

Daniela Stan Raicu

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Work Experience

- 2008 - Present Associate Professor
DePaul University, School of CTI, Chicago, IL
- 2002 - 2008 Assistant Professor
DePaul University, School of CTI, Chicago, IL
- Summer 2002 Coordinator of the NSF Research Experience for Undergraduates (REU) Program
Oakland University, Department of Computer Science and Engineering, Rochester, MI
- 1999 – 2002 Graduate Teaching Assistant
Oakland University, Department of Computer Science and Engineering, Rochester, MI
- Summer 2001 Technical Specialist Intern
Ford Motor Company, Business Process Reengineering Department, Dearborn, MI
- Summer 2000 Researcher Intern
Accenture, Accenture Technology Labs, Northbrook, IL
- Summer 1999 Data Mining Specialist Intern
Young & Rubicam Company, Detroit, MI
- Summer 1999 Data Analyst Intern
Mandala Sciences Company, Broomfield, MI
- 1997 – 1999 Graduate Teaching Assistant
Wayne State University, Department of Computer Science, Detroit, MI
- 1993 – 1997 Mathematician
Institute of Mathematics of the Romanian Academy, Bucharest, Romania
- 1994 – 1995 Teaching Assistant
Academy of Economic Studies, Department of Computer Science, Bucharest, Romania

Education

- 1999 - 2002 Oakland University, School of Computer Science and Engineering, Rochester, MI
Ph.D. in Computer Science
Dissertation Title: “*eID: A System for Exploration of Image Databases*”
Research Advisor: Prof. Dr. Ishwar K. Sethi, IEEE fellow
- 1997 - 1999 Wayne State University, Detroit, MI
Master of Arts in Computer Science
- 1988 - 1993 University of Bucharest, Department of Mathematics, Bucharest, Romania
Bachelor of Science in Mathematics

Awards and Recognition

- 2008 DePaul “Excellence in Teaching” Award
- 2008 - present Elected member of the National UPE Executive Council
- 2004-2006 CTI Service Award with Upsilon Pi Epsilon (UPE)
- 2003 Honorary Member of the CTI Delta Chapter of UPE
- 2002 Computing Research Association (CRA) Scholarship – to attend the “CRA Academic Career Workshop”, Arlington, Virginia, February, 2002
- 1999 – 2002 Teaching Assistantship, Oakland University, Rochester, MI

- 1999 Graduate Teaching Recognition Award, Wayne State University, Detroit, MI
 1997 – 1999 Teaching Assistantship, Wayne State University, Detroit, MI
 1985 3rd Place in the Romanian Mathematics National Competition, Romania

Teaching

Courses

Data Analysis Courses

- IT223 (formerly CSC323): Data Analysis and SAS I
 - Fall 06-07, Spring 05-06, Fall 05-06, Fall 04-05, Spring 02-03, Winter 02-03, Fall 02-03
- CSC324/423: Data Analysis/Statistical Software II
 - Fall 07-08, Fall 05-06
- CSC334/424: Advanced Data Analysis
 - Winter 07-08, Spring 06-07, Spring 05-06, Winter 04-05
- CSC328/428: Data Analysis for Experimenters
 - Winter 03-04

Data Mining Courses

- IS567: Knowledge Discovery Technologies
 - Spring 06-07, Spring 04-05, Spring 03-04, Winter 03-04
- #CSC367: Introduction to Data Mining
 - Spring 07-08, Spring 04-05, Spring 03-04

Quantitative Reasoning Courses

- #ISP121: Math and Technology Literacy II
 - Winter 07-08, Winter 06-07

Foundations of Computer Science Courses

- CSC415: Foundations of Computer Science
 - Fall 03-04

Visual Computing Courses

- CSC381/481: Introduction to Image Processing
 - Fall 07-08, Fall 06-07, Fall 04-05, Fall 03-04
- CSC382/482: Image Processing and its Applications
 - Winter 06-07, Winter 04-05

Independent Studies & Research Credits

Undergraduate Independent Studies & Research Credits

- IT300: Research Experience (Spring 07-08: Pia Opulencia, Fall 07-08: Carl Philips)
- CSC399: Independent Study (Spring 05-06: Amaris Casiano-Zoko, Fall 03-04: Dong-Hui Xu)

Graduate Independent Studies & Research Credits

- CSC592: Computer Vision/Pattern Recognition (Spring 07-08, Winter 07-08 & Fall 07-08: William Horsthemke, Spring 06-07: Ruchaneewan Susomboon & William Horsthemke, Winter 05-06: Ruchaneewan Susomboon)
- CSC594: Artificial Intelligence Topics (Winter 06-07: Ruchaneewan Susomboon)
- CSC598: Topics in Data Analysis (Spring 05-06: Ruchaneewan Susomboon)
- CSC599: Topics in Computer Science (Winter 04-05: Andrew Smith)
- CSC699: Research (Spring 08-09: William Horsthemke, Winter 08-09: Emilia Apostolova, William Horsthemke, Fall 08-09: William Horsthemke, Winter 07-08 & Fall 07-08: Ruchaneewan Susomboon, Ekarin Varutbangkul, Fall 06-07: Chitra Nair, Fall 05-06: Ruchaneewan Susomboon)
- IS690: Research Seminar (Summer I & II 04-05: Mark Ardito)

Tutorials

Basic Statistics Online Tutorial

New course at CTI; more details are provided in the curriculum development subsection

- <https://www.cs.depaul.edu/cti/studentprofile/tutorials.asp#statistics>

MatLab tutorial sessions for DePaul faculty, staff and students*

- Introduction to MATLAB, Basic Statistics with MatLab, & Advanced Statistics with MatLab tutorials

SPSS tutorial sessions for DePaul faculty, staff and students

- Introduction to SPSS & SPSS AnswerTree for Data Mining Tutorials

PhD Breadth Exams

- Prepared and graded the Data Analysis Breadth Exam - Fall 05-06, Spring 05-06, Fall 06-07, and Spring 07-08 (with Dr. Raffaella Settimi)
- Designed the Visual Computing Reading List, Winter 05-06 (with Dr. Jacob Furst)
- Prepared and graded the Visual Computing Breadth Exam - Spring 05-06, Fall 06-07, and *Spring 06-07 (with Dr. Jacob Furst)

Curriculum Development

Quantitative Reasoning Curriculum

- A new Liberal Arts course (requirement for freshmen): IT 121: Mathematical and Technological Literacy II (with Drs. Amber Settle, GianMario Besana, Curt White, and Terry Steinbach)
- Nine sessions offered in Winter 06-07; 15 sections offered in Winter 07-08 with 343 DePaul students enrolled

Extensive Visual Computing Curriculum development

- Introduced three new graduate courses (CSC 481, CSC 482, CSC484), having cross-listed undergraduate courses (CSC 381, CSC382, CSC384) (with Dr. J. Furst)
- Awarded a QIC Departmental Initiative Grant from DePaul to support and revive the Visual Computing Area (see the Grants and Recognition Section)
- Introduced the Visual Computing Minor (Fall 04-05)
- Created tutorials for the Visual Computing courses

Database and Data Mining Minor

- Revised the minor (with Dr. Raffaella Settimi and Dr. Marcus Schaefer) in Winter 06-07
- Introduced a new undergraduate course in Data Mining (CSC367: Introduction to Data Mining)

COLWeb Beta Testing

Participated with my CSC 382/482 (one of the five courses selected) in the pilot study for the COLWeb Beta testing - Winter 06-07.

