The 2004 Image Processing Workshop, sponsored by DePaul University, CTI Colloquium Committee, and the UPE Honor Society will be held in the DePaul Center, room 8005, on Friday, May 21st, 2004. The goal of the workshop is to provide both an introduction to image processing and presentations on advanced topics for advanced students, faculty and researchers.

The Image Processing Workshop will be a full day event and will feature introductory presentations by DePaul faculty in the morning and advanced presentations by recognized researchers in a broad range of image processing fields. Additionally, undergraduate students working in the CTI Intelligent Multimedia Laboratory will present the results of their research in the field of medical imaging. There will also be a Matlab hands-on tutorial laboratory session scheduled in the afternoon for the workshop attendees.

The following researchers will be presenting their current research in image processing during the afternoon sessions.

**Dr. Ishwar K Sethi** is a Professor and Chair of the Computer Science and Engineering Department at Oakland University; he is also the Director of the Intelligent Information Engineering Laboratory that he founded in 1999. His research interests are artificial neural networks, pattern recognition, computer vision, and multimedia information retrieval. Professor Sethi has served on numerous program committees of national and international conferences as well as on editorial boards of many academic journals. Currently, he is on the editorial boards of IEEE Transactions Multimedia, IEEE Multimedia, Pattern Recognition, Pattern Recognition Letters, and Machine Vision and Applications. He was elected an IEEE Fellow in 2001. Dr. Sethi will present "Content-based Multimedia Retrieval". For more information, please visit [http://www.cse.secs.oakland.edu/isethi/](http://www.cse.secs.oakland.edu/isethi/).

**Dr. Sven Dickinson** is an Associate Professor of Computer Science at the University of Toronto. His major field of interest is computer vision with an emphasis on shape representation, object recognition, and mobile robot navigation. Dr. Dickinson was co-chair of both the 1997 and 1999 IEEE Workshops on Generic Object Recognition, while in 1999 he co-chaired the DIMACS Workshop on Graph Theoretic Methods in Computer Vision. In 1996, he received the NSF CAREER award for his work in generic object recognition, and in 2002, received the Government of Ontario Premiers Research Excellence Award (PREA), also for his work in generic object recognition. Since 1998, he has served as Associate Editor of the IEEE Transactions on Pattern Analysis and Machine Intelligence, in which he also co-edited a special issue on graph algorithms and computer vision, which appeared in 2001. Dr. Dickinson will present “Generic object recognition and robotics”. For more information, please visit [http://www.cs.toronto.edu/~sven/](http://www.cs.toronto.edu/~sven/).
Dr. Stephen Pizer, Kenan Professor in the Departments of Computer Science, Radiation Oncology, Radiology, and Biomedical Engineering at the University of North Carolina at Chapel Hill. Dr. Pizer heads the multidisciplinary Medical Image Display and Analysis Group (MIDAG) and co-leads the Department of Computer Science's Graphics and Image Laboratory. His research, focused since 1962 on medical image processing and display, covers image analysis, human vision, interactive 3D graphics, and contrast enhancement. Dr. Pizer will present “Statistical Geometry of Objects and Object Ensembles”. For more information, please visit http://www.cs.unc.edu/~smp/.

The following researchers will be presenting introductory image processing concepts in the morning sessions.

Dr. Jacob Furst is an Assistant Professor in the School of Computer Science, Telecommunications and Information Systems, at DePaul University, in Chicago; he also was an Associate Dean of CTI Student Services between 1999 and 2003. Dr. Furst received his Bachelor degree in English from Boston University, and his PhD degree in Computer Science from University of North Carolina at Chapel Hill. His research interests are medical imaging, content-based image retrieval, and computer graphics. He is currently working on a project to generate American Sign Language from English, and also on a project related to human organ identification using texture information in Computerized Tomography (CT) images. For more information, please visit http://condor.depaul.edu/~jfurst/.

Yakov Keselman is an Assistant Professor in the School of Computer Science, Telecommunications and Information Systems, at DePaul University, in Chicago. He earned his Bachelor degree in Mathematics and Computer Science from Urals State University, in Russia, and his Master's degree in Mathematics from the University of Georgia; he is currently completing his PhD in Computer Science at Rutgers University, New Jersey. Mr. Keselman's research interests include, among others, generic object recognition, perceptual grouping, and content-based image retrieval. For more information, please visit http://moses.cs.depaul.edu/~ykeselman/.

Dr. Daniela Stan Raicu is an Assistant Professor in the School of Computer Science, Telecommunications and Information Systems (CTI) at DePaul University, Chicago, Illinois. She received her B.S. in Mathematics from University of Bucharest, Romania, her M.A. in Computer Science from Wayne State University, in Michigan, and her Ph.D. in Computer Science from Oakland University, Michigan. Her research interests include data mining and knowledge discovery, pattern recognition, medical imaging, and multimedia retrieval. Dr. Raicu has published numerous papers in her research areas and is actively involved in organizing different conferences and workshops in Multimedia Retrieval. In the past several years, Daniela worked for and applied her data mining and image processing expertise to different research projects at Young & Rubicam, Accenture Technology Labs and Ford Motor Company. For more information, please visit http://facweb.cs.depaul.edu/Dstan/.
Workshop Schedule

DePaul Center, Room 8005
Friday, May 21st, 2004

8:30am – 9:15am  Registration and Continental Breakfast
6:30am – 9:30am  Opening Remarks

9:30am – 10:00am  Tutorial 1:
“Introduction to Image Processing”, Dr. Jacob Furst

10:00am – 10:30am  Tutorial 2:
“Image Feature Extraction”, Dr. Daniela Raicu

10:30am – 11:00am  Tutorial 3:
“Object Segmentation”, Dr. Jacob Furst

11:00am – 11:15am  Coffee Break

11:15am – 11:45am  Tutorial 4:
“Graph Algorithms in Computer Vision”, Yakov Keselman

11:45am – 12:15pm  Undergraduate Research at CTI:
“Medical Imaging”

12:15pm – 1:15pm  Lunch

1:15pm – 2:15pm  Invited Talk 1:
“Content-based Multimedia Retrieval”, Dr. Ishwar K. Sethi

2:15pm – 3:15pm  Invited Talk 2:
“Statistical Geometry of Objects and Object Ensembles”,
Dr. Stephen Pizer

3:15pm – 3:30pm  Coffee Break

3:30pm – 4:30pm  Invited Talk 3:
“Generic Object Recognition and the Need for Image Abstraction”,
Dr. Sven Dickinson

4:30pm – 4:45pm  Closing Remarks

4:45pm – 6:00pm  Matlab tutorial session: “Image Processing”
Yakov Keselman, CST Building, SD Lab (Room 632)