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Research Interests

Computer Vision & Graphics; Three-Dimensional Modeling; Sensor Fusion; Range Segmentation & Registration; Sensor Planning; Three-Dimensional Visualization.

Education

- PH.D., Columbia University, Computer Science Department, October 2001 (Advisor: Peter K. Allen).
- M.PHIL., Columbia University, Computer Science Department, May 2000.
- M.S., Columbia University, Computer Science Department, February 1997.
- Diploma of Engineering, University of Patras, Department of Computer Engineering and Informatics, Patras, Greece, November 1994 (Advisor: George Moustakides).

Positions Held

- Associate Professor (tenured), Hunter College and Graduate Center of the City University of New York (CUNY), Computer Science Department, New York City, January 2006 - Present.
- Assistant Professor, Hunter College and Graduate Center of the City University of New York (CUNY), Computer Science Department, New York City, September 2001 - January 2006.
- Graduate Research Assistant, Columbia University, Computer Science Department, New York City, September 1995 - May 2001.
- Summer Intern, Siemens Corporate Research, Princeton NJ, June 2000 - August 2000.
- Research Scientist, Catholic University of Leuven (Leuven, Belgium) and Computer Technology Institute (Patras, Greece), November 1994 - June 1995.

Committees

- National Science Foundation. Panelist and Reviewer.
- Program Committee Member: IEEE International Conference on Computer Vision and Pattern Recognition (CVPR), Alaska, 2008.
- Program Committee Member: 11th International Conference on Computer Vision, October 2007, Rio de Janeiro, Brazil.
- Program Committee Member: The 6th International Conference on 3-D Digital Imaging and Modeling, August 2007, Montreal, Canada.
- Program Committee Member: The 3rd International Symposium on 3D Data Processing, Visualization & Transmission, June 2006, University of North Carolina, Chapel Hill.
- Program Committee Member: The 5th International Conference on 3-D Digital Imaging and Modeling, June 2005, Ottawa, Canada.
- Program Committee Member: The 2nd IEEE Workshop on Image and Video Registration (with IEEE CVPR 2004), July 2004, Washington DC.
- Program Committee Member: 2003 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Las Vegas, NV.

Teaching Experience (Instructor)

- CSC 83020, 3-D Computer Vision, Spring 2007, Graduate Center.
- CSC 83010, Topics in Computer Graphics: 3D Photography, Spring 2005/2006, Graduate Center.

- CSC 83020, 3D Photography, Fall 2002/2003, Graduate Center.
- CSCI 493.69 Computational Vision, Spring 2002/2004 Hunter College.
- CSCI 365, Computer Theory II, Spring 2005, Hunter College.
- CSCI 265, Computer Theory I, Fall 2004/2005, Hunter College.
- CSCI 235, Software Design and Analysis II (in C+), Fall 2001/2006, Spring 2006, Hunter College.
- CSCI 150, Discrete Structures, Fall 2002/2003, Spring 2003/2004, Hunter College.
- W3137, Data Structures and Algorithms (in JAVA), Spring 2001, Columbia University.

Administrative Service

- Deputy Executive Officer, PhD Program of Computer Science, Graduate Center of CUNY, Fall 2002 - Spring 2003.
- Member of the Executive Committee of the PhD Program of Computer Science, Graduate Center of CUNY, Spring 2006.
- Hunter College Senate, Fall 2001 - Fall 2004.
- Panelist and Reviewer PSC-CUNY Awards.
- Grant Administrator, Computer Science, Hunter College, Spring 2002.
- Master's Admission Committee, Computer Science, Columbia University (one year).
- Hellenic Association of Columbia University (four years).

Professional Memberships /Service

- Institute of Electrical and Electronics Engineers (IEEE) member.
- Association for Computing Machinery (ACM) member.
- New York Academy of Sciences (NYAS) member.
- Referee for International Conference on Robotics and Automation, International Conference on Computer Vision, International Conference on 3D Digital Imaging and Modeling, Journal of Image and Vision Computing, IEEE Transactions on Graphics, International Journal of Robotics and Automation, Journal of Computer Graphics and Applications, ACM SIG-GRAPH, IEEE Transactions on Pattern Analysis and Machine Intelligence.

