles.uiuc.edu/ro/www/AlphaPiMuIndustrialEngineeringSociety/>

**The Institute of Industrial Engineers** (IE Professional Society)

[www.uiuc.edu/ro/iie](http://www.uiuc.edu/ro/iie)

**Illinois Society of General Engineers** (GE Professional Society)

<https://netfiles.uiuc.edu/ro/www/IllinoisSocietyofGeneralEngineers/>

**Gamma Epsilon** (General Engineering Honor Society)

<https://netfiles.uiuc.edu/ro/www/GammaEpsilon/>

## Exploring the Fields: Industrial Engineering and General Engineering

When the new Industrial and Enterprise Systems Engineering Department was created, it merged the two departments of General Engineering and Industrial Engineering. Below is a brief overview about the two disciplines.

Industrial engineering provides an opportunity to work in a variety of businesses. Industrial engineers figure out ways to do things better. They engineer processes and systems that improve quality and productivity. They work to eliminate waste of time, money, materials, energy and other commodities. Industrial engineers save companies money. Industrial engineers are the only engineering professionals trained as productivity and quality improvement specialists.

They improve quality and productivity and make significant contributions to their employers by saving money while making the workplace better for fellow workers. Whether it's shortening a rollercoaster line, streamlining an operating room or manufacturing superior automobiles, all share the common goal of saving money and increasing efficiencies.

General Engineering is a comprehensive and interdisciplinary program in basic sciences, engineering sciences, and engineering design that emphasizes real world problem-solving through partnerships with industry. General engineering provides a background in mechanics and structures, control systems and decision-making with a systems approach. General engineers have superior problem-solving skills applied across disciplines, excellent communication skills and their ability to get results in a team environment.

General Engineers specialize in more than 80 fields at the U of I including bioengineering, business systems, computer science, environmental quality, geography, robotics and telecommunications.

## IESE Graduate Student Publications

IESE graduate students recently have published books, journal articles and conference papers. To read more about these published works, visit [www.iese.uiuc.edu/grad/publ.html](http://www.iese.uiuc.edu/grad/publ.html)

## IESE Calendar of Events

Stay up-to-date on all IESE events, seminars and open houses. Visit and bookmark [www.iese.uiuc.edu/calendar.html](http://www.iese.uiuc.edu/calendar.html)

## IESE Grants 2007 Student Awards and Scholarships

Each year IESE hosts a spring banquet to honor students with awards and scholarships. Visit this link to view a list of the 2007 recipients:

[www.iese.uiuc.edu/ugrad/aid/awardlist.html](http://www.iese.uiuc.edu/ugrad/aid/awardlist.html)

Save the Date for the upcoming IESE Spring Banquet: April 11, 2008.

## New Lab Opens in Transportation Building

The Operations Research Laboratory is a new facility located in room 316 of the Transportation Building at the U of I campus. The lab includes 20 high-end PCs, 10 Linux-based workstations and an 8-CPU server. In addition, there will be a projection facility to allow for audio-visual instruction of undergraduate and graduate-level courses in Industrial Engineering and Operations Research.

Operations research is a mathematically-inclined discipline with the goal of making better decisions. Researchers and practitioners draw from the areas of optimization, probability and simulation to model, analyze and control complex systems. Operations research techniques are applied to a whole host of problems ranging from managing inventories under uncertainty to better scheduling of airline crews.

## Senior Design Lab Renovations Underway: Creating a First-Class Facility

The new IESE Senior Design Laboratory will simulate the working environment and resources a young engineer would find in a corporate engineering environment. Students will use the lab as part of the senior capstone project. The studio will be patterned after modern design offices in industry and it will support the design activities of student teams by providing the following:

- Significant engineering design, simulation and analysis facilities (high-performance workstations, software and peripherals)
- Communications in all forms (telephones, fax machines, Internet, printers, scanners, projectors, copying machines, video conferencing, etc.)
- Resources for report-writing, presentations, project planning and project management
- Up-to-date space and furniture, fixtures and equipment for "clean" work centers for students to work in teams
- Other "design-office" facilities including a flexible area for conferences and meetings, additional storage facilities for project equipment, materials and teamwork development resources

Visit [www.iese.uiuc.edu/events/SeniorDesign.pdf](http://www.iese.uiuc.edu/events/SeniorDesign.pdf) to view artist renderings.

The State of Illinois has committed to contribute \$700,000, which is \$400,000 short of the \$1.1 million budget needed to complete this project. The College of Engineering and IESE will underwrite the project until we can raise the additional \$400,000. Although our personal circumstances might not permit all of us to make a large donation, we ask that you "Give What You Can Give." If each one of us does our part, we can help retain the great reputation of our University, our College and our Department despite the lack of state funding. Gifts of any size will be most appreciated and you can even make your contribution more significant by pledging a gift over several years. Don't forget to find out if your company offers a matching gift program; you will be recognized for the entire gift.

We will be recognizing all donors in an appropriate place in the new design lab and for those who are able to make a substantial donation we will also be offering naming rights to various areas and components of our lab.

Thank you for making the decision to be a part of the future of the IESE department.

