

Dezhen Song, Curriculum Vitae

RESEACH INTERESTS

Perception, Networked Robots, Vision Systems, Automation, Stochastic Modelling

EDUCATION

- Aug. 2000 – Aug. 2004, Ph.D., Department of Industrial Engineering and Operations Research, University of California, Berkeley
- Aug. 1998 – Jul. 2000, Ph. D. student, Department of Industrial Engineering, Mississippi State University (Transferred)
- Sep. 1995 – Mar. 1998, M.S., Industrial Automation, Department of Control Science and Engineering, Zhejiang University
- Sep. 1991 – Jul. 1995, B.S., Process Control, Department of Chemical Engineering, Zhejiang University

EMPLOYMENT

- Sep. 2016 – present, *Professor*, Department of Computer Science and Engineering, Texas A&M University (TAMU), College Station, TX 77843
- Sep. 2010 – Aug. 2016, *Associate Professor*, Department of Computer Science and Engineering, Texas A&M University (TAMU), College Station, TX 77843
- Sep. 2011– Aug. 2013, *Visiting Scientist*, Shenzhen Institute of Advanced Technology (SIAT), Chinese Academy of Science (CAS), Shenzhen, China
- Aug. 2004 – Aug. 2010, *Assistant Professor*, Department of Computer Science and Engineering, Texas A&M University (TAMU), College Station, TX 77843
- May. 2001 - Aug. 2004, *Graduate Student Researcher*, Alpha Lab, Department of Industrial Engineering and Operations Research, University of California, Berkeley
- Sep. 2000 - Aug. 2001, *Programmer/Analyst/Graduate Student Instructor*, Department of Statistics, University of California, Berkeley
- Aug. 1998 - Jul. 2000, *Graduate Research Assistant*, Department of Industrial Engineering, Mississippi State University, Starkville, MS
- Jan. 1997 - Aug. 1998, *Chief Software Engineer/ Head of Research & Development Department/ CTO*, Nanwang, (Southern Video), Hangzhou, Zhejiang Province, China
- Sep. 1995 - Jan. 1998, *Graduate Research Assistant*, Institute of Industrial Process Control, Zhejiang University, Hangzhou, China
- Sep. 1993 - Aug. 1995, *Undergraduate Research Assistant / Network Administrator*, Computer & Network Center, Department of Chemical Engineering, Zhejiang University, Hangzhou, China

HONORS AND AWARDS

- The 2nd Overall Place, Year 1 of GM-SAE Autodrive Challenge, The 12th Unmanned Team, TAMU
- Nominated for IEEE RAS Early Career Award, 2010
- Award for Excellence in Physical Sciences & Mathematics, 2009, for contribution to Springer Handbook of Robotics, Association of American Publishers, Inc.
- Finalist, Best Paper Award, (with Dr. Wai Kin Victor Chan, Dr. Jingang Yi, Dr. Shengwei Ding), IEEE International Conference on Automation Science and Engineering (CASE), 2008
- Keynote Speaker, International Workshop on Distributed Sensing and Collective Intelligence in Biodiversity Monitoring, Amsterdam, The Netherlands, Dec. 3-5, 2008

- Finalist, NTF Award on Entertainment Robots and Systems (with K. Goldberg), IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), San Diego, Oct. 2007
(This new award is to review the papers in this category in the last 20 years since the beginning of the IROS conference and select the best paper from them.)
- TEES Select Young Faculty, 2007
- Faculty Early Career Development (CAREER) Award, National Science Foundation, 2007-2012.
- Semi-finalist (with blue team), DARPA Grand Challenge, Oct. 2005
- Kayamori Best Paper Award, (with Dr. Jingang Yi and Dr. Shengwei Ding), IEEE International Conference on Robotics and Automation, 2005
- Doctoral Symposium, ACM Multimedia 2003 (4 out of 20)
- Graduate School Scholarship, Zhejiang University in 1996
- Exemplary undergraduate student, Zhejiang University in 1995
- Exemplary undergraduate student, Zhejiang Province, P.R. China, 1995
- Guanghua Fellowship, Zhejiang University, 1994
- Excellent Student Scholarship, Zhejiang University: First Grade in 1994 (top 1%), Second Grade in 1993, 1992 (top 5%)
- Winner of National High School Olympic Physics Competition, Anhui Province, China, Grade 3, 1990
- Winner of National High School Olympic Chemistry Competition, Anhui Province, China, Grade 2, 1990
- Winner of Hefei High School Chemistry Contest, Anhui Province, P.R. China, Grade 1, 1989
- Winner of Hefei Middle School Chinese Writing Contest, Grade 1, Anhui, China, 1986