Selected Invited Talks

- Carnegie Mellon University, Robotics Institute, VASC Seminar Series, April 17 2006.
- Rutgers University, Computational Biomedicine Imaging and Modeling Center, Department of Computer Science, New Brunswick, NJ, April 2005.
- New York University, Media Research Laboratory, Department of Computer Science, New York City, March 28 2005.
- University of Pennsylvania, GRASP Seminar Series, Philadelphia, PA, March 2005.
- IBM T. J. Watson Research Center, Hawthorne, NY, February 2005.
- "Geometry and Texture Recovery of Scenes of Large Scale", New York Academy of Sciences, Computer and Information Sciences Colloquium, Computer Visualization Applications, New York City, February 27 2002.
- "Reconstruction of Photorealistic 3D Models in Urban Environments", CUNY WIRED! A New Media CUNY Conference, New York City, March 15 2002.
- "Recovering Photorealistic 3-D Models of Urban Environments", Multimedia Vision and Visualization Group Seminars, Stevens Institute of Technology, NJ, April 8 2002.
- "Automatic Geometric Registration of Dense Range Scans for 3D Site Modeling", Polytechnic University, Brooklyn NY, November 7 2003.
- "Automatic Geometric Registration of Dense Range Scans for 3D Site Modeling", Lehman College of CUNY, Bronx NY, December 10 2003.

Publications

Available at

<http://www.cs.hunter.cuny.edu/~ioannis/publications.html>

1. "Integrating Automated Range Registration with Multiview Geometry for the Photorealistic Modeling of Large-Scale Scenes", I. Stamos, L. Liu, C. Chao, G. Wolberg, G. Yu, S. Zokai, *International Journal of Computer Vision* [Special Issue] (to appear).
2. "A systematic approach for 2D-image to 3D-range registration in urban environments", L. Liu and I. Stamos, *VRML Workshop, 11th International Conference on Computer Vision, Rio de Janeiro, Brazil, October 14-20 2007*.
3. "Range Image Segmentation for Modeling and Object Detection in Urban Scenes", C. Chen and I. Stamos, *The 6th International Conference on 3-D Digital Imaging and Modeling, Montreal, Canada, August 21-23 2007*.
4. "Multiview Geometry for Texture Mapping 2D Images Onto 3D Range Data", L. Liu, I. Stamos, G. Yu, G. Wolberg, S. Zokai, *IEEE International Conference of Computer Vision and Pattern Recognition, New York, NY, June 17-22 2006, Vol. II, pp. 2293-2300*.
5. "Range Image Registration Based on Circular Features", C. Chen and I. Stamos, *3rd International Symposium on 3D Data Processing, Visualization & Transmission, University of North Carolina, Chapel Hill, June 14-16 2006*.
6. "3D Modeling Using Planar Segments And Mesh Elements", I. Stamos, G. Yu, G. Wolberg, S. Zokai, *3rd International Symposium on 3D Data Processing, Visualization & Transmission, University of North Carolina, Chapel Hill, June 14-16 2006*.
7. "Semi-automatic range to range registration: a feature-based method", C. Chen and I. Stamos, *The 5th International Conference on 3-D Digital Imaging and Modeling, Ottawa, June 13-17, 2005, pp. 254-261*.
8. "Automatic 3D to 2D Registration for the Photorealistic Rendering of Urban Scenes", L. Liu and I. Stamos, *IEEE International Conference on Computer Vision and Pattern Recognition, San Diego, 2005, Vol. II, pp. 137-143*.
9. "Geometry and Texture Recovery of Scenes of Large Scale", I. Stamos and P. K. Allen, *Journal of Computer Vision and Image Understanding, Vol. 88, No. 2, Nov. 2002, pp. 94-118*.
10. "New Methods for Digital Modeling of Historic Sites Using Range and Image Data", P.K. Allen, I. Stamos, et al., *IEEE Computer Graphics & Applications, Special Issue on 3D Reconstruction and Visualization of Large Scale Environments, Nov./Dec. 2003, pp. 32-41*.
11. "Geometry and Texture Recovery of Scenes of Large Scale: Integration of Range and Intensity Sensing", PhD Thesis, Columbia University, 2001.
12. "Efficient Model Creation of Large Structures based on Range Segmentation", I. Stamos and M. Leordeanu, *2nd International Symposium on 3D Data Processing, Visualization & Transmission, Thessaloniki, Greece, September 2004*.
13. "Automated Feature-Based Range Registration of Urban Scenes of Large Scale", I. Stamos and M. Leordeanu, *IEEE International Conference of Computer Vision and Pattern Recognition, Madison, WI, June 16-22 2003, Vol. II, pp. 555-561*.
14. "3D Modeling of Historic Sites using Range and Image Data", P. K. Allen, I. Stamos, A. Troccoli, B. Smith, M. Leordeanu and Y. C. Hsu, *International Conference of Robotics and Automation, Taipei, September 2003, pp. 145-150*.
15. "The Beauvais Cathedral Project", P. K. Allen, A. Troccoli, B. Smith, I. Stamos, and S. Murray, *Workshop on Applications of Computer Vision in Archeology, IEEE International Conference of Computer Vision and Pattern Recognition, Madison, WI, June 2003*.
16. "Photorealistic 3D Modeling of Architecturally Complex Environments", I. Stamos, *2002 International Conference on Imaging Science, Systems, and Technology, Las Vegas, Nevada, June 24-27 2002, pp. 92-98*.