Research Advisor[†]

PhD Students

- *Current Students:* Bill Horsthemke, Dmitry Zinovev, Zahra Ferdowski
 - PhD dissertation committee member: Julie Zhang, Runa Bhaumik, Emilia Apostolova
- *Graduated:*
 - Chuan Duan (PhD dissertation committee member)
 - Dissertation: "Improving Requirements Clustering in an Interactive and Dynamic Environment", April 2009
 - April Reed (PhD dissertation committee member)
 - Dissertation: "Differences in Critical Risk Factors on Virtual Versus Traditional Software Projects", June 2008
 - Assistant Professor, East Carolina University in Greenville, North Carolina
 - Kevin Zhou (PhD dissertation committee member)
 - Dissertation: "Mining Web Navigation Patterns based on A Mixture of Latent Variable Models", July 2006
 - Research Engineer, eBay

* All MatLab tutorials are available online at: <http://facweb.cs.depaul.edu/research/vc/tutorials/index.htm>

[†] Information was provided on the student employment wherever it was available

Master Students

- *Graduated:* John Campion, Michael Doran, Charles Dowling, Lynette Lilly (Accenture), Chanokporn Limsangsri, Dony Kartawijaya, Andrew Smith, Winnie Tsang, Marc Ardito (Allstate), Dmitry Zinovev (PhD program at DePaul), Vesna Mitrovic

Undergraduate Students

- *Current Students:* Joseph Wantroba, Richard Brock
- *Graduated:* Carl Philips (MS-CS DePaul), Pia Opulencia (eLoyalty Corp., Behavioral Analytics), Stelian Aioanei, Jennifer Chow (graduated from Law School), Mikhail Kalinin (PhD Program, University of California at Irvine), Arati Kurani (Pharmacy School), Jong Lee (MIS, DePaul University), Eugene Ioffe, Greg Smith, Andrew Corboy, Winnie Tsang, Dong-Hui Xu (PhD Program, University of Washington)
- *NSF REU Program Students:*
 - Summer 2008: Sarah Jabon, Shirley Yu (UIC Pharmacy School)
 - Summer 2007: Ryan Datteri (PhD Program, Vanderbilt University), Aaron Mintz, Marwa Muhammad
 - Summer 2006: Tim Disney (PhD Program, University of California, Santa Cruz), Michael Lam (PhD Program, University of Maryland at College Park), Mailan Pham
 - Summer 2005: Stephanie Handrick, Roman Lerman, Bahare Naimipour (PhD Program, Michigan State University)

Research^{‡,♦}

Books and Book Chapters

- **Raicu DS**. "Mining Knowledge in Computer Tomography Databases" (Chapter 25), *Multimedia Data Mining and Knowledge Discovery*, Springer Publishers. Petrushin VA and Khan L (Editors), 2006.
- **Raicu DS**, Strandburg K (Editors). *Privacy and Technologies of Identity: A Cross-disciplinary Conversation*, Springer Publishers, 2005.
- Arabnia HR, **Raicu DS**, Rui Y (Editors). *Proceedings of the 2003 International Conference on Imaging Science, Systems, and Technology (CISST'03)*, CSREA Press, June 2003.

Journal Articles

- **Raicu DS**, Zinovev D, Furst JD, Varutbangkul E. "Semi-supervised Learning Approaches for Diagnostic Decision Making", *Advances in Medical Intelligent Decision Support Systems Special Issue of the Intelligent Decision Technologies (IDT) Journal*, Vol. 3, No. 2, 2009 (to appear)
- *Opulencia P*, Channin DS, **Raicu DS**, Furst JD. "Mapping LIDC, RadLex, and Lung Nodule Image Features". *Journal of Digital Imaging* (to appear).
- Heimann T, Ginneken B, Styner M, Arzhaeva Y, Aurich V, **Raicu D**. et al., "Comparison of Methods for Liver Segmentation from CT datasets", *IEEE Transactions of Medical Imaging (TMI)* (to appear).
- **Raicu DS**, Varutbangkul E, Furst JD, Armato III SG. "Modeling semantics from image data: opportunities from LIDC". Special issue "Warehousing and Mining Complex Data: Applications to Biology, Medicine, Behavior, Health and Environment" of the *International Journal of Biomedical Engineering*, Vol. 2, (3), 2009.
- Horsthemke W, **Raicu DS**, and Furst JD. "Evaluation Challenges for Bridging Semantic Gap: Shape Disagreements in the LIDC". *International Journal of Healthcare Information Systems and Informatics (IJHISI)*, Vol 3 (4), 2008.
- *Lam M*, *Disney T*, **Raicu DS**, Furst JD, Channin DS. "BRISC - An Open Source Pulmonary Nodule Image Retrieval Framework". *Journal of Digital Imaging*, 2007, doi 10.1007/s10278-007-9059-y
- Doran M, **Raicu DS**, Furst JD, Settini R, Schipma M, Chandler D. "Oligonucleotide Microarray Identification of Bacillus Anthracis Strains using Support Vector Machines". *Bioinformatics Journal*, vol. 23 (4), pp. 487 - 492, 2007, doi:10.1093/bioinformatics/btl626.

[‡] My name changed from "Daniela Stan" to "Daniela Stan Raicu" after my marriage in 2002

[♦] The authors highlighted using Italics font style are undergraduate students

- **Raicu DS**, Sethi IK. "Synobins: An Intermediate Level towards Annotation and Semantic Retrieval". *EURASIP Journal on Applied Signal Processing*, vol. 2006, Article ID 63124, pp. 1-19, 2006. doi:10.1155/ASP/2006/63124
 - **Raicu DS**, Sethi IK. "eID: A System for Exploration of Image Databases". *Information Processing and Management Journal*, Elsevier (Ed.), vol. 39/3, pp. 335-361, May 2003.
- Under Review:
- *Disney T, Lam M, Raicu DS, Furst JD, Channin DS*. "A Lookup and Reference Tool for Pulmonary Computed Tomography Nodules". *Journal of Digital Imaging* (submitted).
 - D. Zinovev, J. Furst, D. Raicu, S. Armato, "Predicting Radiological Agreement on LIDC Nodules", *Algorithms Journal*(ISSN 1999-4893), Special Issue on Machine Learning for Medical Imaging (abstract submitted)

Conferences and Workshop Proceedings[§]

Computing Education

- **D. S. Raicu**, J. D. Furst, "Enhancing Undergraduate Education: A REU Model for Interdisciplinary Research", *SIGCSE 2009: The 40th ACM Technical Symposium on Computer Science Education*, Chattanooga, TN, March 4-7, 2009. (33% acceptance rate)

Medical Informatics

- E. Apostolova, D.S. Channin, D. Demner-Fushman, J. Furst, S. Lytinen, **D. Raicu**, "Automatic Segmentation of Clinical Texts", *IEEE 2009 International Conference of the Engineering in Medicine and Biology Society (EMBS'09)* (submitted)
- *Wantroba J, Raicu DS, Furst JD*, "A study on the effect of CT imaging acquisition parameters on lung nodule image interpretation", *IEEE International Conference on Image Processing*, Greece, September 2009 (submitted)
- *Jabon SA, Raicu DS, Furst JD*, "Content-based versus semantic-based similarity retrieval: a LIDC case study", *SPIE Medical Imaging Conference*, Lake Buena Vista, FL, 7-12 February 2009
- *Yu S, Wantroba J, Raicu DS, Furst JD*, "A study on the effect of CT imaging acquisition parameters on lung nodule image interpretation", *SPIE Medical Imaging Conference*, Lake Buena Vista, FL, 7-12 February 2009
- W. H. Horsthemke, **D. S. Raicu**, J. D. Furst, "Characterizing pulmonary nodule shape using a boundary-region approach", *SPIE Medical Imaging Conference*, Lake Buena Vista, FL, 7-12 February 2009
- *Philips C, Li D, Raicu DS, Furst JD*. "Directional Invariance of Co-Occurrence Matrices within the Liver". *BIOTECHNO 2008: International Conference on Biocomputation, Bioinformatics, and Biomedical Technologies*, Romania, June 29th-July 5th, 2008.
- Varutbangkul E, Mitrovic V, **Raicu DS**, Furst JD. "Approaches for Generating a Data Set for Learning Predictive Models for Lung Nodule Interpretation". *BIOTECHNO 2008: International Conference on Biocomputation, Bioinformatics, and Biomedical Technologies*, Romania, June 29th-July 5th, 2008.
- Susomboon R, **Raicu DS**, Furst JD. "An ANOVA-based Study for Liver Texture Invariance using Co-occurrence Matrices". *SPIE Medical Imaging Conference*, San Diego, CA, February 2008.
- *Muhammad M, Raicu DS, Furst JD, Varutbangkul E*. "Texture versus Shape Analysis for Lung Nodule Similarity in Computed Tomography Studies". *SPIE Medical Imaging Conference*, San Diego, CA, February 2008.
- *Mintz A, Raicu DS, Furst JD*. "Liver Segmentation Combining Gabor Filtering and Traditional Vector Field Snake". *SPIE Medical Imaging Conference*, San Diego, CA, February 2008.
- *Datteri R, Raicu DS, Furst JD*. "Texture Analysis for Pulmonary Nodules Interpretation and Retrieval". *SPIE Medical Imaging Conference*, San Diego, CA, February 2008. (nominated for the **Best Student Paper Award**)
- Horsthemke W, Varutbangkul E, **Raicu DS**, and Furst JD. "Predictive Data Mining for Lung Nodule Interpretation". In the *Proceedings of the Seventh IEEE ICDM'07 Workshop on Data Mining in Medicine*, October 2007. (under 25% acceptance rate)

