

Damian Martin Lyons

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Education:

9/86	Ph.D.	Computer Science. University of Massachusetts, Amherst MA.
8/81	M.Sc.	Computer Science. Trinity College, University of Dublin, Ireland.
6/80	B.A.I.	Electrical Engineering. Trinity College, University of Dublin, Ireland.
6/79	B.A.	Mathematics. Trinity College, University of Dublin, Ireland.

Citizenship: US.

Employment History:

07/06	----	Department Chair, Department of Computer & Information Science, Fordham University, NY.
08/03	06/06	Assoc. Chair for Graduate Studies, Department of Computer & Information Science, Fordham University, NY.
09/02	----	Director, Computer Vision & Robotics Laboratory, Department of Computer & Information Science, Fordham University, NY.
06/02	----	Assoc. Professor, Department of Computer & Information Science, Fordham University, NY.
06/01	06/02	Research Department Head, Video & Display Processing Department, Philips Research, Briarcliff Manor NY 10510
10/96	06/01	Principal Member Research Staff, Philips Research, Briarcliff Manor NY 10510
10/86	10/96	Senior Member Research Staff, Philips Research, Briarcliff Manor NY 10510
06/84	08/84,	
06/85	08/85	Instructor, COINS-121, University of Massachusetts, Amherst MA.
1981	1982	Lecturer,

Computer Science Department, Waterford Institute of Technology, Ireland.

Research Interests:

- Computer vision, visual target tracking, automated surveillance, visual event detection, fusion of visual cues, automated camera handoff, augmented and virtual reality interfaces.
- Robot task planning and programming, formal analysis of plans and programs, model-based plan checking, FSA and port-automata based discrete-event control.
- Hybrid reactive-deliberative robot architectures, adaptive planning, way-finding using a hybrid architecture, cognitive robotics, Beowulf applications in robotics.

Professional Activities:

- **Societies:** Member of IEEE Computer Society, IEEE Robotics Society, IEEE Society for Pattern Analysis and Machine Intelligence, IEEE Society for Systems, Man and Cybernetics and the Association for Computing Machinery.
- **Scientific Advisory Board & Research Consultant:** ActivEye Inc., Pleasantville NY,
- **Steering Committee** IEEE International Symposium on Assembly and Task Planning 1998-2005.
- **Program Co-Chair** IEEE International Symposium on Assembly & Task Planning, Marina del Ray 1997.
- **Guest Editor** IEEE Transactions on Robotics & Automation, Special Issue on Assembly & Task Planning (Feb'96).
- **Technical Committee Chairman.** IEEE Robotics & Automation Society, Assembly and Task Planning Technical Committee, 1992-1996.
- **Chair, Organizing committee** IEEE International Symposium on Assembly & Task Planning, Pittsburgh 1995.
- **Co-Organizer** Workshop on Special Architectures for Robotics, IEEE International Symposium on Robotics and Automation 1988.
- **Member** NCITS/MPEG-4 US delegation 1998, participated in MPEG4 core experiments in SNHC.
- **Program Committees:**
 - International Conference on Computer Vision Theory and Applications, Setubal, Portugal, 2006.
 - Multisensor, Multisource Information Fusion: Architectures, Algorithms, and Applications, SPIE Defense and Security Symposium Symposium 2007, 2007,2008.
 - IEEE International Conference on Robotics and Automation, Barcelona Spain, 1997, 2005;
 - IEEE International Conference on Advanced Video and Signal Surveillance, 2003, 2005;
 - IEEE International Conference on Multisensor Fusion & Integration,, 1996, 2003;
 - IEEE International Symposium on Assembly & Task Planning 1997;
 - Joint IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 1997;