17. "Automatic Registration of 3-D with 2-D Imagery in Urban Environments", I. Stamos and P. K. Allen. Eighth International Conference on Computer Vision, Vancouver, Canada, July 2001, pp. 731-736.
18. "AVENUE: Automated Site Modeling in Urban Environments", P. K. Allen, I. Stamos, A. Georgiev, E. Gold and P. Blaer, Third International Conference on 3D Digital Imaging and Modeling, Québec City, Canada, May 28 2001, pp. 357-364.
19. "3-D Model Construction Using Range and Image Data", I. Stamos and P. K. Allen, in Proc. of IEEE International Conference on Computer Vision and Pattern Recognition, South Carolina, June 2000, Vol. I, pp. 531-536.
20. "Integration of Range and Image Sensing for Photorealistic 3D Modeling", I. Stamos and P. K. Allen in Proc. of International Conference on Robotics and Automation, San Francisco, April 2000, pp. 1435-1440.
21. "Interactive Sensor Planning", I. Stamos and P. K. Allen, in Proc. of International Conference on Computer Vision and Pattern Recognition, Santa Barbara, June 1998, pp. 489-494.
22. "View Planning for Site Modeling", P. K. Allen, M. K. Reed and I. Stamos, in Proc. DARPA Image Understanding Workshop, Monterey, November 1998, pp. 1181-1192.
23. "Automated Model Acquisition using Volumes of Occlusion", M. K. Reed, P. K. Allen and I. Stamos, in Proc. of IEEE International Conference on Computer Vision and Pattern Recognition, Puerto Rico, June 1997, pp. 72-77.
24. "3-D Modeling from Range Imagery: An Incremental Method with a Planning Component", M. K. Reed, P. K. Allen and I. Stamos, in Proc. of the International Conference on Recent Advances in 3D Imaging and Modeling, Ottawa, Canada, May 1997, pp. 76-84.

Abstracts

- "Automatic Geometric Registration of Dense Range Scans for 3D Site Modeling", DIMACS Workshop on Surface Reconstruction, April 30 - May 2, 2003, DIMACS Center, Rutgers University, Piscataway NJ (with P. K. Allen, Columbia University).
- RCV'03: First NSF PI Workshop on Robotics and Computer Vision, Oct. 26-27 2003, Las Vegas, NV.