Visit [www.iese.uiuc.edu](http://www.iese.uiuc.edu) and click on "Make a Gift" to donate online or clip out this coupon and send your donation to us.



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104 S. Mathews Avenue  
Urbana, IL 61801



# Faculty News



## IESE Professor Presents at ASB Annual Meeting

As a founding member of the American Society of Biomechanics (ASB), Professor **Manssour Moeinzadeh** was an invited participant at the 30th anniversary ceremonies of the ASB Annual Meeting at Stanford University.

He presented two papers on his current collaborative research work entitled: "The Effect of Bone Microstructure on Micro-cracks Propagation Trajectory" and "A Genetic Algorithm Approach to Singularity Avoidance in the Analysis of Weight Lifting Performance."



## IESE Faculty Receive Bisson Award

Society of Tribologists and Lubrication Engineers (STLE) 62nd Annual Business Meeting and Presidents' Luncheon was held on May 8, 2007 at the Marriott Hotel in Philadelphia.

The Edmond E. Bisson Award was awarded to **Nicholas G. Demas** (Mechanical), **Andreas A. Polycarpou** (Mechanical) and **Thomas F. Conry** (General Engineering), University of Illinois Urbana-Champaign.

Thomas F. Conry

The Bisson Award was named in honor of Edmond E. Bisson, former STLE Editor-in-Chief who contributed so much through the years toward the ongoing success of publications in fulfilling the society's purpose. The award, established in 1991, is given to STLE members or non-members for the best-written contribution published by the Society in the year preceding the Annual Meeting. The contribution shall deal with tribology, lubrication engineering or allied disciplines. The award winner paper is titled "Tribological Studies on Scuffing Due to the Influence of Carbon Dioxide Used as a Refrigerant in Compressors" (July 2005 *Tribology Transactions*).



## Professor Stipanovich will be Humboldt Research Fellow

The selection committee of the prestigious **Alexander von Humboldt Stiftung** has awarded IESE Professor Dr. Dusan Stipanovich with a fellowship for joint research with Informatik VII on cooperating mobile robots and satellite formations. Dr. Stipanovich joined IESE in 2004 as an Assistant Professor and a Research Assistant Professor in the Control and Decision Group of the Coordinated Science Laboratory.



## IESE Faculty Receive Research Grant

University of Illinois IESE professors **Harrison Kim**, principal investigator, and **Deborah Thurston**, co-principal investigator, were awarded with a research grant from the National Science Foundation under the Engineering Design Program in Civil, Mechanical and Manufacturing Innovation on the topic "Enterprise Systems for Product Portfolio Design."

The objective of this proposed research is to develop a new enterprise model for design, by expanding the scope of traditional design to include consideration of the enterprise within which the product will be manufactured, operated and recovered. The approach integrates a recycling/remanufacturing enterprise model with a product portfolio design model, which is influenced by dynamically changing market demands.



Long-term societal benefits include recovering the economic value that is currently wasted in discarded products, decreasing environmental impacts and decreasing total costs to consumers. Manufacturers will be able to achieve the goal of cost-effective product take-back with access to frequently updated data.



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## Faculty News



### Professor Edward D. Ebert Celebrates 90th Birthday

**Edward D. Ebert**, Professor Emeritus of General Engineering, joined the faculty in 1946. He graduated in 1939 with a B.S. in Civil Engineering from the University of Illinois and in 1949 with a M.S. in Civil Engineering from the University of Illinois.

Upon graduation, Ebert joined the Bethlehem Steel Co. as a civil engineer doing design and fabricating work. He left in 1945 for military service in the Corps of Engineers at Fort Belvoir, Virginia, and was there until the fall of 1946 when he joined the faculty as an instructor. He was promoted to professor in 1964, and retired in 1978.

In addition to teaching the graphics courses in General Engineering, he also taught surveying in the summer camps conducted by the Department of Civil Engineering. In the early 1960s, he assumed the responsibilities as chief advisor for General Engineering students.

To honor Ebert for his years of teaching at the University, a scholarship has been created in his name. Please contact Hadra Gustafson at (217) 333-0140 or hgustafs@uiuc.edu if you are interested in making a contribution.

### “Best Publication Award” Received by IESE Department Head

Department Head **Jong-Shi Pang** has received the “Best Publication Award,” an award of the Energy, Natural Resources and Environment (ENRE) Section at the November Institute for Operations Research and the Management Sciences (INFORMS) conference in Seattle. The award went to the paper titled “Collusive Game Solutions via Optimization,” written by J.E. Harrington, B.F. Hobbs, J.S. Pang, A. Liu, and G. Roch and published in *Mathematical Programming*. The annual award recognizes the contributions of ENRE members to the research areas of Forestry and Energy.



### Kirlik Works at the Intersection of Technology and Cognition

**Alex Kirlik**, Acting Head of the Human Factors Division and Professor of Human Factors, Psychology, Mechanical Science and Engineering, Industrial and Enterprise Systems Engineering and member of the Human Perception and Performance group at the Beckman Institute, has been studying human interaction with technology.

Kirlik's view is that technology isn't simply an end-product of human intelligence; it also serves to mediate people's interactions with their environments and that process affects cognition and behavior. Understanding those interactions and the technology that supports them is at the heart of Kirlik's discipline of human factors.

