

Seth Hutchinson
Curriculum Vitae

ADDRESS

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CURRENT POSITION

Professor and KUKA Chair for Robotics, School of Interactive Computing (2018-present)
Executive Director, Institute for Robotics and Intelligent Machines (2019-present)
—*Georgia Institute of Technology*,

EDUCATION

Ph.D. Electrical Engineering, Purdue University, Dec. 1988
Master of Science, Electrical Engineering, Purdue University, Dec. 1984
Bachelor of Science, Electrical Engineering, Purdue University, May 1983

OTHER POSITIONS

At the Georgia Institute of Technology

- 2018: Associate Director, Institute for Robotics and Intelligent Machines

At the University of Illinois at Urbana-Champaign

- Jan, 2018-present: *Professor Emeritus of Electrical and Computer Engineering*
- 2003-2017: *Professor of Electrical and Computer Engineering; Research Professor, Beckman Institute and Coordinated Science Laboratory*
- 2001-2007: *Associate Head for Undergraduate Affairs, Electrical and Computer Engineering*
- 1996-2003: *Associate Professor of Electrical and Computer Engineering; Research Asst. Professor, Beckman Institute and Coordinated Science Laboratory*
- 1990-1996: *Assistant Professor of Electrical and Computer Engineering; Research Asst. Professor, Beckman Institute and Coordinated Science Laboratory*

Visiting Positions and Sabbatical Leaves

- July, 2017: Università di Roma “La Sapienza”, Rome, Italy: *Visiting Professor*
- Sep-Dec, 2013: Università di Roma “La Sapienza”, Rome, Italy: *Visiting Professor*
- Oct, 2011: Tecnológico de Monterrey, Campus of Guadalajara: *Visiting Professor*
- Jun, 2008: L’Institut Français Mécanique Avancée, Clermont-Ferrand, France: *Visiting Professor*
- Sep-Oct, 2007: Université de Rennes I, Rennes France: *Invited Professor*
- Jun 2005: Tecnológico de Monterrey, Campus Estado de México: *Visiting Professor*
- Jan, 2005: The Australian National University: *Visiting Fellow*
- 1997-1998: Ecole Nationale Supérieure des Télécommunications, Paris, France: *Visiting Professor*
- 1989: Purdue University: *Visiting Assistant Professor of Electrical Engineering*

RESEARCH INTERESTS

Robotics: Vision-based control, motion planning, planning under uncertainty, pursuit-evasion, localization and mapping, locomotion, bio-inspired robotics

TEACHING

- **Courses Developed, Georgia Institute of Technology:**
 - ◊ CS 8803RMP Robot Motion Planning
 - ◊ CS 8803MM Mobile Manipulation (with Professor Frank Dellaert)
- **Course Instructor, Georgia Institute of Technology:**
 - ◊ Introduction to Perception and Robotics (CS 3630)
- **Courses Developed, University of Illinois:**
 - ◊ ECE 550 Advanced Robotic Planning
 - ◊ ECE 470 Introduction to Robotics (with Professors Mark Spong and Narendra Ahuja)
 - ◊ ECE 379 Robot Sensing (with Professor Narendra Ahuja)
- **Course Instructor, University of Illinois:**
 - ◊ Introduction to Robotics (ECE 470)
 - ◊ Advanced Robotic Planning (ECE 550)
 - ◊ Control Systems (ECE 486)
 - ◊ Control System Theory and Design (ECE 515)
 - ◊ Introduction to Optimization (ECE 490)
 - ◊ Senior Design Laboratory (ECE 445)
 - ◊ Introduction to Computing Systems (ECE 190)
 - ◊ Analog Signal Processing (ECE 210)
 - ◊ Computer Engineering I (ECE 290)
 - ◊ Probability with Engineering Applications (ECE 313)
 - ◊ Logic Design (ECE 462)
 - ◊ Engineering Ethics (ECE 316)
- **Tutorials**
 - ◊ “Visual Servo Control,” 9th Summer School on Image and Robotics 2008, IFMA, Campus des Cezeaux, France
 - ◊ “Visual Servo Control,” Centro de Investigación en Matemáticas, Guanajuato, Mexico (Feb. 2008)
 - ◊ “Visual Servo Control,” IEEE Int’l Conf. on Robotics and Automation, 1996
 - ◊ “Multisensor Fusion Under Uncertainty: Bayes Methods and the Dempster-Shafer Theory,” given at the IEEE Int’l Conf. on Multisensor Fusion and Integration for Intelligent Systems, 1994
- **Short Courses:**
 - ◊ Underactuated Robots, Università di Roma “La Sapienza”, Rome, Italy, Winter, 2016.
 - ◊ Probabilistic Methods in Robotics, Università di Roma “La Sapienza”, Rome, Italy, Fall, 2013.
 - ◊ Lectures on visual servo control and path planning at the Dutch Institute of Systems and Control (DISC) Summer School on Dynamics and Control Methods for Medical Robotics, June, 2011.
 - ◊ “Visual Servo Control,” Centro de Investigación en Matemáticas, Guanajuato, Mexico (Aug. 2009)
 - ◊ “Visual Servo Control,” Centro de Investigación y de Estudios Avanzados del Instituto Politécnico Nacional, CINVESTAV, Saltillo, Mexico, (Feb. 2009)
 - ◊ *Robot Motion Planning*, a four week graduate course given at the Tecnológico de Monterrey, Campus Estado de México, June 2005
 - ◊ *Robotics and Computer Vision*, a three day short course offered through the Office of Continuing Engineering Education at the University of Illinois, Summer 1993 (with Professor Ponce)

