

YANYAN LU

ADDRESS

George Mason University
Fairfax, VA 22030
(703) 622-7964

EMAIL & HOMEPAGE

ylu4@gmu.edu
Homepage

JOB OBJECTIVE

A position in Software Development.

COMPUTER SKILLS

Proficient programming skills in C/C++, OpenGL, IDL, Matlab and Lisp.
Familiar with Java, OpenMP and MPI.

EDUCATION

- Ph.D. in Computer Science, George Mason University, Fairfax, VA, expected Summer 2013
G.P.A: 3.81/4.0
- M.S. in Computer Science, George Mason University, Fairfax, VA, 2011
G.P.A: 3.9/4.0
- B.S. in Computer Science, Dalian University of Technology, Dalian, China, 2007
G.P.A: 4.0/4.0

PROFESSIONAL EXPERIENCE

Research Assistant

Summer 2008-Present

- *GIS and Scientific Computing*
 - Fast and robust generation of city-scale seamless 3D urban models for traffic simulation and natural or man-made phenomenon simulations
- *Approximate Geometry Representation*
 - Approximate convex decomposition of polygons and polyhedra
 - Using approximate convex decomposition and 2D morphing to recognize hand gestures
 - Automatic extraction of regions-of-interest from medical images
- *Algorithmic Robotics*
 - Path planning under uncertainty in highly unknown environments
 - Finding critical changes in dynamic configuration spaces
 - Planning motions in similar environments by reusing local roadmaps of obstacles
 - High dimensional deterministic planners using approximate star-shaped decomposition

Teaching Assistant

Fall 2007-Spring 2011

- Introduction to Algorithms
- Language Processing

PUBLICATIONS

1. Mukulika Ghosh and Nancy M. Amato and **Yanyan Lu** and Jyh-Ming Lien, “Fast Approximate Convex Decomposition Using Relative Concavity”, *Computer-Aided Design (CAD)*, 2012. Also appears in *Proc. of Symposium on Solid and Physical Modeling*, Dijon, France, Oct. 2012.
2. Jyh-Ming Lien, Fernando Camelli, **Yanyan Lu** and David Wong, “City-Scale Urban CFD using GIS Data”, in the *Proc. of the Computing for Geospatial Research*, July. 2012.

3. **Yanyan Lu**, Jyh-Ming Lien, Mukulika Ghosh and Nancy Amato, “ α -Decomposition of Polygons”, *Computers & Graphics*, special edition of Shape Modeling International (SMI) Conference, College Station, Texas, May. 2012.
4. **Yanyan Lu**, Evan Behar, Stephen Donnelly, Jyh-Ming Lien, Fernando Camelli and David Wong, “Fast and Robust Generation of City-Scale Seamless 3D Urban Models”, *Computer-Aided Design (CAD)*, 2011. Also appear in *SIAM Conference on Geometric and Physical Modeling (GD/SPM)*, Orlando, Florida, Oct. 2011. Nominated for best paper award (6/72 papers).
5. Stephen Donnelly, **Yanyan Lu**, Evan Behar and Jyh-Ming Lien, “Estimating Penetration Depth of Convex Polyhedra Using Dynamic Minkowski Sum”, Contributed Presentation Abstract, *SIAM Conference on Geometric and Physical Modeling (GD/SPM)*, Orlando, Florida, Oct. 2011.
6. Jyh-Ming Lien, Fernando Camelli, David Wong, **Yanyan Lu** and Benjamin McWhorter, “Creating Building Ground Plans via Robust K -way Union”, *Visual Computer*, 2011.
7. **Yanyan Lu** and Jyh-Ming Lien, “Finding Critical Changes in Dynamic Configuration Spaces”, *Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, San Francisco, California, Sep. 2011.
8. Jyh-Ming Lien and **Yanyan Lu**, “Approximate Star-Shaped Decomposition of the Point-Represented Contact Spaces”, *Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, St. Louis, Missouri, Oct. 2009.
9. Jyh-Ming Lien and **Yanyan Lu**, “Planning Motion in Similar Environments”, *Proceedings of the Robotics: Science and Systems Conference (RSS)*, Seattle, Washington, Jun. 2009.

PROFESSIONAL PRESENTATIONS

1. “Fast and Robust Generation of City-Scale Seamless 3D Urban Models”, *SIAM Conference on Geometric and Physical Modeling (GD/SPM)*, Orlando, Florida, Oct. 2011.
2. “Finding Critical Changes in Dynamic Configuration Spaces”, *Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, San Francisco, California, Sep. 2011.
3. “Approximate Star-Shaped Decomposition of the Point-Represented Contact Spaces”, *Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, St. Louis, Missouri, Oct. 2009.
4. “Planning Motion in Similar Environments”, *Proceedings of the Robotics: Science and Systems Conference (RSS)*, Seattle, Washington, Jun. 2009.

PROFESSIONAL ACTIVITIES

Reviewer

SIAM Conference on Geometric and Physical Modeling (GD/SPM)
 Symposium on Computational Geometry (SoCG)
 Geometric Modeling and Processing (GMP)
 Shape Modeling International (SMI)
 IEEE International Conference on Robotics and Automation (ICRA)
 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)
 Robotics: Science and Systems Conference (RSS)
 International Journal of Robotics Research (IJRR)
 Journal of Computing and Information Science in Engineering (JCISE)