“I'm interested in all aspects of human interaction with technology,” said Kirlik, whose Ph.D. is in industrial engineering. “I view technology very broadly as the constructed world. We live today in the United States in almost entirely constructed eco-niches.”

To read the full article about Kirlik's research, visit [www.beckman.uiuc.edu/news/articles/feature090507.html](http://www.beckman.uiuc.edu/news/articles/feature090507.html)



### Thurston and Ph.D. Student Receive Best Paper Award

SEE Ph.D. student **Vijitashwa Pandey** and Professor **Deborah L. Thurston** won the Best Paper Award at the American Society of Mechanical Engineers' Design for Manufacturing and Life Cycle Conference in Las Vegas, Nevada, in September.

Their paper was titled “Variability and Component Criticality in Component Reuse and Remanufacturing Systems.” Their work simultaneously increases both manufacturers' profits and customer satisfaction. It enables manufacturers to recapture the value added by the manufacturing process that is currently being wasted in landfills. Their market-base approach employs a portfolio of consumer market segments, each of which has different needs. Their work is funded by the National Science Foundation.

## IESE Announces Open Faculty Positions

IESE invites applications for several full-time faculty positions at all levels in all traditional and emerging areas of industrial and enterprise systems engineering, including, but not limited to Optimization, Network Systems, Operations Research, Financial Engineering, Energy Markets and Service Engineering (such as revenue management, supply chains, and health care planning and delivery systems).

For more information about the positions or to apply, visit [www.iese.uiuc.edu/news/pdfs/posannouncefac.pdf](http://www.iese.uiuc.edu/news/pdfs/posannouncefac.pdf)



For the past 30 years, the General Engineering seniors have entered their GE 494 projects into the Student Engineering Design Competition sponsored by the James F. Lincoln Arc Welding Foundation. Entries are judged on the basis of originality or ingenuity, feasibility, results achieved or expected, engineering competence, and clarity of the presentation. Of the undergraduate entries that are received, the following were presented with undergraduate awards.

**James F. Lincoln Arc  
Welding Foundation  
Awards Presented**  
**National  
Recognition for  
Senior Design  
Projects**

**Capstone Projects  
for Academic Year  
2006-07**

**Electrical Energy Management and Cost Reduction**

Advisor: Uday Shanbhag  
**Lincoln Merit Award**  
Oak State Products, Inc.  
Company Contact: Michael L Healy  
Eric L Chi  
Michael W. Fehrenbacher  
Allison M. Budd

**Production Scheduling Software Development**

Advisor: Harry S. Wildblood  
**Lincoln Silver Award**  
Castle Metals & Co., A. M.  
Company Contact: Kevin Coughlin  
Steven Sam  
Brian David Hall  
Aashay Desai

**Label Manufacture Setup Time and Scrap Reduction**

Advisor: Jiming Peng  
**Lincoln Merit Award**  
Continental Datalabel, Inc.  
Company Contact: Timothy Flynn  
Justin Edward Stewart  
Melissa Lynn Vurdelja  
Megan Elizabeth Wimmer

**Asphalt Spray Nozzle Predictive Design**

**Model Development**  
Advisor: David E. Goldberg

**Lincoln Merit Award**

Etnyre & Co., E. D. Company Contact: Pat O'Brien  
Kyle Brandon Daniels  
David Charles Aument  
Chad Alan Williams

**Salt Spreader Redesign for Cost Reduction**

Advisor: Scott A. Burns  
**Lincoln Bronze Award**  
Flink Company Company Contact: Mike Supergan  
Michael Tobin Shaw  
Christopher Alan Potsch  
Joseph James Delaney

**Expanded Metal Slitting Scrap Reduction**

Advisor: Jiming Peng  
**Lincoln Bronze Award**  
Metalex Company Contact: Robert Benjamin Birk  
Bryan Benjamin Horvath  
Vikram K. Raghavan  
Joseph Charles Rokop

**Dental Dust Collector Redesign**

Advisor: Changyan Zhou  
**Lincoln Merit Award**  
Nevin Laboratories, Inc. Company Contact: Robert Nevin  
James Philip Hardy  
Kenneth Brian Engberg  
Pedro C. Tenorio

**Share Your IESE Story**

Do you have a story to share about your student, co-worker or alum from IESE? Please send your story to [hgustafs@uiuc.edu](mailto:hgustafs@uiuc.edu). We'll print future stories in upcoming issues of *IESE News*.

This letter is to thank all of you down there for the wonderful job you are doing. In my case it's because of my son, John Spelich. You always hope the best for your children and, in John's case, I think he received the best education one could ask for at the U of I College of Engineering. To me, it is practically amazing what he has been able to do in so short a time.

He graduated from General Engineering in December 2004. He took a job with Allstate Insurance in Northbrook, Illinois because he wanted to stay in Illinois and because he was getting married in February. He really liked the people at Allstate and the job was interesting, but it wasn't the kind of engineering he wanted. He was there about a year.

In early February 2006, he took a job with Spartan Tool, LLC in Mendota, Illinois. Spartan manufactures equipment for residential, municipal and industrial cleaning contractors.