PROFESSIONAL ACTIVITIES

• Editorships

- ◇ Advisory Board, *International Journal of Robotics Research*, 2023-present
- ◇ Advisory Editorial Board, *Journal of Intelligent Service Robotics*, 2014-present
- ◇ Editorial Board, *International Journal of Robotics Research*, 2005-2022
- ◇ Editor-in-Chief, *IEEE Transactions on Robotics*, 2008-2013
- ◇ Founding Editor-in-Chief, Conference Editorial Board, IEEE Robotics and Automation Society 2006-2008
- ◇ Editorial Board, *Journal of Intelligent Service Robotics*, 2005-2014
- ◇ Editor, *IEEE Transactions on Robotics and Automation*, 2000-2005
- ◇ Associate Editor, *IEEE Transactions on Robotics and Automation* 1997-2000

• Guest Editorships

- ◇ Guest Editor, *IEEE Trans. on Automation Science and Engineering*, Special Issue on the 2018 Workshop on the Algorithmic Foundations of Robotics (WAFR), July, 2021.
- ◇ Guest Editor, *Int'l Journal of Robotics Research*, Special Issue on the Thirteenth Workshop on the Algorithmic Foundations of Robotics (WAFR), Sept. 2021.
- ◇ Guest Editor, *International Journal of Computer Vision* and *International Journal of Robotics Research*, Joint Special Issue on Vision and Robotics, Nov., 2007.
- ◇ Guest Editor, *International Journal of Robotics Research*, Jul.-Aug. 2004.
- ◇ Guest Editor, *IEEE Transactions on Robotics and Automation*, Special section on visual servo control, October 1996.

• IEEE Robotics and Automation Society, Offices and Committees

- ◇ Junior Past President, 2022-present
- ◇ Chair, Nominations Committee, 2022-present
- ◇ President, 2020-2021
- ◇ President-Elect, 2018-2019
- ◇ Member of the AdCom, 2006-2009, 2014-2016, 2017-2018 (at-large member)
- ◇ Member, Ad hoc Committee on RAS Governance Review and Restructuring, 2021-present
- ◇ Member, Conference Activities Board (CAB), 2016-2019
- ◇ Associate Vice President for Conference Technical Programs, 2016-2019
- ◇ Chair of the Steering Committee of *IEEE Robotics and Automation Letters*, 2015-2019
- ◇ Co-Chair, Awards Committee, 2018-2019
- ◇ Chair, Awards Evaluation Committee, 2018-2019
- ◇ Member of the Publications Activities Board (PAB), 2008-2019
- ◇ Member of the ad hoc Committee on New Publication Strategies, 2014-2019
- ◇ Director, IEEE RAS Young Reviewers Program, 2015-2018
- ◇ Member of the Electronic Publications and Services Board, 2014-2015
- ◇ Member of the IEEE Fellow Nomination Committee, 2012-2015
- ◇ Chair, IEEE Fellow Nomination Committee, 2016, 2017
- ◇ Member of the search committee: Editor-in-Chief of *IEEE Robotics and Automation Letters*, 2015
- ◇ Member of the Nomination Committee for the George Saridis Leadership Award, 2017
- ◇ Member of the Nomination Committee for the IEEE RAS Distinguished Service Award, 2017
- ◇ Co-Chair, Evaluation Panel for the George Saridis Leadership Award in Robotics and Automation, 2014, 2015
- ◇ Co-Chair, Evaluation Panel for the IEEE RAS Distinguished Service Award, 2014, 2015
- ◇ Member of the Pioneer in Robotics and Automation Award Nomination Committee, 2014, 2015
- ◇ Co-chair of the Pioneer in Robotics and Automation Award Nomination Committee, 2013

