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International Activities of the Faculties at the College of EGINEERING

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INTERNATIONAL ACTIVITIES OF THE FACULTIES AT COLLEGE OF ENGINEERING

Manoj K Mohanty

Professor, Mining and Mineral Resources Engineering
Southern Illinois University Carbondale



International Advisory Board Meeting-July 2010

COLLEGE OF ENGINEERING-SIUC

❑ Five Departments

- Civil and Environmental Engineering (CEE)
- Electrical and Computer Engineering (ECE)
- Mechanical Engineering and Energy Processes (MEEP)
- Mining and Mineral Resources Engineering (MMRE)
- Technology

❑ Two Research Centers

- Center for Advanced Friction Studies
- Center for Embedded Systems

❑ Biomedical Engineering MS and ME Program



OM AGRAWAL (PROFESSOR, MEEP)

Keynote Speaker:

Agrawal, O. P., Euler-Lagrange Equation For a New Class of Fractional Variational Problems, IFAC-2008, Fractional Differentiation and Its Applications (FDAs), November 5-7, 2008, Ankara, Turkey.

Agrawal, O. P., Fractional Derivatives and Their Applications, Part II – Thermal Analysis of Disk Brakes, ENOC2008, EUROMECH Nonlinear Dynamics Conference, June 30, 2008, St. Petersburg, Russia.

International Conference Organizing in the Countries such as, Turkey, Russia and France.



OM AGRAWAL (Continued..)

Host for Fulbright Fellows and Other Scientists:

- Professor Sami I. Muslih, Physics Department, Al-Azhar University-Gaza, P.O. Box, 1277, Gaza, **Palestine**.
- Professor Dumitru Baleanu, Çankaya University, Faculty of Art and Sciences, Department of Mathematics and Computer Sciences, Balgat 0630, Ankara, **Turkey**.

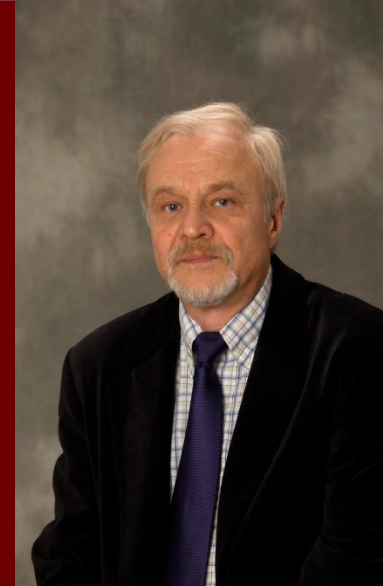
International Research Supervisors:

Mr. Raj Biswas, Indian Institute of Technology, Kharagpur, **India**;
Ozlem Defterli, Department of Mathematics and Computer Sciences,
Faculty of Arts and Sciences, Cankaya University, 06530, Ankara, **Turkey**.
Beyza Billur Iskender, Department of Mathematics, Faculty of Science and
Arts, Balıkesir University, Balıkesir, **TURKEY**; Derya Karadeniz, Department
of Mathematics, Faculty of Science and Arts, Balıkesir University, Balıkesir,
Turkey.



Tomasz Wiltowski (Professor, MEEP)

- Member of the experts panel on energy for the European Union Institute of Energy, Petten, the Netherlands
- Collaboration on biomass gasification with the Technical University Ostrava, Czech Republic
- Collaboration with the Central Mining Institute, Katowice , Poland on the underground coal gasification
- Member of the research group on hydrogen storage at the Central Mining Institute, Katowice , Poland

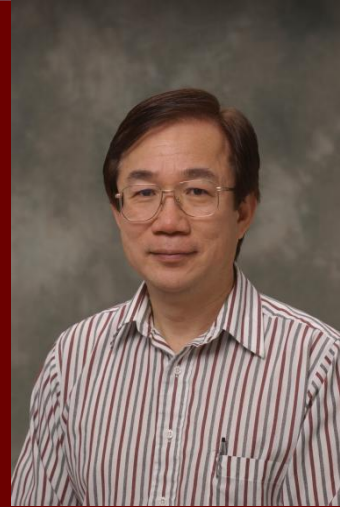


Tomasz Wiltowski (Continued....)