RESEARCH GRANTS AND AWARDS

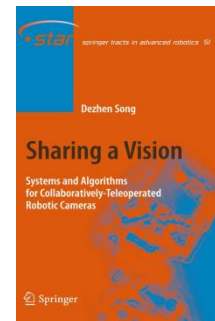
1. “*Networked motion sensors for train/rail condition monitoring*,” Center for Railway Research (CRR), Texas A&M Transportation Institute (TTI), Association of American Railroads (AAR) Affiliated Lab, PI: David Allen, Co-PI: Dezhen Song, \$30,000, (pro-rate amount 100%), Jan. 2018-Dec. 2018
2. “*EAGER: MEMS Co-Steered Optical and Acoustic Dual Modal Communication and Ranging Devices for Underwater Vehicles*,” National Science Foundation, NRI-1748161, PI: Jun Zou, Co-PI: Dezhen Song, \$202,779, (pro-rate amount 50%), Sep. 2017- Aug. 2019
3. “*Networked motion sensors for train/rail condition monitoring*,” Center for Railway Research (CRR), Texas A&M Transportation Institute (TTI), Association of American Railroads (AAR) Affiliated Lab, PI: David Allen, Co-PI: Dezhen Song, \$40,000, (pro-rate amount 100%), Jan. 2017-Dec. 2017
4. “*Localization and mapping algorithms by using onboard sensors on Robonaut 2*,” TEES-NASA Collaboration, NO. SAA-EA-16-22219, Oct. 2016-Aug. 2017, PI: Dezhen Song, \$40,000
5. “*NRI: Collaborative Research: Targeted Observation of Severe Local Storms Using Aerial Robots*,” National Science Foundation, NRI-1526200, PI: Dezhen Song, \$224,242, Sep. 2015 - Sep. 2018 (Pro-rated amount 100%)
6. “*Advancing Innovative High-Speed Remote-Sensing Highway Infrastructure Assessment Using Emerging Technologies*,” Texas Department of Transportation (TxDoT), Research Supervisor: Paul Carlson, PIs: Jeff Miles, Adam Pike, Richard Zimmer, Stephan Hurlebaus, Andrew Wimsat, Robert Lytton, and Dezhen Song, \$1,723,345 (Phase I), Jan. 2015 – Aug. 2016. (Pro-rated amount 7.18%)
7. “*NRI: Collaborative Research: Minimally Invasive Robotic Non-Destructive Evaluation and Rehabilitation for Bridge Decks (Bridge-MINDER)*,” National Science Foundation, NRI-1426752, PI: Dezhen Song, \$300,000, Sep. 2014-Sep. 2017 (Pro-rated amount 100%)
8. “*RI: Small: Robotic Search of Transient Objects*,” National Science Foundation, IIS-1318638, PI: Dezhen Song, \$350,000, Sep. 2013-Sep. 2016 (Pro-rated amount 100%)
9. “*High-level Landmarks for Guiding Robots (HILGUR)*,” US Army Small Business Technology Transfer (STTR), A12a-T030 Phase I, 2012, PI: Dezhen Song, \$40,000 (Nov. 2012-Apr. 2013)
10. “*MRI: Acquisition of Mobile, Distributed Instrumentation for Response Research (RESPOND-R)*,” NSF MRI-0923203, \$1.4M (from NSF) + \$600k cost sharing, PI: Robin Murphy, Co-PIs: Aaron