- ◊ Member of the Financial Activities Board (FAB), 2008-2013
- ◊ Member of the Technical Activities Board (TAB), 2008-2013
- ◊ Member of the Steering Committee for Technical Programs (SCTP), 2006-2009
- ◊ Associate Vice President for Publications, 2005-2006
- ◊ Member of the Conference Board and the Member Services Committee, 2005-2007
- ◊ Member of the ad hoc committee to rename and redefine the scope of the *IEEE Transactions on Robotics and Automation*, 2002
- ◊ Co-chair, Technical Committee on Computer and Robot Vision, 1992-1996
- **IEEE Boards and Committees**
 - ◊ IEEE TAB Strategic Planning Committee, 2019
 - ◊ IEEE Periodicals Review and Advisory Committee (PRAC), 2016-2018
 - ◊ Division 10 representative to the IEEE Thesaurus Editorial Board, 2014-2018
- **Conference and Workshop Organization**
 - ◊ General Chair, *IEEE Int'l Conf. on Robotics and Automation (ICRA)*, 2025
 - ◊ Program Chair, *IEEE Int'l Conf. on Robotics and Automation (ICRA)*, 2023
 - ◊ Awards Co-chair, *IEEE Int'l Conf. on Intelligent Robots and Systems (IROS)*, 2019, 2022
 - ◊ Steering Committee, *Workshop on the Algorithmic Foundations of Robotics (WAFR)*, 2009-present
 - ◊ Program Co-Chair for the Americas, *IEEE Int'l Conf. on Robotics and Automation (ICRA)*, 2016
 - ◊ Area Chair, *Robotics: Science and Systems (RSS)*, 2012, 2013, 2017, 2018
 - ◊ Program Co-chair, *IEEE Int'l Conf. on Intelligent Robots and Systems (IROS)*, 2015, 2017
 - ◊ Program Co-chair for the Americas, *IEEE Int'l Conf. on Intelligent Robots and Systems (IROS)*, 2008, 2014
 - ◊ Program Co-chair for America, *13th International Conference on Advanced Robotics*, 2007
 - ◊ Co-chair, *Workshop on the Algorithmic Foundations of Robotics*, 2002, 2018
 - ◊ Program Vice-chair, *9TH IEEE International Conference on Tools with Artificial Intelligence (IC-TAI97)*, November 1997
 - ◊ Co-chair, IEEE Workshop on Visual Servoing: Achievements, Applications and Open Problems, San Diego, May 1994
- **Program and Organizing Committees**
 - ◊ Heterogeneous Multi-Agent Task Allocation and Planning Workshop (held in conjunction with RSS): 2020
 - ◊ International Symposium on Medical Robotics, 2019
 - ◊ IEEE Conference on Control Technology and Applications, 2017
 - ◊ Workshop on the Algorithmic Foundations of Robotics (WAFR): 1994, 2002, 2006, 2008, 2010, 2014, 2016
 - ◊ IEEE Int'l Conf. on Intelligent Robots and Systems (IROS): 1992, 1994, 1996, 1998, 2001-2006, 2008-2011, 2019
 - ◊ IEEE Int'l Conf. on Robotics and Automation (ICRA): 1994, 1996, 1997 1999-2003, 2005-2006; 2017 (SPC), 2019, 2021 (SPC)
 - ◊ IEEE Conf. on Decision and Control (CDC): 2012
 - ◊ American Control Conference (ACC): 2011
 - ◊ Robotics: Science and Systems (RSS): 2005, 2009, 2014
 - ◊ Robotics Challenges and Vision Workshop (held in conjunction with RSS): 2013
 - ◊ Int'l Conf. on Pattern Recognition (ICPR): 2002, 2010, 2012
 - ◊ IEEE Workshop on Visual Control of Mobile Robots (ViCoMoR): 2011, 2012
 - ◊ International Conference on Informatics in Control, Automation and Robotics (ICINCO): 2007
 - ◊ International Conference on Control, Automation and Systems (ICCAS): 2007
 - ◊ IASTED International Conference on Robotics and Applications: 2007

