

## **Dr. Durai Sundaramoorthi**

### **Academic Honors / Activities**

- Chair – 2010 Informs Data Mining and Health Informatics Workshop
- 18<sup>th</sup> Place – 2010 INFORMS Data Mining Contest (World Wide Contest)
- Best Interactive Presentation Award – 2009 INFORMS annual meeting
- Best Research Poster Award – 2009 Mayo Clinic Conference on Systems Engineering & Operations Research in Health Care
- Finalist – 2009 INFORMS Case Study Contest
- 16<sup>th</sup> Place – 2009 INFORMS Data Mining Contest (World Wide Contest)
- Review Board – International Journal of Operations Research and Information Systems
- Reviewer – Health Care Management Science
- Reviewer – International Journal on Production Research
- Council Member – Data Mining Section of INFORMS
- Newsletter Editor - Data Mining Section of INFORMS
- Session Chair (2007, 2008, 2009, 2010 - INFORMS Annual Meeting)
- Session Chair (2007, 2009 - Institute of Industrial Engineers Annual Conference)
- Nominee – 2008 Decision Sciences Institute Doctoral Dissertation Award
- Member of TAU BETA PHI-honor society for engineers
- Member of ALPHA PHI MU-honor society for industrial engineers
- Member of INFORMS (2004 – present)
- Member of Decision Sciences Institute (2006 – present)
- Member of IIE (2005 – present)
- Dean's List (2001)
- State first mark of 100 % in mathematics in the secondary school leaving certificate Examination

## **Journal Publications**

- D. Sundaramoorthi, J. M. Rosenberger, V. C. P. Chen, D. F. Behan and S.B. Kim. "Simulation and patient assignment: Unearthing patterns." Nursing Management, (2010), Vol 41 (11) P 14 - 16.
- D. Sundaramoorthi, V. C. P. Chen, J. M. Rosenberger, S.B. Kim, and D. F. Behan. "A Data-Integrated Simulation-Based Optimization for Assigning Nurses to Patient Admissions" Health Care Management Science, (2010), Vol 13 (3) P210 – 221.
- D. Sundaramoorthi, V. C. P. Chen, J. M. Rosenberger, S.B. Kim, and D.F. Behan. "A Data-Integrated Simulation Model to Evaluate Nurse-Patient Assignments." Health Care Management Science, (2009), Vol 12 (3), P 252 – 268.

## **Conference Publications** (MWSU Student authors are underlined)

- A. Coult, D. Sundaramoorthi, D. H. Nguyen. "Using Classification and Regression Trees to Model Financial Market Movement." In Proceedings of the 2010 IE Research Conference, Cancun, MX.
- D. Sundaramoorthi, D. H. Nguyen, and H. Sundaramoorthi. "Knowledge Discovery and Mining of Ground-Level Ozone Data." In Proceedings of the 4th INFORMS Workshop on Data Mining and Information Systems, (2009), San Diego, CA.
- S. Streeter, D. Sundaramoorthi, M. Lewis, C. Samuels. "Using Classification and Regression Trees to Predict Ozone Concentration." In Proceedings of the 2009 IE Research Conference, Miami, FL.
- D. Sundaramoorthi, V. C. P. Chen, J. M. Rosenberger, and S.B. Kim. "A Data-Integrated-Simulation Based Optimal Policy to Assign Nurses to Patients." In Proceedings of the 3rd INFORMS Workshop on Data Mining and Health Informatics, (2008), Washington, DC.

- MD Sarder, D. Liles, S. Ferriera, P. Punnakitikashem, and D. Sundaramoorthi. "A Generic Product and Process Design Ontology." In Proceedings of the 2007 IE Research Conference, Nashville, TN.
- D. Sundaramoorthi, V. C. P. Chen, S.B. Kim, J. M. Rosenberger, and D.F. Behan. "A Data-Integrated Nurse Activity Simulation Model." In Proceedings of the 2006 Winter Simulation Conference, Monterey, CA.
- D. Sundaramoorthi, V. C. P. Chen, J. M. Rosenberger, S.B. Kim, and D.F. Behan. "Using Classification and Regression Trees to Estimate Transitions in a Nurse Activity Simulation model." In Proceedings of the 2006 IE Research Conference, Orlando, FL.
- D. Sundaramoorthi, V. C. P. Chen, J. M. Rosenberger, and D. F. Green. "Knowledge Discovery and Mining for Nurse Activity and Patient Data." In Proceedings of the 2005 IE Research Conference, Atlanta, GA.