In the middle of April 2006, after John had been with the company only one and a half months, his boss, with some direction and suggestions, gave him his own project. The project was to redesign the company's video camera system. He was to redesign it, engineer it, build a prototype, test it, finalize it and then get it into production. He was to have 25 units completed and ready to sell at a Pumper and Cleaner Expo in Nashville, Tennessee the following February (2007). He did it and the new camera was a complete success. He recently told me that Spartan can't build the cameras fast enough at this point.

He brought one of the cameras home so I could see it. It is really something. The only thing I could think to say was, "How in the world did you know how to do this?" He just said he had some very good courses down at Champaign and a good senior class project. Also, he said he had input from two fine engineers who already were with the company. He was also given access to some tool and die men to help him build parts for the prototype.

If you follow the thinking, one could say that because of the University of Illinois College of Engineering, many companies across the country are enjoying the use of a new piece of equipment that helps them do their job a bit easier.

If you knew John, I think you would be proud of your student and graduate just as I am to be his father.

*Thank you again and sincerely, James Spelich*

## IESE Welcomes New Alumni Advisory Board Members

**Brent Matthias** received a B.S. in General Engineering from UIUC in 1991. After earning his undergraduate degree, Brent was a project engineer at Applied Web Systems based in Elgin, IL, where he designed auxiliary printing press and pollution control equipment. He then went on to complete his JD from Loyola University Chicago in 1996. Brent was a patent attorney at two large Chicago-based firms until 2005, when he founded Miller, Matthias & Hull, specializing in patent prosecution and opinion matters. Brent lives in Crystal Lake, IL with his wife, Linda, and three children, Kendall, J.T. and Brock.

**Lindsay Winn** graduated in December 2000 with a degree in General Engineering and a secondary field in Computer Science. She worked for two and a half years as an applications engineer with the semiconductor company Altera in San Jose, CA. After moving to St. Louis, she worked for Boeing for two and half years as a systems engineer on the UK Apache helicopter flight simulator. When her husband, John, graduated from law school, they moved to Chicago and now live in Lincoln Park. Lindsay works for Kraft Foods in their procurement department managing major food processing equipment suppliers. When not working, she is playing with her dog, trying a new recipe, running or biking. This year she completed her first sprint distance triathlon and hopes to complete an Olympic distance triathlon next year.

**Ben Goodman** earned a B.S. in General Engineering in May 2003. Following graduation, he began his consulting career with Accenture. The majority of his professional experience has focused on change enablement consulting, intended to equip organizations to embrace change programs and deliver value-based outcomes. Dedicated to the IESE Department, Ben enjoys coming to campus as often as possible to work directly with the students. He is often joined by his wife, Becky, who graduated from UIUC with a B.S. in Elementary Education. They always make time to stop by Murphy's, where the couple first met, during each campus visit.

**Diane Steinkamp** graduated in May 1996 with a B.S. in General Engineering and a secondary field in Engineering Administration. After leaving the University of Illinois, Diane spent three and half years working for Accenture as a process consultant based in St. Louis. She then worked

for KPG, Inc., a small St. Louis consulting firm. In 2002 Diane enrolled in the Olin Business School full-time MBA program at Washington University in St. Louis and earned a MBA in 2004. She joined Anheuser-Busch Companies, Inc. in June 2004 as an executive development program associate where she is involved with wholesaler valuation and financial analysis of wholesaler merger and acquisition activities. Outside of work, she enjoys traveling and is an active member of the St. Louis Gateway Alumnae Chapter of Alpha Phi.

**Brad Gillette** graduated in 2003 with a B.S. in General Engineering with a secondary field in Engineering Administration. Since graduation, Brad has worked for Kurt Salmon Associates (KSA), a global management-consulting firm focused in the consumer products and retail sectors. Based in KSA's Los Angeles office, Brad acts as KSA's lead recruiter for the University of California, Berkeley. While attending Illinois, Brad was active in extracurricular activities and is still involved on campus not only as an IESE Alumni Board member, but also as an alumni advisor for OTCR, a student run, student staffed consulting organization at the U of I. Brad enjoys traveling to see friends and family, returning to U of I for football and basketball games, creating new adventures, and has just returned from a trip to Utila, Honduras where he earned his open water scuba diving certification.

**Mike Maschek** graduated Summa Cum Laude from General Engineering in December 2001 earning Bronze Tablet, Senior 100 and Edward S. Fraser distinctions. In addition to his degree in GE, Mike also earned a minor in Technology and Management. While at Illinois, he was active in many organizations/activities inside and outside of the GE Department including The Marching Illini (Illini Drumline) and The Illinois Society of General Engineers. Upon graduation, Mike accepted a job at Citadel Investment Group in Chicago and is still employed there as a business analyst. While working, Mike is attending The University of Chicago Graduate School of Business part-time in pursuit of his MBA. In his free time, Mike teaches the Illini Drumline and plays/leads in the drumlines for the Chicago Bears and the Chicago Bulls. Mike's other hobbies include flying single engine planes, sailing, motorcycling, playing sports and working out.

## IESE Alumni Board Forges Ahead with New Members



### Dear Fellow Alums,

There has been a lot of work and effort to get our new IESE Department rolling and moving the Alumni Board in a direction that can bring the most value to our new Department and our new Department Head, Professor Jong-Shi Pang.