TSUCHIN PHILIP CHU (PROFESSOR, MECHANICAL ENGINEERING)

- ❑ Professor Chu has been invited by many universities in Taiwan to give lectures the past ten years.
- ❑ In March 2009, he was invited by National Tsing Hua University to organize a workshop in Taiwan and give a one day lecture on Digital Image Correlation.
- ❑ In April 2010, he was invited by National Chung Hsing University to give lectures on Non-destructive Evaluation to AUO, a leading company in Taiwan for LCD panel manufacturing. This lecture series is sponsored by National Science Council in Taiwan.



Kanchan Mondal, Associate Professor MEEP

- Conducted Collaborative Research with Dr Debabrata Das, Professor, Department of Biotechnology, Indian Institute of Technology, Kharagpur.
- Joint NSF-DST Planning Award: Biohydrogen production with simultaneous CO₂ Capture



Kanchan Mondal, (Continued..)

- Collaborative Research (in hydrogen production and storage) with Dr I. P. Jain, Professor and Emeritus Scientist, Center for Non Conventional Energy Resources, University of Rajasthan, India
- Honorary Visiting Professor, Technical University Ostrava, Czech Republic, 2009; Topic: Energy Management



SATYA HARPALANI (PROFESSOR AND CHAIR, MMRE)

Dr. Harpalani has been working on Indo-US projects with funding from the US EPA for several years. The thrust of the work is in the following areas:

- ❑ Assessment and quantification of natural gas emission from coal operations into atmosphere
- ❑ Utilization of this “*wasted*” energy resource
- ❑ “*Carbon Credits*” for avoided emissions
- ❑ Technical and economic feasibility of recovering unconventional sources of energy from Indian coal/shale
- ❑ Assist Indian scientists establish a research facility to evaluate and simulate long-term flow behavior of Indian rocks/coal



SATYA HARPALANI (CONTINUED...)



Lunching of Indo-US Coal Mine Methane Research Center (November 2008)



DR. Y. P. CHUGH (PROFESSOR, MMRE)

- Fulbright Senior Specialist Award-2006- Indian School of Mines, Dhanbad. Developed the first BS Degree Program in Environmental Science and Engineering at a major public institution. Return visit to institution in 2007.
- Adjunct Professor- Indian School of Mines, 2006-Present
- Plenary Speaker at several Coal, Energy, and Environment forums in India, 2005-2009.



DR. Y. P. CHUGH (CONTINUED...)

- International Task Force Member “Sustainable Coal Development in China”, China Council of International Cooperation and Environmental Development, 2009
- Visiting Professor- Banaras Hindu University, India, 2009. Assisted with review of sustainability institute and rock mechanics center.
- Visiting Professor- National University of Singapore. Teach a short course and assist with mineral development issues. June 2010.
- Visiting Professor- China University of Mining and Technology. Assist with mine subsidence and waste management issues. Offer a short course in mining subsidence. August 2010.
- International Society for Rock Mechanics Meeting, New Delhi. Offer a short course on “ Ground Control in Coal Mines”, October 2010.



MANOJ K. MOHANTY (PROFESSOR, MMRE)



- ❑ Indo-US Coal Working Group
 - Member since 2009
 - Attended two joint meetings held in Washington DC
- ❑ Institute of Minerals and Materials Technology (IMMT), Bhubaneswar-
 - Keynote lecture at MPT2009
 - Joint research proposal to the Indian Ministry of Steel-2009 (decision pending)
 - A senior scientist from IMMT spent nearly 6 months at SIUC
- ❑ Indian School of Mines (ISM), Dhanbad;
 - Invited Presentation in 2007
 - Keynote lecture at MPT 2005
 - A Professor of ISM visited SIUC for 2 days in May 2010.



MANOJ K. MOHANTY (CONTINUED...)