### **Grants / Proposals**

- Comparison of pre- and post-surgical plantar sensory thresholds and sensory densities of diabetic peripheral sensory neuropathy patients, St. Joseph Orthopedics, \$undisclosed, Nov 2010 to present.
- Prevention of Atrial Fibrillation - A Statistical Analysis of Usage of Dronedrone (Multaq) after bypass of coronary artery surgery, Heartland Regional Medical Center, \$undisclosed. July 2010 to Jun 2011
- Logan Summer Research Grant, \$8,000. Jun 2010 to Aug 2010
- Craig School of Business Summer Research Grant, \$7,000. Jun 2009 to Aug 2009
- Special Data Mining Projects for Heartland Regional Medical Center, \$undisclosed. Jun 2008 to Aug 2008
- Craig School of Business Summer Research Grant, \$6,600. Jun 2008 to Aug 2008
- Texas Public Education Grant, \$80,000. Aug 2002 to Aug 2007
- Study and analysis of vehicular and pedestrian traffic on the Missouri Western State University campus - submitted to Physical Plant of Missouri Western State University (not funded)

- A Simulation-Based-Optimization Information Technology Tool to Improve Patient Care - submitted to Robert Wood Johnson Foundation (not funded)
- Ideas for Making Long-term Habit Changes in Lifestyle – submitted to innocentive.com (Innocentive 6470275-not funded).
- A Simulation-Based-Optimization Information Technology Tool to Improve Patient Care – submitted to Missouri Life Sciences Research Board’s 2008 RFP (not funded).
- A Simulation-Based Optimization Tool to Select Mine Clearing Technology and Convoy Distance – submitted to Leonard Wood Institute’s 2008RFP (not funded).

**Technical Presentations** (as Lead or Co-author)

- INFORMS Annual Meeting, Austin, TX, Nov 2010 (Invited)  
A Data-Integrated Simulation to Predict Financial Market Movement
- IIE Annual Conference, Can Cun, MX, Jun 2010  
Using Classification and Regression Trees to Model Financial Market Movement
- INFORMS Annual Meeting, San Diego, CA, Oct 2009  
Simulation and Optimization of nurse-to-patient assignments.
- INFORMS DM and SI workshop, San Diego, CA, Oct 2009  
Using Classification and Regression Trees to Predict Ozone Concentration
- INFORMS Annual Meeting, San Diego, CA, Oct 2009  
Determining Playing Eleven for Kolkata Knight Riders.
- INFORMS Annual Meeting, San Diego, CA, Oct 2009  
Knowledge Discovery and Mining of Ground-Level Ozone Data
- IIE Annual Conference, Miami, FL, May 2009  
Using Classification and Regression Trees to Predict Ozone Concentration
- INFORMS Annual Meeting, Washington, DC, Oct 2008  
A Data-Integrated Simulation Approach to Optimize Patient Care
- INFORMS DM and HA workshop, Washington, DC, Oct 2008  
A Data-Integrated-Simulation Based Optimal Policy to Assign Nurses to Patients
- INFORMS Annual Meeting, Seattle, WA, Nov 2007 (Invited)

A Data-Integrated Nurse-Patient assignment Simulation Model: development and validation

- IIE Annual Conference, Nashville, TN, May 2007  
A data-integrated nurse activity simulation model: development and validation
- Winter Simulation Conference, Monterey, CA, Dec 2006  
A Data-Integrated Nurse Activity Simulation Model
- INFORMS Annual Meeting, Pittsburgh, PA, Nov 2006 (Invited)  
A Data-Integrated Simulation Model for Nurse Activity
- IIE Annual Conference, Orlando, FL, May 2006  
Using Classification and Regression Trees for a Nurse Activity Simulation
- INFORMS Annual Meeting, San Francisco, CA, Nov 2005 (Invited)  
Using Classification Trees to Develop a Nurse Activity Simulation
- IIE Annual Conference, Atlanta, GA, May 2005  
Knowledge Discovery and Mining for Nurse Activity and Patient Data
- Annual Celebration of Excellence by Students, Arlington, TX, Apr 2005  
Statistical Data Mining for Nurse Activity and Patient Data
- INFORMS Annual Meeting, Denver, CO, Oct 2004 (Invited)  
Application of Data Mining to Nurse Activity and Patient Diagnosis

### **Poster Presentations**

- Mayo Clinic Conference on System Engineering & Operations Research, Rochester, MN, Aug 2009  
A data-integrated simulation-based optimization of new patient assignments.
- Cerner Health Conference, Kansas City, MO, Oct 2008  
A Data-Integrated Simulation to Optimize Nurse-Patient Assignments.
- Mayo Clinic Conference on System Engineering & Operations Research, Rochester, MN, Sep 2008  
A Data-Integrated-Simulation Based Optimal Policy to Assign Nurses to Patients.
- NSF Bridges to Engineering 2020 Workshop, Greensboro, NC, Mar 2008 (Invited)  
A Data-Integrated Simulation Model to Evaluate Nurse-Patient Assignments.

- Operating on Health Care, Vancouver, CA, Aug 2007  
A Data-Integrated Nurse Activity Simulation Model.