[§] Acceptance rates provided where they were available

- Susomboon R, **Raicu DS**, and Furst JD. "A Hybrid Approach for Liver Segmentation". In the *Proceedings of the Tenth International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI'07), 3D Segmentation in the Clinic: a grand challenge Grand Challenge Workshop*, October 2007. (35% acceptance rate)
- Horsthemke W, **Raicu DS**, and Furst JD. "Task-Oriented Medical Image Retrieval". In the *Proceedings of the 10th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI'07), Content-based Image Retrieval for Biomedical Image Archives: achievements, problems and prospects Workshop*, October 2007. (35% acceptance rate)
- **Raicu DS**, Varutbangkul E, Cisneros JG, Furst JD, Channin DS, Armato III SG. "Semantics and Image Content Integration for Pulmonary Nodule Interpretation in Thoracic Computed Tomography". In the *Proceedings of the SPIE Medical Imaging Conference*, Vol. 6512, pp. 65120S, March, 2007.
- Lam M, Disney T, Pham M, **Raicu DS**, Furst JD, Susomboon R. "Content-Based Image Retrieval for Pulmonary Computed Tomography Nodule Images". In the *Proceedings of the SPIE Medical Imaging Conference*, Vol. 6516, pp. 65160N, March, 2007.
- Pham M, Susomboon R, Disney T, **Raicu DS**, Furst JD. "A Comparison of Texture Models for Automatic Liver Segmentation". In the *Proceedings of the SPIE Medical Imaging Conference*, Vol. 6512, pp. 65124E, 2007.
- Horsthemke W, **Raicu DS**. "Organ Analysis and Classification using Principal Component and Linear Discriminant Analysis". In the *Proceedings of the SPIE Medical Imaging Conference*, Vol. 6512, pp. 65124A, March 2007.
- Susomboon R, **Raicu DS**, Furst JD. "Automatic Single-Organ Segmentation in Computed Tomography Images". In the *Proceedings of the IEEE 2006 International Conference on Data Mining (ICDM'06)*, pp. 1081-1086, December 2006 (under 20% acceptance rate).
- Furst JD, Susomboon R, **Raicu DS**. "Single Organ Segmentation Filters for Multiple Organ Segmentation". In the *Proceedings of the IEEE 2006 International Conference of the Engineering in Medicine and Biology Society (EMBS'06)*, pp. 3033-3036, August 2006.
- Handrick S, Naimipour B, Furst JD, **Raicu DS**. "Binning Strategies Evaluation for Tissue Classification in Computed Tomography Images". In the *Proceedings of SPIE Medical Imaging Conference*, Vol. 6144, 65160N, pp. 61444L, March, 2006.
- Whitney BW, Backman NJ, Furst JD, **Raicu DS**. "Single click volumetric segmentation of abdominal organs in Computed Tomography images". In the *Proceedings of SPIE Medical Imaging Conference*, vol. 6144, pp. 1426-1436, 2006.
- Lerman R, **Raicu DS**, Furst JD. "Contrast enhancement of soft-tissues in Computed Tomography images". In the *Proceedings of SPIE Medical Imaging Conference*, Vol. 6144, pp. 61446M, March 2006.
- Backman NJ, Whitney BW, Furst JD, **Raicu DS**. "A prioritized and adaptive approach to volumetric seeded region growing using texture descriptors". In the *Proceedings of SPIE Electronic Imaging*, Vol. 6065, pp. 396-403, February 2006.
- Kalinin M, **Raicu DS**, Furst JD, Channin DS. "A Classification Approach for Anatomical Regions Segmentation". In the *Proceedings of the IEEE International Conference on Image Processing (ICIP'05)*, Vol. 2 (11-14), pp. II - 1262-5, September 2005. (46% acceptance rate)
- Corboy A, Tsang W, **Raicu DS**, Furst JD. "Texture-Based Image Retrieval for Computerized Tomography Databases". In the *Proceedings of the 18th IEEE International Symposium on Computer-Based Medical Systems (CBMS'05)*, pp. 593 - 598, June, 2005.
- Xu DH, Kurani A, Furst JD, **Raicu DS**. "Run-length encoding for volumetric texture". In the *Proceedings of the 4th IASTED International Conference on Visualization, Imaging, and Image Processing - VIIP 2004*, September 6-8, 2004.
- Kurani A, Xu DH, Furst JD, **Raicu DS**. "Co-occurrence matrices for volumetric data". In the *Proceedings of the 7th IASTED International Conference on Computer Graphics and Imaging - CGIM 2004*, August 16-18, 2004.
- **Raicu DS**, Furst JD, Channin DS, Xu DH, Kurani A. "A Texture Dictionary for Human Organs Tissues' Classification". In the *Proceedings of the 8th World Multiconference on Systemics, Cybernetics and Informatics (SCI 2004)*, July 18-21, 2004.

Bioinformatics

- Doran M, **Raicu DS**, Furst JD, Settini R, Schipma M, Chandler D. "An Empirical Comparison of Machine Learning Algorithms for the Classification of Anthracis DNA Using Microarray Data". In the *Proceedings of the 3rd International Conference on Intelligent Computing and Information Systems*, March 2007.
- Greenblum SI, Krucoff MO, Furst J, **Raicu DS**. "An Automated Approach to Image Analysis of Noisy Microarrays". In the *Proceedings of the International Conference on Computer Vision Theory and Applications (VISAPP'07)*, March 2007.

Multimedia Data Mining

- **Raicu DS**. "A Data Mining Framework for Target Marketing". In the *Proceedings of the 18th ISCA International Conference on Computers and Their Applications*, pp. 476-479, March 2003.
- **Stan D**, Sethi IK. "Color Patterns for Pictorial Content Description". In the *Proceedings of the 17th ACM Symposium on Applied Computing*, pp. 693 - 698, March 2002. (42% acceptance rate)
- Sethi IK, Coman I, **Stan D**. "Mining Association Rules between Low-level Image Features and High-level Concepts". In the *Proceedings of SPIE Conference: Data Mining and Knowledge Discovery III*, pp. 279-290, April 2001.
- **Stan D**, Sethi IK. "Image Retrieval using a Hierarchy of Clusters". In *Lecture Notes in Computer Science: Advances in Pattern Recognition – ICAPR 2001*, Springer-Verlag Ltd., vol. 2013, pp. 377-388, March 2001.
- **Stan D**, Sethi IK. "Mapping Low-level Image Features to Semantic Concepts". In the *Proceedings of SPIE Conference: Storage and Retrieval for Media Databases*, pp. 172-179, January 2001.