At our spring Board meeting, working committees were formed to focus our attention on the key issues where the Board could provide the most value. These areas include Alumni Relations, Development & Scholarship, Membership & Recruiting and Student Enrichment. These committees have been working on issues including conducting mock interviews with the students, providing guest speakers at student society meetings, providing input on curriculum and insights to the faculty on what industry is looking for in their new hires, as well as advice regarding the new Senior Design Studio which is currently under construction. As other needs arise, the Board remains available to provide its insights, experience and assistance in any way that will be beneficial.

One of the more exciting aspects of our recent formation has been meeting alumni and exploring ways for them to join us on the Alumni Board in service to our Department. The diversity in career paths that have emanated from our department in Champaign-Urbana to all areas of the world and in virtually every professional arena continues to be a great testament to the quality and broad base appeal that degrees in either General or Industrial Engineering have in the marketplace.

As the first President of the IESE Alumni Board and an alum with a BSIE and a MBA, I have found the emergence of our new department filled with promise and potential as we all have begun to work together to bring the IESE Department into a leadership position among all of the other nationally rated engineering programs in the country. We invite all of our alums to return to campus to discover how the IESE Department is making a new name for all of us.

Through our efforts and your responses, the following alums were nominated to the board during our spring 2007 meeting. See page 10 for details about these members. Please join me in congratulating these new members who

have already brought a great deal of new energy and enthusiasm to our efforts. During the 2007 Homecoming weekend, we convened our fall Board meeting where one of the tasks of the Executive and Membership Committees was to nominate the 2008 slate of members to the board. These candidates were then confirmed by the full Board and will commence their service to the department when we meet again in the spring of 2008. Each member will surely bring excellence from their profession, a love for their university and a commitment to strengthen and expand our department to new heights and notoriety in the years to come. New board members are:

**Dan Crenin**, BSIE '90; **Kelly Dempksi**, BSGE '94; **Jay Goldberg**, BSGE '79; **Amee Green**, BSIE '01; **James Nuttall**, BSIE '94 and **Steve Pawlowicz**, BSIE '83.

Should the possibility of serving in such a capacity appeal to you, we would enjoy hearing from you. Please feel free to contact myself at [fvkc@msn.com](mailto:fvkc@msn.com) or Hadra Gustafson

at [hgustafs@uiuc.edu](mailto:hgustafs@uiuc.edu) for more information.

Another area of focus has been getting connected and maintaining a higher level of communications with all of our alums. From the formation of a new online community, "Always Illinois" to local or regional social gatherings, these efforts are all terrific ways of staying or reconnecting with our roots as fellow engineering "Illini." We are always looking to develop more effective ways of renewing our connection to each of you and encourage you to read the articles in the newsletter or visit us online at [www.iese.uiuc.edu](http://www.iese.uiuc.edu). If you have any ideas on other ways we can stay connected or reconnect with you, we would love to hear from you.

As our Department continues on this exciting journey in its pursuit of achieving a top five national ranking, we hope each of you will find your own ways to continue to support our efforts and to be a part of making this great department even better. **Go Illini!**

**Sincerely,**

Fred Chin

*IESE Alumni Board President*





## Welcome Dawn Sandone

**Dawn Sandone**, major gifts officer in the College of Engineering Development Office since February 2000, is the new development officer for the Industrial and Enterprise Systems Engineering (IESE) Department. She replaces Rita Bates. Sandone is responsible for raising funds, assisting the department in identifying support needs and keeping alumni connected with the latest IESE accomplishment and developments.

She also serves as the major gifts officer for the Aerospace Engineering, Materials Science and Engineering, Nuclear Plasma and Radiological Engineering and Physics Departments.

Born in Orlando, Florida, Sandone earned a B.S. in business administration from Stetson University in DeLand, Florida. She is in the process of pursuing a master's degree in the College of Education at the University of Illinois. When she returns from her many enjoyable travels around the world, meeting with our esteemed alumni, she values her time with close friends, and helping out at her family's horse farm in Urbana.



## Stay active. Be engaged. Join OLLI.

For curious minds age 50 and better, the new Osher Lifelong Learning Institute (OLLI) comes to the University of Illinois and the community thanks to support from the campus and the Bernard Osher Foundation.

Part of a network at universities around the country, OLLI proves learning has no age limits by providing members with intellectually stimulating courses (with no tests or grades!), free or discounted services, a wellness program and much more. Best of all, it offers members a way to connect with others who also believe in staying active and engaged in life!

For further information, visit the OLLI Web site at [www.oli.uiuc.edu](http://www.oli.uiuc.edu) or call (217) 244-9141.

## In Memory: Slavenas Fund Continues to Support Students

**Brian Slavenas** completed his bachelor's degree in Industrial Engineering at the University of Illinois at Urbana-Champaign in December 2002. In April 2003 1LT Slavenas was deployed for active duty with F Company, 106th Aviation. He died on November 2, 2003 when the helicopter he piloted was shot down outside of Fallujah, Iraq. The Brian D. Slavenas IIE Outstanding Member Award and Scholarship Fund pays tribute each year to his dedication.