Funding

- NSF Faculty Early Career Development Award (CAREER), "CAREER: Photorealistic 3-D Modeling of Large-Scale Scenes: Integration of 3-D Range and 2-D Intensity Sensing in a Complete System", IIS-0237878, February 2003 - January 2008 (Principal Investigator), \$421,000.
- NSF Major Research Instrumentation (MRI), "MRI/RUI: Acquisition of Range-Scanning Equipment and of Data Servers for the Reconstruction of Large-Scale Scenes from 3D Range and 2D Color Data", EIA-0215962 May 2002 - April 2004 (Principal Investigator), \$159,307.
- Urban Modeling Project, Google Gift, 2007-2008 (with Prof. George Wolberg), \$50,000.
- CUNY Collaborative Award, "Visualization Toolkit for 3D Photography", September 2006 August 2007 (with Prof. George Wolberg), \$40,000.
- Presidential Travel Grant, Hunter College, January 2008, \$1,700.
- PSC-CUNY Research Award Program: a) "Photorealistic 3-D Modeling", 2002 - 2003 (Principal Investigator). b) "Automated Registration", 2005 - 2006 (Principal Investigator).
- CUNY Institute for Software Design and Development, "Automatic Registration of 3-D Point Sets", June 2002 - October 2002, January 2003 - June 2003 (Principal Investigator), \$12,000.

PhD Students (Advisor)

- Dr. Lingyun Liu (now at Google) [Graduate Center of CUNY, June 2003 - May 2007].

- Dr. Cecilia Chao Chen (now at Google) [Graduate Center of CUNY, September 2003 - August 2007].
- Adriana Wise, PhD student, Graduate Center of CUNY, September 2005 - Present.

Undergraduate Students (Mentor)

- Marius Leordeanu, undergraduate student, Hunter College, May 2002 - July 2003. Currently PhD student at the Robotics Institute of Carnegie Mellon University.
- Yevgeniy Pavlov, undergraduate student, Hunter College, May 2005 - September 2006.
- Danny Lum, undergraduate student, Hunter College, Summer 2006.
- Koichiro Matsunaga, undergraduate student, Hunter College, Summer 2006. Currently MS student at Columbia University.

Student committees

- Dr. Alejandro Troccoli, Columbia University, PhD Thesis Defense Committee, 2007 (advisor Peter K. Allen).
- Dr. Igor Maslov, CUNY Graduate Center, PhD Thesis Defense/Proposal/Candidacy Exam Committees, 2005-2007 (advisor Izidor Gernter).
- Erwann Rogard, Columbia University, Candidacy Exam Committee, 2006 (advisor Andrew Gelman).
- Deniz Sarioz, CUNY Graduate Center, Candidacy Exam Committee, 2005 (advisor Gabor Herman).
- Ran Davidi, CUNY Graduate Center, PhD Thesis Proposal/Candidacy Exam Committees, 2007-2008 (advisor Gabor Herman).
- Gene Yu, CUNY Graduate Center, Candidacy Exam Committee, 2008 (advisor George Wolberg).

Other

Prof. Stamos is involved in the reconstruction of the 3D model of the endangered Cathedral of St. Pierre in Beauvais, France, in conjunction with the Robotics Laboratory and the Media Center for Art History, Archeology & Historic Preservation of Columbia University. This project was described in the article *Cybersleuths Take On the Mystery of the Collapsing Colossus* that appeared in the New York Times (October 27 2001).

Honors and Awards

- NSF Faculty Early Career Development Award (CAREER), February 2003.
- Feliks Gross Endowment Award, CUNY Academy for the Humanities and Sciences, May 2003.
- Outstanding Teaching Assistant Award, School of Engineering and Applied Sciences, Columbia University, Fall 2000.
- Graduate Research Assistant: Full Scholarship, Robotics Laboratory, Computer Science Department, Columbia University.
- Scholarship for undergraduate studies from the Institution of Scholarships of the Greek State.
- Scholarship for undergraduate and graduate studies from the Institution of Ioannis S. Latsis, Greece.
- Graduated ranking first, class of November 1994, Engineering School, University of Patras, Greece.