School of CTI Research Symposium

- E. Apostolova, D. Channin, D. Demner-Fushman, J. Furst, S. Lytinen, and **D. Raicu**, "Automatic Segmentation of Clinical Texts - Preliminary Results", In the Proceedings of the SoC Research Symposium, May 2009.(Abstract/Early work)
- Z. Ferdowsi, R. Settini, and **D. Raicu**, "From Individual Tracts to Community Segments: An unsupervised learning approach for the Chicago community areas", In the Proceedings of the SoC Research Symposium, May 2009. (Abstract/Early work)
- J. Zhang, N. Tomuro, J. Furst, **D. Raicu**, "A Contour-based Mass Segmentation in Mammograms", In the Proceedings of the SoC Research Symposium, May 2009. (Abstract/Early work).
- D. Zinovev, **D. Raicu**, and J. Furst, Semi-supervised Learning Approaches for Predicting Lung Nodules Semantic Characteristics, In the Proceedings of the SoC Research Symposium, May 2009.(Abstract/Mature work)
- W. Horsthemke, **D. Raicu**, J. Furst, Characterizing Pulmonary Nodule Shape using a Boundary-Region Approach, In the Proceedings of the SoC Research Symposium, May 2009. (Abstract/Mature work)
- Horsthemke W, **Raicu DS**, Furst JD. "Bridging the Evaluation Gap Challenge to Diagnostic Labeling of Pulmonary Nodules". In the *Proceedings of the CTI Research Symposium*, May 2008.
- Apostolova E, Lytinen S, **Raicu D**. "Named Entity Recognition in Acute Inflammatory Response Studies". In the *Proceedings of the CTI Research Symposium*, May 2008.
- Susomboon R, **Raicu DS**, Furst JD. "Co-occurrence Matrix Invariance to Patient Size in Computed Tomography". In the *Proceedings of the CTI Research Symposium*, May 2007.
- Varutbangkul E, **Raicu DS**, Furst JD. "A Computer-Aided Diagnosis Framework for Pulmonary Nodule Interpretation in Thoracic CT". In the *Proceedings of the CTI Research Symposium*, May 2007.
- Horsthemke W, **Raicu DS**. "Exploiting Variance in Radiologist-Defined Truth: Opportunities from the LIDC". In the *Proceedings of the CTI Research Symposium*, May 2007.
- Doran M., Settini R, **Raicu DS**, Furst JD, Chandler D, Schipma M. "Analysis of a Proposed Universal Fingerprint Microarray". In the *Proceedings of the CTI Research Symposium*, April 2006.
- Malinga B, **Raicu DS**, Furst JD. "Local vs. Global Histogram-based Color Image Clustering". In the *Proceedings of the CTI Research Symposium*, April 2006.
- Susomboon R, **Raicu DS**, Furst JD. "Pixel-Based Texture Classification of Tissues in Computed Tomography". In the *Proceedings of the CTI Research Symposium*, April 2006. (Best Paper Award)

- Zhang Y, Tomuro N, **Raicu DS**, Furst JD. "Investigation on Feature Selection to Improve Classification of Abdominal Organs in CT Images". In the *Proceedings of the CTI Research Symposium*, April 2006.
- Horsthemke WH, Furst JD, **Raicu DS**. "Texture Classifier Robustness for Sub-organ Sized Windows". In the *Proceedings of the DePaul CTI Research Symposium*, Chicago, November, 2004.

Posters and Extended Abstracts

- J. Furst, **D. Raicu**, M. Kelly, N. Cooper, "Voronoi probability maps for seed region detection in abdominal CT images", *Proceedings of Computer-Assisted Radiology and Surgery (CARS)*, Berlin, Germany, June 23rd-27th 2009. (extended abstract & talk)
- P. Oplencia, J. Furst, D. Raicu, "Mapping LIDC, RadLex, and Lung Nodule Image Features", *Radiological Society of North America (RSNA) 2008 Conference*, Chicago, Illinois, November 30 – December 5, 2008. (extended abstract & talk)
- Phillips C, Furst J, **Raicu DS**. "An analysis of co-occurrence and Gabor texture classification in 2D and 3D", *Proceedings of Computer-Assisted Radiology and Surgery (CARS)*, June 2008. (poster and extended abstract)
- Muhammad M, **Raicu DS**, Furst JD, Varutbangkul E. "Fourier Descriptors for Lung Nodule Boundary Analysis". *The 2008 Annual Meeting of the Society for Imaging Informatics in Medicine (SIIM 2008)*, Seattle, May 2008. (poster, demo, and extended abstract)
- Datteri R, **Raicu DS**, Furst JD. "Texture Analysis for Pulmonary Nodules Interpretation and Retrieval". *The 2008 Annual Meeting of the Society for Imaging Informatics in Medicine (SIIM 2008)*, Seattle, May 2008. (talk and extended abstract)
- Horsthemke W, **Raicu DS**, Furst JD. "Computationally-Intensive Tasks in Medical Imaging Informatics". *Microsoft eScience Workshop*, October 2007. (abstract and poster)
- Disney T, Lam M, **Raicu DS**, Furst JD, Channin DS. "A Lookup and Reference Tool for Pulmonary Computed Tomography Nodules". *The 2007 Annual Meeting of the Society for Imaging Informatics in Medicine (SIIM 2007)*, Rhode Island, June 2007. (extended abstract and talk)
- Phillips C, Valencia SG, **Raicu DS**, Furst JD. "A Visualization Approach for Texture-based Comparison of Soft Tissues in Computed Tomography". *Chicago Area Undergraduate Research Symposium (CAURS'07)*, Chicago, April 14th, 2007. (**Top Math Poster Award**)
- Valencia SG, **Raicu DS**, Furst JD. "Visualization of Soft Tissues". *Autumn Science and Math Science Day Event*, DePaul University, November, 2006. (poster)
- Susomboon R, **Raicu DS**, Furst JD, Channin DS. "A Probabilistic Approach for Automatic Liver Segmentation". *The 92nd Scientific Assembly and Annual Meeting of Radiology Society of North America (RSNA06)*, Chicago, IL, USA, November 26 - December 1st, 2006. (extended abstract, poster & demo)
- Lerman R, **Raicu DS**, Furst JD. "Contrast Enhancement Techniques". *Autumn Science and Math Science Day Event*, DePaul University, November, 2005. (poster)
- Xu D, Lee J, **Raicu DS**, Furst JD, Channin DS. "Texture Classification of Normal Tissues in Computed Tomography". *The 2005 Annual Meeting of the Society for Computer Applications in Radiology*, Florida, June 2-5, 2005. (extended abstract and talk)
- Channin DS, **Raicu DS**, Furst JD, Xu DH, Lilly L, Limsangsri C. "Classification of Tissues in Computed Tomography using Decision Trees". *The 90th Scientific Assembly and Annual Meeting of Radiology Society of North America (RSNA04)*, Chicago, November 28 - December 3rd, 2004. (extended abstract, poster & demo)
- Xu DH, **Raicu DS**, Furst JD. "Pixel-level Texture Classification". *Autumn Science and Math Science Day Event*, DePaul University, November, 2004. (poster)
- Kalinin M, Lee J, **Raicu DS**, Furst JD. "Machine Learning Classifiers for Computed Tomography". *Autumn Science and Math Science Day Event*, DePaul University, November, 2004. (poster)
- Kurani A, Xu DH, **Raicu DS**, Furst JD. "Texture Analysis in Computerized Tomography (CT) Images". *Autumn Science and Math Science Day Event*, DePaul University, November, 2003. (poster)
- Smith G, Aioanei S, Furst JD, **Raicu DS**. "Human Body Organ Segmentation in CT Images". *Autumn Science and Math Science Day Event*, DePaul University, November, 2003. (poster)
- Stan D. "A New Approach for Exploration of Image Databases". *Grace Hopper Celebration of Women in Computing Conference*, British Columbia, CA, October, 2002. (poster)

Technical Reports

- **Stan D.** “Target Marketing using Data Mining Techniques”. *Ford Motor Company*, MI, 2001.
- **Stan D.** “People Detection and Tracking for Smart Houses”. *Accenture*, IL, 2000.
- **Stan D.** “Face Recognition using Principal Component Analysis”. *Wayne State University, Computer Science Department*, Detroit, MI, December 1998.
- **Stan D.** “Independent Component Analysis for Signal Separation”. *Wayne State University, Computer Science Department*, Detroit, MI, August 1998.