When Slavenas' grandmother **Mrs. Halina Jakubenas Dilys** passed away she requested that donations be made to the Brian D. Slavenas IIE Outstanding Member Award.

The IESE Department thanks the Slavenas family and friends for their continued support. To view a list of donors who contributed to Brian's fund in memory of his grandmother, visit [www.iese.uiuc.edu/ugrad/aid/iie.html](http://www.iese.uiuc.edu/ugrad/aid/iie.html)

To learn more about the fund or to make a contribution contact Hadra Gustafson at 217.333.0140 or [hgustafs@uiuc.edu](mailto:hgustafs@uiuc.edu) or visit [www.iese.uiuc.edu/alumni/makegift\\_online.html](http://www.iese.uiuc.edu/alumni/makegift_online.html) to make a donation online.



*Brian Slavenas (left) and his grandmother, Mrs. Halina Jakubenas Dilys.*

## IESE Alumni Gather in San Francisco



On Saturday, November 10 IESE alumni in the San Francisco area got together at the Musée Mécanique to explore one of the world's largest privately owned collections of mechanically operated musical instruments and antique arcade machines.

Once the quarters ran out everyone headed across the street to Fisherman's Grotto for a social hour. IESE's new department head, Jong-Shi Pang, was in attendance as well as 11 alumni who brought family and friends with them.

We hope to regularly host events for alumni in the Bay Area and plan to host a similar event in New York this spring.

Please contact Hadra Gustafson at [hgustafs@uiuc.edu](mailto:hgustafs@uiuc.edu) for additional information or visit [www.iese.uiuc.edu](http://www.iese.uiuc.edu)

## Project Design Chair's Paper Chosen as Finalist



**Harry S. Wildblood**, chairman of project design activity, presented a paper at the National Capstone Design Course Conference in Boulder, Colorado. His paper, "Institutionalizing a Capstone Program—The Devil's in the Details," has been selected as the best paper in its session at the conference and may be published in the new online ASEE Journal, *Advances in Engineering Education*. The mission of this journal is to highlight significant advances in instruction, pedagogy, technology and assessment that substantially improve learning.

Wildblood's paper highlighted IESE's capstone engineering design course program which prepares students to work successfully in a commercial engineering environment. The Department's program has evolved for more than 40 years to become a industrially sponsored semester-project, each of which has a three-student team and is assisted by a faculty advisor. Projects are scoped to be identical to those encountered by an entry-level engineer in the industry.

For more information about the capstone design program or to become a sponsor, visit [www.iese.uiuc.edu/ge494/industry-partners.html](http://www.iese.uiuc.edu/ge494/industry-partners.html)

## Callahan, continued

devices, such as a motorized wheelchair.

"Prior technologies that allowed the disabled to communicate required physical movements like pressing a button or tracking head movements," said Callahan. "The amount of movement required to use these devices makes them inaccessible to severely disabled people. Because our technology does not require physical movement it has created an opportunity to bypass the communicative behaviors imposed by physical disability."

Leading a team of students and researchers, Callahan has begun to realize the potential of this technology. After a recent breakthrough, he and his team has shown the ability to produce fluent speech with 70 percent accuracy from the neurological signals. It is his hope that this innovation will restore communication for millions of disabled people.

"Michael Callahan's project to help individuals without speech and mobility communicate through the application of neuroscience is truly innovative and deserving of the Lemelson-Illinois Student Prize," said Ray Almgren, National Instruments vice president of product marketing and academic relations. "Using our LabVIEW graphical system design platform, Michael was able to design an application that compares signals from the muscles in the neck and develop a fully functional wheelchair prototype that can be controlled by a person's thoughts. National Instruments is excited to be a part of this project, and we wish Michael continued success."

To promote innovation at the University of Illinois, Callahan is also working to bring resources to students interested in pursuing their ideas. He has been instrumental in creating a laboratory for students involved with the Technology Entrepreneur Center to develop their product ideas. Callahan is also working with Motorola to develop technology innovation for the impoverished people in India.

The \$30,000 Lemelson-Illinois Student Prize is funded through a partnership with the Lemelson-MIT Program, which has awarded the \$30,000 Lemelson-MIT Student Prize to outstanding student inventors at MIT since 1995.

For information about Michael Callahan's company and a demonstration of the technology, visit [www.theaudeo.com](http://www.theaudeo.com).

### Editor's Note:

Michael Callahan recently graduated with a master's degree in Systems and Entrepreneurial Engineering. He now is running his company full-time and working to raise the first round of funding. "We have grown our team and improved the technology as well," Callahan says. "We are pursuing a number of business opportunities and partnerships with large companies. We recently demonstrated the technology at DEMO, [www.demo.com](http://www.demo.com), a launch pad for emerging technology and were awarded DEMOgod."

## Innovative Educators, continued

It was clear to us that teaching decision skills fits well with the mission of the JDC. Kaiser recognized the value of this venture and embraced the idea of developing a program to help residents make better decisions.

### Teaching Decision Skills at the JDC

We started with two, four-hour workshops for two groups of teens. Material delivered in the workshops was taken from the field of decision analysis and normative decision-making. While this material had long been tested with graduate students, a key objective in our endeavor was to test this material with teens at the JDC and to gather feedback for use in future workshops.