- ◇ 13th International Conference on Advanced Robotics: 2007
- ◇ SICE-ICASE International Joint Conference: 2006
- ◇ SPIE Conf. on Optomechatronic Systems Control: 2006
- ◇ Int'l Conf. on Computer Vision Theory and Applications (VISAPP): 2006
- ◇ IEEE Int'l Conf. on Multisensor Fusion and Integration for Intelligent Systems (MFI): 1994, 1996, 1999, 2001, 2003, 2006, 2008, 2009
- ◇ IEEE Int'l Conf. on Comp. Vision and Pattern Recognition (CVPR): 1996, 1997, 2000, 2001
- ◇ IEEE Int'l Conf. on Industrial Electronics, Technology & Automation (IETA): 2001
- ◇ Thirty-First International Symposium on Robotics (ISR): 2000
- ◇ SPIE Conf. on Sensor Fusion and Decentralized Control in Autonomous Robotic Sys.: 1997, 1999
- ◇ IEEE Workshop on Perceptual Organization in Computer Vision (held with CVPR): 1998
- ◇ Nat'l Conf. on Artificial Intelligence (AAAI): 1994, 1996
- ◇ Sixth Int'l Symposium on Robotics and Manufacturing (ISRAM): 1996
- ◇ IROS Workshop on Vision for Robots: 1995
- ◇ SPIE Conf. on Neural and Stochastic Methods in Image and Signal Processing: 1992, 1993, 1994
- ◇ The Twelfth Int'l Conf. on Pattern Recognition — Comp. Vision and Applications: 1994
- ◇ SPIE Conf. on Applications of Artificial Intelligence XI: Machine Vision and Robotics: 1993
- ◇ SPIE Conf. on Stochastic Methods in Signal Proc., Image Proc., and Comp. Vision: 1991
- **Reviewer**
 - ◇ Chair, Science Advisory Board, Munich Institute of Robotics and Machine Intelligence (2022-present)
 - ◇ **Advanced Center for Electrical and Electronic Engineering (AC3E)**, Chile, member of the International Scientific Committee, 2018-present
 - ◇ **National Science Foundation** Spring 1994, Fall 1995, Spring 1997, Spring 2002, Winter 2008, Fall 2012, Spring 2014, Spring 2015
 - ◇ **National Institute of Justice**, Standing Scientific Review Panel on Technology, 2013
 - ◇ **NASA**: Spring 1999, Winter 2005, Winter 2006, Fall 2007
 - ◇ **INRIA**: Evaluation of the *control and complex systems* program, Fall 2004
 - ◇ **EU Framework Programme for research and technology development**:
 - Evaluation Panel for Information and Communication Technologies (ICT-2009.2.1 Cognitive Systems and Robotics), 2009, 2010, 2011, 2012, 2013, 2014
 - Site Review Committee: 2012 (TOMSY), 2013 (TOMSY), 2014 (TOMSY, PACMAN), 2015 (PACMAN)
 - ◇ **Journals**: IEEE Trans. on Robotics and Automation, Robotics and Autonomous Systems, International Journal of Robotics Research, IEEE Trans. on Image Processing, IEEE Trans. on Pattern Analysis and Machine Intelligence, IEEE Trans. on Computers, IEEE Trans. on Systems, Man, and Cybernetics, IEEE Computer Magazine, IEEE Control Magazine, Journal of Robotic Systems, ASME Trans. Journal of Engineering for Industry, Computer Vision, Graphics, and Image Processing: Image Understanding, Robotics and Computer-Integrated Manufacturing
 - ◇ **Conferences and Workshops**: dozens of technical conferences and workshops
- **Professional Memberships**: IEEE (Fellow), Robotics Society of India, 2013-present.

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