Conference and Seminar Talks

Invited Talks

- “What is Research?”, ACM-W DePaul Chapter Seminar, DePaul University, February 24th, 2009.
- “Why Math and Computer Science go hand in hand”, *Math Faculty Seminar*, Deerfield High School, December 4th, 2007.
- “Grid Opportunities in Medical Imaging”, *Distributed Systems Laboratory (DSL) Workshop*, University of Chicago, May 29, 2007
- “Student Projects, Publications, and Mentorship” Panel, *NSF Computer & Information Science & Engineering (CISE) Principal Investigators (PI) Meeting*, San Jose, CA, April 26th-28th, 2007
- “A Journey from Pixels to Semantics in Medical Imaging”, *Image Analysis Regional Seminar*, University of South Florida, Florida, November 17, 2006.
- “Medical Imaging Projects at DePaul University”, *Translational Imaging Informatics Seminar*, Northwestern University, July 20th, 2006.
- “Journey to Academia”, *Women in Science and Engineering Day, NSF REU Program*, Oakland University, June 22nd, 2005.

Conference Talks

- “Enhancing Undergraduate Education: A REU Model for Interdisciplinary Research”, *SIGCSE 2009: The 40th ACM Technical Symposium on Computer Science Education*, Chattanooga, TN, March 4-7, 2009. (paper presentation)
- “Semantics and Image Content Integration for Pulmonary Nodule Interpretation in Thoracic Computed Tomography”, *SPIE Medical Imaging Conference*, February 19, 2007. (paper presentation)
- “A Classification Approach for Anatomical Regions Segmentation”, *The IEEE International Conference on Image Processing (ICIP’05)*, Italy, September 11-14, 2005. (paper presentation)
- “Texture Classification of Normal Tissues in Computed Tomography”, *The 2005 Annual Meeting of the Society for Computer Applications in Radiology*, Florida, June 2-5, 2005
- “A Texture Dictionary for Human Organs Tissues’ Classification”, *The 8th World Multiconference on Systemics, Cybernetics and Informatics (SCI 2004)*, Orlando, FL, July 2004. (paper presentation)
- “Image Retrieval using a Hierarchy of Clusters”, *The International Conference on Advances in Pattern Recognition – ICAPR 2001*, Rio de Janeiro, Brazil, March 2001. (paper presentation)
- “Mapping Low-level Image Features to Semantic Concepts”, *SPIE Conference: Storage and Retrieval for Media Databases*, San Jose, CA, January 2001. (paper presentation)
- “Using Data Mining for Targeted Marketing Efforts”, *Applications of Technology in Business Conference*, Troy, MI, October 2000.

CTI Seminars, Conferences and Workshop Talks

- “Developing a Research Career”, *NSF REU Program*, CTI, DePaul University, June 2005-2008.

- “Segmentation of 3D CT Volume Images Using a Single 2D Atlas”, *Visual Computing (VC) Seminar*, CTI, DePaul University, March 30th, 2007.
- “Applications of Machine Learning to Medical Informatics”, *CSC578: Machine learning and Neural Networks course*, DePaul University, Fall 2006
- “Introduction to Medical Informatics”, *Biomedical Informatics Workshops’ 06 & 08*, DePaul University.
- “CTI Medical Informatics”, *Biomedical Informatics Workshop’06*, DePaul University, October 13th, 2006
- “Retrieving and Reading Research Papers”, *NSF REU Program*, CTI, DePaul University, June 2005, 2006.
- “How to Make a Research Presentation”, *NSF REU Program*, CTI, DePaul University, July 2005, 2006.
- “Texture Classification: Are filter banks necessary?” *VC Seminar*, DePaul University, June 2nd, 2006.
- “Computer-Aided Diagnosis Systems”, *Medical Informatics Workshop*, CTI, DePaul University, May 2005.
- “Future Medical Informatics Research at CTI”, *Visual Medical Informatics Workshop*, CTI, DePaul University, Chicago, May 2005.
- “Developing Image Databases Resources for the Medical Imaging Research Community”, *VC Seminar*, CTI, DePaul University, Chicago, February 05.
- “Automatic Brain Segmentation for MRI Images”, *VC Seminar*, CTI DePaul University, November 2004.
- “Image Processing”, *CTI PhD Conference*, DePaul University, Chicago, October 2004.
- “Introduction to Content-based Image Retrieval”, *Visual Computing Workshop: Image Processing*, DePaul University, Chicago, May 2004.
- “Machine Learning for Computer Medical Analysis”, *VC Seminar*, CTI School, DePaul University, Chicago, IL, March 2004.
- “An Introduction to Data Mining and Image Processing”, *Math Club Seminar*, Department of Mathematics, DePaul University, Chicago, IL, March 2004.
- “Privacy Preserving Data Mining”, *DePaul College of Law*, DePaul University, Chicago, IL, May 2003.
- “ASSERT: Automatic Search and Selection Engine with Retrieval Tools”, *VC Seminar*, DePaul University, Chicago, IL, March 2003.
- “Research in Content-based and Semantic-based Image Retrieval”, *Artificial Intelligence Seminar*, CTI School, DePaul University, Chicago, IL, March 2003.
- “Visual Computing”, *CTI Research Symposium*, DePaul University, Chicago, IL, November 2002.
- “Visual Computing”, *CTI PhD Conference*, DePaul University, Chicago, IL, September 2002.

Other Talks

- “Building a Research Career”, *NSF REU Program*, Oakland University, School of Engineering, and Computer Science, Rochester, MI, May 2002.
- “Target Marketing using Data Mining Techniques”, *Research Seminar*, Ford Motor Company, Dearborn, MI, August 2001.
- “Applications of Data Mining”, *Research Seminar*, Oakland University, School of Engineering, and Computer Science, Rochester, MI, November 2000.
- “People Detection and Tracking for Smart Houses”, *Research Seminar*, Accenture Technology Labs, Northbrook, IL, August 2000.

Exhibitions and other Creative Ideas

Current External Collaborations

- *Project Title*: “Affordable Rental Housing Initiative”, March 2007- present
 - *Collaborators*: Dr. Raffaella Settini (CTI) and six other faculty from Finance, Geography, Marketing, and the Real State Center of DePaul University
 - *Goals*: High-risk assessment modeling of rental units in Chicago area using data analysis, data mining, and visualization techniques.
- *Project Title*: “Computer-aided Tools for Soft Tissues Analysis”, June 2003 - present

- *Collaborators:* Dr. David Channin (Chief, Imaging Informatics Section, Department of Radiology, Northwestern University), Dr. Lucia Dettori (CTI), Dr. Jacob Furst (CTI), and Dr. Noriko Tomuro (CTI)
- *Goals:* 1) Design of algorithms and development of automatic tools for soft tissue segmentation, classification, and retrieval in computed tomography images, 2) Creation of an interdisciplinary curricula and activities in the area of medical informatics.
- *Project Title:* “Semantics and Image Content Integration for Lung Nodules’ Interpretation”, June 2006- present
 - *Collaborators:* Dr. Sam Armato (Associate Professor, Medical Physics Department, University of Chicago) and Dr. Jacob Furst (CTI)
 - *Goals:* 1) Creation of lookup tools for finding tumors in medical images using image processing, data mining, and content-based image retrieval; 2) Modeling the mappings between medical experts’ high-level assessment of medical images (CT, PET, MRI) and the low-level content of these images.