Abbas, Chris Spetzler and Jessica Fulton (an undergraduate UIUC student at the time, and now a high school math teacher in Chicago) delivered the first workshop. As the team entered the JDC, they passed through three locked doors to reach a small classroom, decorated with posters of animals and bookshelves of textbooks. The classroom looked much like any other school classroom, except that it had no outside windows and had special security door knobs. Two officers entered the room with four residents, all boys in their teens.

When Jessica handed each resident a colorful pamphlet from the Decision Education Foundation that outlined the topics for discussion, one of the officers said, "Please pull the staples from the pamphlets. You can't give these kids staples; it is for their own safety." This was a striking difference between teaching at a regular classroom and at the JDC. In addition, no monetary incentives were allowed in any of the demonstrations. While \$20, \$5, and \$100 bills were used as investment resources in our classroom demonstrations at school, we could not use the same incentives at the JDC. Only "tokens" could be handed out and obtained by asking the officers for them. A token is a colorful piece of paper printed at the JDC and given as an incentive for good behavior. Residents use tokens to "purchase" snack items.

Over the next four hours, we talked to the teens about making good decisions, decisions vs. outcomes and the six elements of decision quality. The officers also listened.

The session had touching moments when residents shared their hopes about changing their lives. In one of the demonstrations, residents were asked what they would do in the following situation: A mother with two teenage girls is facing a decision of whether a grandmother, with worsening Alzheimer's disease, should move in with them or move into assisted living. If she does move in with them, the mother would have to adjust her work schedule and work fewer hours. The teenage girls would have to share a bedroom.

In other settings, students often pause to think about the pros and cons of each alternative. Residents at the JDC shared their own experience with their families. Some of their comments included:

**Resident 1:** "When my grandma went out of jail she came and lived with us. It is only natural that a daughter takes care of her mother when she is older."

**Resident 2:** "I would just get a job working at the nursing home. Then she could live there and I could still see her every day."

In keeping with the importance of "family comes first," the residents all decided to make sacrifices to take care of their grandmother. The officers were watching with interest and impressed by

the participation of the kids. We observed how supportive the officers were of the teens and how the teens confided in them and trusted their advice. At the end of the session, one of the officers commented, "We thought you would be lucky to go an hour with them and you kept their attention for all four. We have never seen these kids so excited about learning."

We repeated the same workshop for another group that afternoon. During the session, a staff member entered with a can of milk and a sandwich for each resident. One of the residents also got a token. A resident's written response is typical of the experience and comments we received that day: "This session has made me look at decision-making a lot differently and (made it) easier to make a decision."

By the end of the day something significant had begun at the JDC. The concept that decision-making can be taught in a way that attracts the interest of the residents was established. This experience quickly led to four more workshops — two aimed at the teens and two at the correctional officers who wanted to learn more about decision-making.

In January, Abbas and two other UIUC graduate students, Sarah Miller and Nathan Hoffmann, presented two workshops to the juvenile detention officers. Later, the officers told Abbas and Hoffman many stories about the teens and the challenges the residents faced. We used this input to create several case studies for workshops delivered at the JDC in March 2007.

### We Have No Decisions Here

We began one workshop by asking a staff member in advance for 20 tokens to use in an investment demonstration. An officer entered the room with six residents, four boys and two girls. After introductions, Abbas introduced the topic of decisions and asked for examples from the residents. One girl at the JDC, we will call Amanda, raised her hand.

**Amanda:** "You talk about decisions, but we don't get many decisions here or in our lives."

**Abbas:** "Did you make a decision to come to class this morning? Could you have said no?"

**Amanda:** "Yes, I could, but that would have meant bad behavior. I need to get out of here fast, and I need a letter from the staff of the JDC so the judge can release me next week."

**Abbas:** "So in fact you do have decisions here. You made a decision of coming to class. You chose to have good behavior at the JDC to get out faster. What about your decisions when you leave? Would you like to return?"

**Amanda:** "No, never again. I will make sure that I do not do anything to get me back."

**Abbas:** "How will you do that?"

**Amanda:** "I will never shoplift again and will abandon those friends that encouraged me to do so."

**Abbas:** "That sounds like another decision to me."

After some discussion the residents began to understand they make decisions every day, and that they bear the consequences of the decisions they make.

Abbas asked for a volunteer. A girl we will call Janice raised her hand. "Thank you, Janice," said Abbas. "Here are your five tokens for volunteering."



This article appeared in the August 2007 OR/MS Today.



Janice didn't understand him at first. "You're kidding, right?" Five tokens was a significant prize — enough chips and treats to last a few days. "I don't take money from people," Janice added.

Convincing the group of his intentions, Abbas posed an investment opportunity to Janice.

"What is an investment?" she asked.

"An investment is like a stock; its price can go up or down, and you can get more money back or even lose money if you choose to invest," offered another teen resident.

Abbas mentioned the payoff will be 20 tokens if the investment is successful and no tokens if unsuccessful. This captured the attention of all six residents.

"Now that's a big decision!" exclaimed one resident.

"I need another volunteer," Abbas continued.