- 4th European Conference on Planning (ECP'97), Toulouse, France, 1997.
- OE / IFIP / IEEE International Conference on Integrated and Sustainable Industrial Production, Lisbon Portugal 1997;
- International Conference on Balanced Automation Systems, Lisbon Portugal, 1996;
- AAAI Spring Symposium on Error Detection in Manufacturing Systems, Stanford University, Stanford CA, 1994;
- Workshop on Computational Theories of Interaction and Agency, University of Chicago, Chicago IL, 1994;
- Workshop on Schemas and Neural Networks, USC, Los Angeles CA, 1993.
- **Have reviewed for:**
 - IEEE: Computer, Expert, Transactions on Robotics & Automation, Transactions on Automation Science & Engineering, Transactions on Automatic Control;
 - Others: Real-Time Imaging, Artificial Intelligence, Journal of AI Research, Robotics & Autonomous Systems, Robotica, Journal of Parallel & Distributed Computation, EURASIP Journal on Applied Signal Processing, Elsevier Journal of Real-Time Imaging;
 - Government Agencies: NSF, NSERC.
- **Master's Committees:**
 - Andrew Palumbo, 2004, M.S. Thesis, Fordham University, Department of Computer and Information Science. (Reader)
 - Kiran Pamnany, 2005, M.S. Thesis, Fordham University, Department of Computer and Information Science. (Advisor)
 - Jizhou Ai, 2006, MS Thesis, Fordham University, Department of Computer and Information Science. (Reader)
- **Doctoral Committees:**
 - Thomas G. Murphy, 1996 (co-advisor), Sc.D. Dissertation, University of Massachusetts Lowell, Dept. of Computer Science. "An Investigation into the Use of Deliberative Information as a Resource for Reactive System Decision Making."

Honors and Awards:

- Jeffcott-McNeill Prize for Engineering, Trinity College, University of Dublin, Ireland.
- Inventor/Co-inventor on 14 US Patents and 7 European Patents issued for work in Robotics and Computer Vision.

- Inventor/Co-inventor on 7 US Patents pending for work in Computer Vision.
- Philips Research Individual Research Award 1997.
- Philips Research Group Research Award 1998.
- Philips International Corporate Research Exhibit (CRE), 1998, 2001.
- Nominated for CRE Presidents Award 2001.
- Distinguished paper award: Hsu, D.F., Lyons, D.M., A Dynamic Pruning Strategy for Real-Time Tracking, *IEEE International Conference on Advanced Information Networking and Applications*, March 2005, Taipei Taiwan.

Funding

- Philips Research USA. July 2002. Completed.
- Fordham College at Rose Hill. July 2002. Completed,
- Fordham University Office of Research. June 2003. Completed.
- Fordham University, Graduate School of Arts and Sciences, June 2004. Completed.
- US Dept. of Defense. October 2005. Completed.
- Fordham University, Office of Research. May 2006. Completed.
- Mr. Z. Wang / SPCorp Inc. (Co-PI). June 2007. In progress.

Invited Presentations

1. Robots, Artificial Intelligence and the Evolution of Computing. Invited Presentation (w/ J. Falk). Fordham GSAS Communitas'08, March 2008.
2. Energy efficient rotational legged locomotion. Invited presentation. Army Research Office Workshop on Mobility in Challenging Environments, Needham MA, Oct. 2006.
3. The Vanishing Robot. Invited Presentation to Columbia University Robotics Laboratory, April 1996.
4. A Formal Approach to Reactive Robotics. ONR Workshop on Non-Linear Adaptive Control Univ. of Maryland MD, September 1993.
5. When is Reactivity Important in Automated Manufacturing? IEEE Workshop on Assembly & Task Planning Atlanta GA, May 1993.
6. Reactive Planning. Presentation for PACE University CS Dept, April 8th 1992.
7. Integrating Reaction and Deliberation by Casting Planning as Adaptation of a Reactive System. Invited presentation to the Office of Naval Research Workshop on Non-Linear Adaptive Control, Univ. of Maryland, College park MD, Sept. 3rd 1993.

8. Integrating Reaction and Deliberation by Casting Planning as Adaptation of a Reactive System. Invited presentation to Teleos Inc. April 3rd 1992.
9. Integrating Reaction and Deliberation by Casting Planning as Adaptation of a Reactive System. Invited presentation the Computer Science Department of Yale University, March 17th 1992.
10. A Formal Model for Reactive Robot Plans. Invited presentation to the Harvard University Computer Science Dept. November 13th 1990.
11. Robot Schemas. Presentation to ATT Murray Hill, Robotics Group, May 1989.
12. Dynamic Process Graphs. Presentation to ECE Department, Carnegie-Mellon University February 1989.
13. Robot Schemas. Presentation to the McGill University ECE Department, December 1987.