Past External Collaborations

- *Project Title:* “Microarray Data Analysis for Forensic Applications”, March 2006-June 2007
 - *Collaborators:* Dr. Darrell Chandler (Researcher, Argonne National Labs, and Vice-President, Akonni Biosystems Inc.), Dr. Matthew Schipma (Researcher, Argonne National Laboratory), Dr. Jacob Furst (CTI), Dr. Raffaella Settimi (CTI)
 - *Goals:* Defined and developed image analysis, computational and statistical tools and techniques that are extensible to microarray image analysis problems
- *Project Title:* “Patents’ Analysis and Retrieval”, September 2003- June 2005
 - *Collaborators:* Dr. Katherine J. Strandburg (Professor, DePaul College of Law) and Dr. Bamshad Mobasher (CTI)
 - *Goals:* Studied the relationships among different types of patents and investigated different clustering and visualization techniques of patent databases in the intellectual property domain
- *Project Title:* “Customer Behavior Modeling”, March 2004-August 2004
 - *Collaborators:* Andrew Drefahl (Vice-President, Blue Wolf Inc.) and Hitachi Inc.
 - *Goals:* Applied data mining and visualization techniques for automatic market segmentation of Hitachi customers based on their preferences.

CTI Visual Computing (VC) Research Seminar

- VC Seminar Organizer:
 - Spring 2003, Spring 2006, Fall 2006, Winter 2007, Spring 2007, Fall 2007, Winter 2008, Spring 2008, Winter 2009

Grants and Recognition Exhibitions

Ongoing Research Support

- *Proposal Title:* Identifying the relationships between image content and radiologists’ assessment, 05/01/2009 – 12/01/2010
 - DePaul University Research Council (URC)
 - *Goal:* data mining research for finding the relationships among high-level and low-level image features
 - *Role:* co-Principal Investigator (PI)
 - *Amount:* \$3,360
- *Proposal Title:* Medical Informatics eXperiences, 01/01/2008 – 12/31/2010
 - National Science Foundation (NSF) REU Program
 - *Goal:* continue to support medical informatics research and encourage undergraduates to pursue careers at the frontier between medicine and computer science
 - *Role:* Principal Investigator (PI)

- Amount: \$306,510
- *Proposal Title:* Affordable Rental Housing Initiative, 05/01/2007-04/31/2010
 - McArthur Foundation
 - *Goal:* create a rental data clearinghouse for the Chicago area and create high-risk assessment models for the rental units.
 - *Role:* Senior Personnel (PI: Dr. Susanne Connen, DePaul Real Estate Center)
 - *Amount:* \$3,500,000 (~ \$400,000 awarded to CTI)
- *Proposal Title:* GAANN (Graduate Assistance in Areas of National Need) Scholarship Program, 07/01/2007-07/01/2010
 - Department of Education
 - *Goal:* provide fellowships to increase the number of students pursuing Doctoral degrees in certain identified areas of need, including Computer and Information Sciences
 - *Role:* co-Principal Investigator (PI: Dr. Steve Lytinen, CTI)
 - *Amount:* \$650,000
- *Proposal Title:* Automatic, Probabilistic Classification of Tissues in Computed Tomography images of the abdomen, 12/1/2007 – 06/01/2009
 - DePaul University Research Council (URC)
 - *Goal:* investigate data mining and image processing techniques for the segmentation of soft tissues
 - *Role:* co-Principal Investigator (PI: Dr. Jacob Furst, CTI)
 - *Amount:* \$3,440
- *Proposal Title:* Undergraduate Research in Medical Imaging, 06/2003 – present
 - DePaul University Undergraduate Research Program
 - *Goal:* support medical imaging undergraduate research at DePaul University
 - *Role:* Principal Investigator (PI)
 - *Amount:* ~\$20,000

Pending Research Support

- *Proposal Title:* A lookup and reference tool for lung nodules in Computed Tomography (CT) Studies, 01/01/2010-12/31/2013
 - National Institutes of Health (NIH) R01 Program
 - *Goal:* create content-based image retrieval tools for lung nodules in CT studies
 - *Role:* Principal Investigator (PI)
 - *Amount:* \$1,026,042
- *Proposal Title:* Investigation of CBIR effects on the diagnosis and qualitative characterization of lung nodules, 10/01/2009-09/30/2011
 - National Institutes of Health (NIH) R01 Program
 - *Goal:* investigate similarity measures for lung nodule retrieval and perform observer studies to evaluate the effect of CBIR on diagnosis and qualitative interpretation
 - *Role:* Principal Investigator (PI)
 - *Amount:* \$674,332.00

Completed Research Support

- *Proposal Title:* MedIX: Medical Informatics eXperiences, 02/01/2005 – 01/31/2007
 - *National Science Foundation (NSF)*
 - *Goal:* support medical informatics research and encourage undergraduates to pursue careers at the frontier between medicine and computer science
 - *Role:* Principal Investigator (PI)

- Amount: \$226,677
- *Proposal Title:* Microarray Data Analysis, 08/30/2005 – 09/01/2006
 - Argonne National Laboratories (ANL)
 - *Goal:* develop data analysis and experimental design operating procedures for microarrays within the context of Department of Homeland Security microbial forensics programs.
 - *Role:* Principal Investigator (PI)
 - *Amount:* \$51,356
- *Proposal Title:* Texture Feature Reduction for Computed Tomography Studies, 11/15/2004 – 05/15/2006
 - DePaul University Research Council (URC)
 - *Goal:* data analysis research for dimensionality reduction in medical imaging
 - *Role:* Principal Investigator (PI)
 - *Amount:* \$3,000
- *Proposal Title:* Visual Computing Curriculum Development, 05/01/2003 – 04/01/2005
 - DePaul University Quality of Instruction Grant (QIC)
 - *Goal:* revive the Visual Computing area at DePaul by introducing new courses, and offering workshops and tutorials in the field
 - *Role:* Principal Investigator (PI)
 - *Amount:* \$5,000

Service

Service to School of CTI

CTI Committees

- Recruiting Committee, member, September 2007- June 2008
 - Security/Information Assurance search subcommittee
 - Squire for one of the two IA faculty candidates (Reza Curtmola, April 3rd-4th, 2008)
- Student Affairs Committee, member, September 2003 - Present
 - Faculty Advisor of the CTI Upsilon Pi Epsilon (UPE) honor society (see activities below)
- Computer Science Program Committee, member, February, 2003 - Present
 - Student Research Coordinator (please see activities below)
- Undergraduate Committee, member, September 2003 – Present
 - CTI Undergraduate Prospective Mentoring program
 - Mentor of over 50 prospective students since 2004
 - Created “Best practices for IT223” document (with Dr. Raffaella Settimi)
 - Created the Placement test for IT223 (with Dr. Raffaella Settimi)
 - Created the Visual Computing Minor (with Drs. Lucia Dettori & Jacob Furst)
 - Revised the Data Analysis Minor (with Drs. Raffaella Settimi & Marcus Schaefer)
 - Member of the Ad-hoc Committee to interview/select the tutors for 2005-2006 academic year
- Diversity Committee, member, September 2006 – June 2008
 - Reviewed the applicant data for tenure track positions in 2003 – 2006
 - Worked on the content of the Women in IT webpage at CTI
 - Participated in all the Grace Hopper Conference of Celebration of Women in Computing Conferences (October 17-20, 2007; October 4-7th, 2006; October 8th, 2004)
 - Worked on revising the CTI online application form for faculty positions
- Financial Awards Committee, member, September 2005 – Present

