2011 – 2012 Xerox-MT Fellowship Categories

Imaging, Video, and Smart Documents
Developing research and technologies for the recognition and enhancement of video and image content, scene analysis and content extraction. The application areas are broad from transportation, healthcare, collaboration, as well as smart document applications such as document summarization, natural language generation and machine translation.

Complex System Dynamics
Research in the areas of understanding and leveraging the enormous complexity inherent in large systems and systems of systems so ubiquitous to modern society, whether those systems are biological, electro-mechanical, chemical, sociological, or software.

Data mining, Visualization, and Analytics
Developing research and technologies that can mine new knowledge and business intelligence from large amounts of structured and unstructured data. Visualization and analytics that enable meaningful representations and reductions of the data in the areas of both descriptive and predictive analytics.

Cloud and Distributed Computing
This area focuses on research in the area of cloud computing such as dynamic scalable applications, technologies that enable performance optimization in particular with large data sets, cloud bursting, distributed resource optimization, enabling quality of service in the cloud, and security.

Knowledge Work Automation
As the information explosion continues, the knowledge worker needs significant advances in tools and technologies to be effective. Research areas are in collaboration, knowledge management, intelligent agents, process automation, semantic reasoning, computational thinking, and machine learning.

Web and Social Computing
Research in this area develops and explores the use of web and social computing technology enabling “computation” carried out by groups of people including collaborative filtering, online auctions, predictive markets, and social software applications.

Green Processes and Technologies
Research in understanding & improving environmental impacts of products’ entire lifecycles, from raw materials and manufacture, through customer use, to disposal. The end goal is simultaneously providing ever-greater functionality while reducing environmental footprint.

Nanotechnology Systems
Investigating micro/nano-technologies in areas such as microfluidics, nanostructures, and nanodevices, enabling new generations of mechanical, electrical, and optical devices/applications.

For clarification or further detail on any of these categories, please contact Norm Zeck, Manager of Strategy Operations and Strategic Initiatives, at Norm.Zeck@xerox.com.
MIT SCHOOL OF ENGINEERING
XEROX FELLOWSHIPS 2011-2012
**2nd-, 3rd-, and 4th-year SoE graduate students, with a preference for PhD students**

Department (please mark with "X"):  
- Aeronautics & Astronautics  
- Biological Engineering  
- Chemical Engineering  
- Civil and Environmental Engineering  
- Electrical Engineering & Computer Science  
- Engineering Systems Division  
- Material Science & Engineering  
- Mechanical Engineering  
- Nuclear Science & Engineering

Graduate Student Nominee:  

Degree objective @ MIT:  
- SM  
- PhD  
- ScD

Undergraduate Data:  
- School:  
- Year of Graduation:  
- Degree Earned:

Research Interest:  
- Imaging, Video, and Smart Documents  
- Knowledge Work Automation  
- Complex System Dynamics  
- Web and Social Computing  
- Data Mining, Visualization, and Analytics  
- Green Processes and Technologies  
- Cloud and Distributed Computing  
- Nanotechnology Systems

Race/Ethnicity (please mark with "X"):  
- African American  
- Mexican American  
- Native American  
- Puerto Rican  
- Other Hispanic  

Gender (please mark with "X"):  
- Male  
- Female

Please describe:  

NOTE: Some preference will be given (but not limited) to women and members of other groups that are underrepresented in engineering

Faculty or Department Contact Person/Nominator:  

Faculty or Department Contact Telephone & Email:  

All nominations should include:  

1. Thesis Proposal or Research Statement  
2. Applicant's CV  
3. Letter of recommendation (1)  
4. MIT Transcript

SUBMISSION DEADLINE: 5/13/2011 (Hard copy only)

Submit nominations to:  
Eileen Ng-Ghavidel  
Office of the Dean of Engineering  
1-203