- ❑ National Metallurgical Laboratory (NML), Jamshedpur
 - Invited Presentation in 2007
 - Member of the International Organizing Committee for the MPT 2010
 - A keynote speaker at MPT 2010
- ❑ China University of Mining and Technology
 - Invited Presentation at the Beijing Campus-2008
 - A Professor from the Xuzhou campus spent about 6 months at SIUC
- ❑ Tangshan Shenzhou Manufacturing, Co. Ltd (TSM), Hebei Province, China-2008
 - Visited their Dry Separator manufacturing facility
 - Planned for some joint work; got a Illinois state grant funded
- ❑ Review of PhD Dissertation and Research Proposals from Australia and Canada.



MANOJ K. MOHANTY (CONTINUED...)



Southern Illinois University Carbondale

College of Engineering

TOMAS VELASCO (ASSOCIATE PROFESSOR, TECHNOLOGY)

- Taught a course in Six Sigma as Visiting Scholar at *Fachhochschule Deggendorf University*, Department of Industrial Engineering, Deggendorf; Germany. (Summer 2007).



TOMAS VELASCO (CONTINUED)

- Taught a graduate course in Lean Six Sigma as Visiting Professor at *Universidad Carlos III*, Department of Mechanical Engineering, Madrid, Spain. (*Summer 2009*).

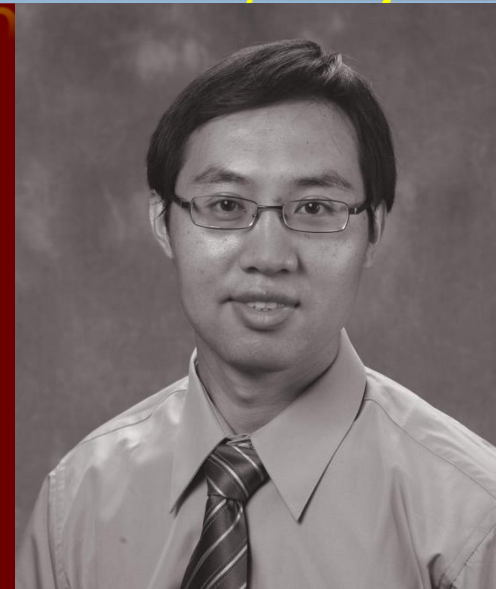


- Taught a Seminar in Design of Experiments as Visiting Professor at *Universidad Europea de Madrid*, Department of Industrial Engineering, Madrid, Spain. (*Summer 2009*).



XINGMAO “SAMUEL” MA (ASSISTANT PROFESSOR, CEE)

- Dr. Ma was selected as one of the 15 Green Talents of the Year 2009 by the German Federal Ministry of Education and Research (FMER). The Green Talents were invited to participate in the International Forum for High Potentials in Green Technologies held in Germany during the first week of September 2009.
- Dr. Ma is also going this fall to Germany for one month to continue his collaboration.



YANNA LIANG (ASSISTANT PROFESSOR, CEE)

- Adjunct Professor, Suzhou University of Science and Technology, China.
- Invited lectures at Suzhou University of Science and Technology June, 2010
- Research collaboration with faculty at Shandong University at Weihai, China.
- Graduate student recruitment from China



OTHER CEE FACULTIES

- **Dr. Rolando Bravo (Associate Prof.):** Active with professional organizations in Peru; research projects and consulting activities
- **Dr. Vijay Puri (Professor):** Active with universities in India; international conference organizing; external reviewers for Ph.D. students.



OTHER ENGINEERING FACULTIES

- Prof. Frances Harackiewicz (ECE)
- Prof. Spyros Tragoudas (ECE)
- Prof. Peter Filip (Friction Center)



SUMMARY

❑ **Research Activities:**

- India, Turkey, Poland, Czech Republic, China.

❑ **Teaching Activities:**

- Spain, Germany, Singapore, India.

❑ **Other Professional Activities:**

- China, Peru, Taiwan, Turkey, India, Netherland.