- Reviewed applications for assistantships
- Member of the ad-hoc committee to select a candidate for the University scholarship (Spring 2007-2008)
- Research Environment and Scholarship Committee, member, 2002 – Present
 - Member of the Local Review Board (LRB)
 - Reviewer for several LRB applications
 - Participant in the 3rd Annual IRB-LRB workshop, June 12th, 2003
- International Issues Committee, member, 2002 – 2007
 - Member of the subcommittee created to help United Nations with the mission of creating websites for countries lacking the resources to do so:
 - Project Phase I: team leader for creating the websites for five countries, January 2004 – June 2004
 - UN visit and web development training, June 2004
 - Project Phase II: team leader for creating the websites for four countries. For more info, visit <http://clinton/UN/CT/index.htm>
- Ph.D. Committee, member, 2002 – 2003, September 2007-present
 - Prepared the list of topics for the PhD breath exam in Data Analysis and Data Mining (with Dr. Raffaella Settimi), Winter 2008
 - Member of the committee reviewing the PhD students receiving CTI stipend, Spring 2007-2008)
 - Subcommittee Chair: reviewed current Ph.D. students receiving CTI stipends, Spring 2003
 - Wrote the Reading List for the PhD breath examination in the CV area
 - Coordinated the interview of Zhang Yu for Winter 2003 PhD admission, Fall 2002
- Graduate Committee, member, 2002 – 2003
 - GAE Exam for Data Analysis
 - Reviewed the study guide, wrote and graded the exam for Spring 2003

Activities as a Student Research Coordinator, February 2003 - Present

- Looked into funding research opportunities for undergraduate students
 - Selected and helped with the application process of eight undergraduates to participate in the University Undergraduate Research Assistantship Program.
 - Applied and obtained a NSF grant to support research experience for undergraduate students.
 - Selected two female undergraduates to participate in the *Computing Research Association (CRA) Outstanding Undergraduate Award Program*; one of the students received an *Honorary Mention* for doing undergraduate research in 2004 and the other one obtained it in 2004 and 2005.
 - Selected three female students to participate in the *Computing Research Association (CRA) Distributed Mentoring Program (DMP)*; all three students were awarded \$6000 to support summer research experience at a DMP hosting institution during summer of 2003 and two students were awarded in summer of 2004 as well.
 - Organized and presented at the “*Funding Opportunities for Graduate Students: Fellowships and Travel grants*” Seminar (Fall 2005, 2006, 2007, and 2008).
 - Selected two undergraduates to present their research work at the Chicago Area Undergraduate Research Symposium (CAURS) on April 14th, 2007. *The students received the Top Math Poster award.* They also received *CTI Outstanding Undergraduate Research awards* at the Celebration of Excellence in May, 2007.
 - Participated with students in the *DePaul University Autumn Science and Math Events* for undergraduates (November 10th, 2006; November 5th, 2004; November 8th, 2003)

- Worked on the creation of a video clip on our REU program for the CDM website (with JoAnne Zelinski and Scot Erlinder)
- Creation and maintenance of a *searchable database of CTI research projects and available funding*; the creation of such a database was demanded by many students during the Second International Student Forum, the Upsilon Pi Epsilon Chapter meetings, and the PhD Conference: <http://clinton.cti.depaul.edu/research/ResearchOpportunities.asp>
- Creation and maintenance of an *undergraduate research website* to publicize the undergraduate research at CTI and facilitate an easier access for students to the opportunities available for them: <http://facweb.cs.depaul.edu/research/ug/>
- Participation in the NSF CISE PIs REU meetings, in Austin , Texas, February 28-29th, 2008 and Arlington, Virginia, March 11-12th, 2009

Activities** as the Faculty Advisor of the Delta Chapter of Illinois, the CTI Chapter of Upsilon Pi Epsilon (UPE), January 2003 - Present

- Co-organizer and Participant, CTI Research Symposium since 2004
- Initiated and organized the *CTI Open Research Labs events* designed to bring more visibility to the research groups at CTI and to open more opportunities for networking among students and faculty
 - *Security and Multimedia Open Lab*, February 15th, 2008
 - *Medical Informatics Open Lab*, January 11th, 2008
 - *Web Intelligence Open Lab*, November 7th, 2008
 - *Requirements Engineering Open lab*, January 23rd, 2009
- Initiated and organized the *iTEA Seminars* designed specifically for students interested in the career potential of an IT degree. The seminars provide the students the opportunity to interact with leaders in the IT field on a one-to-one basis, network and gain insights into today's exciting marketplace.
 - Speakers: Marianne S. Hewitt (February 16th, 2009), Mike Carioscio (November 10th, 2008), Daniel Nottke (April 12th, 2007), James Ripley (April 26th, 2007), and Neville Rademeyer (May 17th, 2007)
- UPE Round Tables
 - *“Entrepreneurship in Information Technology”*, Presenters: Dr. Daniel Mittleman, M. P. McCormick, and Vincent Kellen, February 22nd, 2007
 - *“Research in Computer Science”*, Presenters: Dr. Bamshad Mobasher, Dr. Jane Huang, and Dr. Gang Wei (Accenture Technologies Lab), February 2006
- Nominated eight UPE officers to obtain National UPE Scholarships (\$1,000 each). All recommended students received UPE awards.
 - Taghrid Samak, UPE President, Fall 2008
 - Carl Philips, Fall 2008
 - Robert Paulin, UPE Treasurer, Fall 2007
 - Ruchaneewan Susomboon, UPE Secretary, Fall 2007
 - Jonathan Gemmell, UPE Vice-President, Fall 2006
 - Niranchana Anantharaman, UPE President, Fall 2005
 - Tariq Puthawala, UPE Secretary, Fall 2004
 - Marsha Timm, UPE President, Fall 2003
- UPE General Elections: yearly events
- Six initiation ceremonies and *over 1,000 students were initiated in UPE* since Spring 2003
- Initiation of the *UPE Research seminars* for undergraduates and graduate students:
 - Medical Informatics, Dr. Raicu and Dr. Furst, April 16th, 2009
 - Computational Finance, Dr. Massimo DiPierro, February 1st, 2007

** These activities are also listed on the UPE website at <http://clinton.cs.depaul.edu/upe/>

- Natural Language Processing, Drs. Noriko Tomuro & Peter Wiemer-Hastings, April 2006
- Bioinformatics Lecture: Mr. David Angulo, CTI Faculty, Feb. 2005
- Web Data Mining, Drs. Bamshad Mobasher, November 2004
- Undergraduate Research: Why bother?, Dr. Daniela Raicu, October 2004
- Software Engineering seminar, Dr. Jane Huang, April 2004
- Computer Graphics seminar, Dr. Rosalee Wolfe, March 2004
- Image Processing seminar, Dr. Daniela Raicu, January 2004
- Digital Cinema Lecture, Dr. Helmut Epp, Dean of CTI, February 2004
- Participant, Annual Academic Recognition Reception, January 29th, 2009
- Participant, DePaul Student Admitted Days, March 2nd, 2008
- Co-organizer and Participant, Groundhog Day Party, February 2006
- Participant, Loop Fair Involvement, January 2006
- Participation in the National UPE Conventions, Portland, Oregon, March 15-16th, 2008, March 6th-7th, 2009
- Participation in the Annual UPE Executive Council meeting, Orlando, Florida, August 1st-3rd, 2008
- Participation in the Library Plaque Reception for DePaul Honorary Societies, DePaul University, February 25th, 2009