All six youths eagerly raised their hands. Abbas chose Bill and described the deal to the group: Janice can choose to invest her five tokens. If she does, Abbas will ask Bill a true-false movie trivia question. If Bill answers correctly, Janice will receive 20 tokens. If Bill answers incorrectly, Janice will lose her five tokens. In addition, she will sing, "Mary Had a Little Lamb" in front of the group.

"Well, Janice, would you like to invest?" Abbas asked.

This created an opportunity to discuss non-monetary attributes (singing in front of the class) when added to a deal. The residents were fascinated by the deal. Rather than thinking of ways to pass another Saturday in the Juvenile Detention Center, they faced an opportunity with real consequences that they all understood.

One resident offered enthusiastic advice to Janice. "You should invest," he said. "You could always earn the five tokens back if you lost, but it will take a real long time."

Amanda agreed. "Janice should invest," she said. "Bill has a 50/50 chance of getting the question right."

"But does he?" Abbas replied. "When a decision has only two possibilities, the outcomes are not always equally likely. There are only two possibilities of life on Mars, but do you think that is a 50/50 chance?"

The group grasped a simple but critical concept — for Janice, the odds of Bill correctly answering the question are her degree of belief in Bill's knowledge of movies. Based on what she knew about Bill, she had to decide if she wanted to make the investment.

"I don't watch a lot of movies," Bill offered. "My favorite movie is 'Boys 'N' the Hood.'"

Abbas presented Janice with another alternative. He showed the group a large medallion with two faces the group named as Heads and Tails. "I have here a medallion. If you choose to invest your five tokens, I will flip this medallion to determine the outcome of your deal."

By this time Janice was visibly nervous about her decision alternatives: not to invest, to invest in Bill's movie expertise or to invest in the flip of the medallion. The other residents were excited about her "game" and offered their opinions. Some locked on the medallion as the best alternative since Bill, the "expert," had not convinced them of his movie expertise. When the decision finally came the residents were on the edge of their seats. Amanda began humming the theme from the game show "Jeopardy." Janice decided not to invest and kept her five tokens.

With her decision made, Abbas asked Janice which investment decision she preferred: Bill or the medallion. On the urging of her

peers, she chose the medallion. Just for fun, Abbas tossed the medallion and Janice correctly called heads.

"Oh, no!" exclaimed Daniel.

"Did she make a good decision?" Abbas asked. He took the opportunity to teach another critical concept: we cannot judge the quality of a decision by observing the outcome. This idea was clearly new for the group.

"I see, a decision is a choice you make," added Daniel. "And an outcome is what happens after the decision."

### Real Life Case Studies

We also collected case studies from the local paper, reprinted below with original names removed:

**Headline:** "Stolen Steel Recovered" — "A Champaign man and a teenager were arrested for stealing some steel I-beams from a construction site in Champaign. The man, 25, who listed an address in Champaign, was arraigned Wednesday on a charge of felony theft. He pleaded not guilty and is due to return to court Jan. 9 for a pretrial hearing. Bond was set at \$5,000. According to Champaign police, officers were called to the 600 block of West Anthony Drive shortly after 7 a.m. Tuesday. Witnesses reported seeing a man and a youth steal six steel I-beams and leave in a vehicle ... Police found the vehicle and arrested the man and a 16-year-old male."

— *The News-Gazette*, Dec. 1, 2006

The man in the clipping was a close family member of the teen. The youth had just left the Champaign Detention Center a week earlier. The officers knew him well. We asked the residents how they would have responded to a close family member's request for their help.

"Well, my uncle, for example, would beat me down if I told him I wouldn't help him," said one boy.

**Abbas:** "What if you go along with your uncle?"

"You could be arrested or you could get away with the crime," were the responses.

**Abbas:** "If you get away, what would you do with the I-beam?"

**Daniel:** "Sell it, but the buyer would know it is stolen and would give us very little money and might even turn us in."

"Is it worth it then?" Abbas asked.

Seeing the branches of the decision tree and their uncertainties outlined on the board provided a graphical picture about consequences of this decision for the residents, as well as a follow-up discussion about ethics in our daily lives.

### Ongoing Work

We have received positive feedback from the residents and the officers at the JDC. Kaiser continues to be very supportive and has agreed to send two officers on a longer-term training course at the Summer Institute sponsored by DEF at Stanford University. Upon their return, Abbas will provide them with the teaching material and know-how to teach decision-making to the residents. At this stage we are training more people at the JDC, building an online Q&A system for the teens and deriving measures of effectiveness for teaching decision skills at the JDC. We hope to see a drop in recidivism and success of the residents in making better decisions as they leave the JDC. As the program develops, we also plan to provide a model that can be incorporated into similar programs to help teens at juvenile detention centers throughout the country.

# WHAT HAPPENS WHEN YOU GIVE SOMEONE A CHANCE?



## YOU CREATE THE PERFECT SETTING FOR FEEDING THE MIND.

See how fellow alumni like Pampered Chef founder Doris Kelley Christopher help shape Brilliant Futures at the University of Illinois. Please visit the Brilliant Futures Campaign website at [brilliantfutures.illinois.edu](http://brilliantfutures.illinois.edu)

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