- Ames, Radu Stoleru, Dezhen Song, and Ricardo Gutierrez-Osuna, Sep. 2009- Aug. 2012, (Pro-rated amount 20%)
11. “*Human-Robot Interaction to Monitor Climate Change Effects via Networked Robotic Observatories*”, Human-Robot Interaction: “Robots Among Us”, Microsoft External Research & Programs, \$70,000, PIs: Dezhen Song (Lead) and Ken Goldberg, April 2008-April 2009, (Pro-rated amount 50%)
 12. “*Robotic BioTelemetry*”, NSF IIS-0643298, Faculty Early Career Development (CAREER), National Science Foundation, \$400,000, Jan. 2007- Jan. 2012, (Pro-rated amount 100%)
 13. “*Collaborative Observatory for Natural Environment*”, National Science Foundation IIS-0534848/0535218, Dezhen Song (PI) and Ken Goldberg (Co-PI), \$440,000, July 2005 - July 2008, (Pro-rated amount 50%)
 14. “*CAF: Perceptive Sensor Networks Laboratory*”, a CAF Proposal, PI: Andruid Kerne, Co-PIs: Ricardo Gutierrez-Osuna and Dezhen Song, Grant period: 2005, Amount: \$80,000. (Pro-rated amount 33%). [Internal Grant]
 15. TEES/TAMU Research Startup, \$190,000, PI: Dezhen Song, Aug 2004 - Aug 2007.

PUBLICATIONS

BOOK

- K1. Dezhen Song, *Sharing a Vision: Systems and Algorithms for Collaboratively-Teleoperated Robotic Cameras*, a Monograph in Springer Tracts on Advanced Robotics, Vol. 51, ISBN: 978-3-540-88064-6, 2009, Springer



JOURNAL PAPERS

- J1. Gaofeng Li, Dezhen Song, Shan Xu, Lei Sun, and Jingtai Liu, *Kinematic-free Orientation Control for a Deformable Manipulator based on the Geodesic in Rotation Group $SO(3)$* , IEEE Robotics and Automation Letters (RA-L), vol. 3, No. 3, July 2018, pp. 2432-2438.
- J2. Yan Lu and Dezhen Song, *Visual Navigation Using Heterogeneous Landmarks and Unsupervised Geometric Constraints*, IEEE Transactions on Robotics (T-RO), vol.: 31, no.: 3, June 2015, pp. 736 – 749.
- J3. Chang Young Kim, Dezhen Song, Jingang Yi, and Xinyu Wu, *Decentralized Searching of Multiple Unknown and Transient Radio Sources with Paired Robots*, Engineering, vol. 1, no. 1, July 2015, pp. 58 -65
- J4. Wen Li and Dezhen Song, *Automatic Bird Species Filtering Using A Multi-Model Approach*, IEEE Transactions on Automation Science and Engineering (T-ASE), vol.12, no.2, pp.553 - 564, April 2015
- J5. Chang Young Kim, Dezhen Song, Yiliang Xu, Jingang Yi, and Xinyu Wu, *Cooperative Search of Multiple Unknown Transient Radio Sources Using Multiple Paired Mobile Robots*, IEEE Transactions on Robotics (T-RO), vol. 30, no. 5, Oct. 2014, pp. 1161 - 1173
- J6. Wen Li and Dezhen Song, *Automatic Bird Species Detection from Crowd Sourced Videos*, IEEE Transactions on Automation Science and Engineering (T-ASE), vol. 11, issue 2, April 2014, pp. 348 - 358
- J7. Dezhen Song, Chang Young Kim, and Jingang Yi, *Simultaneous Localization of Multiple Unknown and Transient Radio Sources Using a Mobile Robot*, IEEE Transactions on Robotics (T-RO), vol. 28, no. 3, June 2012, pp. 668-680
- J8. Rappole, J. H., S. Glasscock, K. Goldberg, D. Song, and S. Faridani, *Range Change among New World Tropical and Subtropical Birds*, In Tropical vertebrates in a changing world (K.-L.