Other CTI and DePaul Activities

- CDM Faculty Marshal, CDM Commencement, June 2008
- Open Houses
 - August 29th, 2007; July 18th, 2007; October 26th, 2006; April 19th, 2006; August 10th, 2005; January 27th, 2005; May 19th, 2003; March 3rd, 2003;
- Family Weekends, Taste of CTI, & CTI Annual New Student and Family Brunch
 - October 12th, 2007; March 31st, 2006, October 14th, 2005; June 24th, 2005; April 2nd, 2005
- Accelerated Admissions, Premiere Advising, and Transition to DePaul
 - August 5th, 2008; July 8th, 2008; August 22nd, 2007; July 26th, 2006; July 25th, 2006; July 9th, 2004; July 16th, 2004; March 12th, 2003
- Advising Week
 - February 15th, 2007; October 16th, 2006; February 2005
- Celebration of Excellence
 - May 24th, 2007; May 25th, 2006; June 4th, 2004; June 6th, 2003
- Undergraduate Information Sessions
 - Spotlight on Computer Science: April 21st, 2007, April 18th, 2008
 - Spotlight on Digital Cinema, Gaming and Computer Graphics and Animation: January 15th, 2007
- CTI Women in IT events
 - ACM-W Chapter event: Digital Divas(speaker)
 - February 24th, 2009; November 10th, 2005; October 13th, 2004; September 26th, 2003
 - CTI Women's Breakfast in IT: January 17th, 2005
 - Women in IT Round Table: September 22nd, 2004; March 22nd, 2004
- Chicago Area Undergraduate Research Symposium (CAURS), April 14th, 2007
- CTI Leadership Council events
 - September 8th, 2006; January 26th, 2005
- DePaul Faculty Tenure and Promotion Workshop: May 11th, 2007

- DePaul Honorary Societies Luncheon: March 12th, 2008, April 18th, 2007
- DePaul Grant Recognition Luncheon: March 9th, 2007, April 22nd, 2009
- Faculty Recruiting: April 21st, 2005: Host for the tenure track candidate Caroline Anderson
- Students Recruiting: December 4th, 2007: Deerfield High school Visit

Creation of a Data Mining Center, Fall 2008- present

- Write the first draft of the proposal (with Dr. Settimi and Dr. Mobasher)
- Initiate the discussions with the Department of Marketing for a joint center at the University level

Service to the University

Scientific Inquiry Domain Committee, Spring 2008

- Provide syllabus and relevant materials for IT223 as part of the Five-Year Syllabus Review of SID LSP Courses

Hyperlink Newsletter, Editorial Board, Member, September 2006- Present

- Responsible for the research stories

Faculty Advisor and Student President Working Group, Member, January 2007- Present

- In accordance with Vision 2012, the 25 honor societies at DePaul University meet quarterly to promote awareness of the organizations and increase recognition and celebration of students' successes.

Academic Integrity Board (AIB), Member, September 2005- Present

- Revised the AI policy
- Participated in the AIB hearings
- Participated in the "Inadvertent Academic Dishonesty among Culturally Diverse Students and Cultural Issues during the AI Process" special meeting, January 12th, 2007

Mathematical and Technological Literacy Committee, February 2004- Present

- Member of the task force to create an elective scientific inquiry course for the Liberal Studies Program (IT121: Mathematical and Technological Literacy II)
- CTI representative for the Mathematical and Technological Literacy domain subcommittee (with Dr. Curt White (Co-Chair) and Ms. Terry Steinbach)

Other Activities

- Vincentian Service Day: The Girls in the Game Site, May 1st, 2004 & Laboure House, May 3rd, 2003

Service to the Profession

Program Committees

- *Member*, 13th International Conference on Knowledge-Based and Intelligent Information & Engineering Systems, Santiago, Chile, September 27 – 30, 2009
- *Member*, 2nd International Workshop on Privacy and Anonymity in the Information Society (PAIS'08), in conjunction with EDBT/ICDT 2009, Saint Petersburg, Russia, March 22, 2009
- *Panelist*, "Logistics", NSF CISE REU PIs Meeting, Arlington, Washington, March 11th-12th, 2009
- *Member*, IEEE International Workshop on Data Semantics for Multimedia Systems and Applications (DSMSA2008), held in conjunction with the IEEE International Symposium on Multimedia (ISM2008), Berkley, California, December 15-17, 2008
- *Chair*, International Conference on Biocomputation, Bioinformatics, and Biomedical Technologies (BIOTECHNO 2008), Bucharest, Romania, June 29th – July 5th, 2008
- *Panelist*, "REUs: Undergraduate Research Experiences and Funding", Consortium for Computing Sciences in Colleges — Northeastern Region, Staten Island, NY, April 11-12, 2008
- *Member*, 1st International Workshop on Privacy and Anonymity in the Information Society (PAIS'08), in conjunction with EDBT/ICDT 2008, Nantes, France, March 29, 2008
- *Chair*, IEEE Workshop on Data Mining in Medicine, in conjunction with the IEEE International Conference on Data Mining, Omaha, Nevada, October 28th, 2007

- *Panelist*, “REUs: How to lead undergraduates to “invent the future” while strengthening your research agenda and educational mission”, Grace Hopper Conference, October 14-17th, 2007
- *Program Committee Member*, CTI Research Symposium, May 5th, 2007
- *Panelist*, “Student Projects, Publications, and Mentorship”, NSF CISE REU PIs Meeting, San Jose, CA, April 26th-28th, 2007
- *Chair*, SoC Biomedical Informatics Workshops, DePaul University, Chicago, IL (May 9th, 2008, October 13th, 2006; May 6th, 2005; May 21st, 2004)
- *Organizing Committee Member*, NSF REU PIs meeting, Chicago, IL, October 27th-October 29th, 2005
- *Student Award Chair, Conference Committee*, the Eleventh ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD), Chicago, IL, August 21st-August 25th, 2005.
- *Co-Chair*, Privacy and Identity Symposium: The Perils of a Technological Age, DePaul University, October 14-15th, 2004.
- *Session Chair and Conference Program Committee Member*, The 2003 International Conference on Imaging Science, Systems, and Technology (CISST'03), Las Vegas, Nevada, USA, June 23-26, 2003.
- *Member, Program Committee*, 29th Annual Conference on Current Trends in Theory and Practice of Informatics (SOFSEM 2002), Milovy, Czech Republic, November 2002.

Reviewer

Panels:

- Washington DC, May 6-7th, 2008: NSF Information Integration and Informatics (III) Program, Type II
- Washington DC, February 14-15th, 2008: NSF Cyber-structure, Discovery and Innovation (CDI) Program, Type II
- Washington DC, February 11-12th, 2008: NSF Cyber-structure, Discovery and Innovation (CDI) Program, Type I
- Washington DC, July 30-31st, 2007: NSF Broadening Participation in Computing (BPC) Program
- Washington DC, November 2nd – 3rd, 2005: NSF REU Program
- The Kentucky Science and Engineering Foundation R&D Excellence Program

Scholarship Programs:

- Microsoft Research PhD Scholarship Programme, 2008

Journals:

- International Journal of Computers and Applications (IJCA) 2009
- Journal of Digital Imaging (JDI) 2009
- Journal of Biomedical Science and Engineering (JBSE) 2008
- IEEE Multimedia 2008
- EURASIP Journal on Advances in Signal Processing 2007
- ACM Multimedia Systems Journal, 2006
- Multimedia Semantics Journal, 2006
- International Journal on Semantic Web and Information Systems 2006
- IEEE Multimedia Tools Journal, 2003

Conferences:

- CBMS 2009: IEEE International Symposium on Computer-Based Medical Systems
- CCSCNE 2009: Consortium for Computing Sciences in Colleges in the Northeastern region
- Mednet 2006: 11th World Congress on Internet in Medicine the Society for Internet in Medicine, October 14 - 19, 2006
- ACM Multimedia Conference, Juan-les-Pins, France, December 2002

Tenure and Promotion Review 2007

- Reviewed the research activities of a tenure-track candidate at St. Thomas University

Professional Memberships

- IEEE, ACM, SPIE