- Schuchmann, ed.), Bonner Zoologische Monographien, Nr 57, 2011, Bonn, Germany, pp. 151-167.
- J9. Dezhen Song, Chang Young Kim, and Jingang Yi, *On the Time to Search for an Intermittent Signal Source Under a Limited Sensing Range*, IEEE Transactions on Robotics (T-RO), vol. 27, no. 2, 2011, pp. 313-323
- J10. Wai Kin Victor Chan, Shengwei Ding, Jingang Yi, and Dezhen Song, *Optimal Scheduling of Multi-Cluster Tools with Constant Robot Moving Times, Part II: Tree-Like Topology Configurations*, IEEE Transactions on Automation Science and Engineering, vol. 8, no. 1, Jan. 2011, pp. 17-28
- J11. Dezhen Song and Yiliang Yu, *A Low False Negative Filter for Detecting Rare Bird Species from Short Video Segments using a Probable Observation Data Set-based EKF Method*, IEEE Transactions on Image Processing, vol. 19, no. 9, Sept. 2010, pp. 2321-2331
- J12. Yiliang Xu and Dezhen Song, *Systems and Algorithms for Autonomous and Scalable Crowd Surveillance Using Robotic PTZ Cameras Assisted by a Wide-Angle Camera*, Autonomous Robots, Volume 29, Number 1 / July, 2010, pp. 53-66
- J13. Dezhen Song, Yiliang Xu, and Ni Qin, *Aligning Windows of Live Video from an Imprecise Pan-Tilt-Zoom Camera into a Remote Panoramic Display for Remote Nature Observation*, Journal of Real Time Image Processing, Vol. 5, Issue 1, 2010, pp. 57-70
- J14. Dezhen Song, Chang Young Kim, and Jingang Yi, *Simultaneous Localization of Multiple Unknown CSMA-based Wireless Sensor Network Nodes Using a Mobile Robot with a Directional Antenna*, Journal of Intelligent Service Robots, vol. 2, No. 4, October, 2009, pp 219-233
- J15. Jingang Yi, Hongpeng Wang, Junjie Zhang, Dezhen Song, Suhada Jayasuriya, and Jingtian Liu, *Modeling and Analysis of Skid-Steered Mobile Robots with Applications to Low-Cost Inertial Measurement Unit-Based Motion Estimation*, IEEE Transactions on Robotics, Vol. 25, No. 5, October, 2009, pp. 1087-1097
- J16. Dezhen Song, Ni Qin, and Ken Goldberg, *Systems, Control Models, and Codec for Collaborative Observation of Remote Environments with an Autonomous Networked Robotic Camera*, Autonomous Robots, May 2008, Vol. 24, No. 4, pp. 435-449
- J17. Jingang Yi, Shengwei Ding, Dezhen Song, and Mike Tao Zhang, *Steady-State Throughput and Scheduling Analysis of Multi-Cluster Tools: A Decomposition Approach*, IEEE Transactions on Automation Science and Engineering, vol. 5, no. 2, pp 321-336, April 2008
- J18. Dezhen Song, Hyun Nam Lee, Jingang Yi, and Anthony Levandowski, *Vision-based Motion Planning for an Autonomous Motorcycle on Ill-Structured Roads*, Autonomous Robots, Vol. 23, No. 3, Oct. 2007, pp. 197-212
- J19. Dezhen Song and Ken Goldberg, *Approximate Algorithms for a Collaboratively Controlled Robotic Camera*, IEEE Transactions on Robotics, Vol. 23, No. 5, Oct. 2007, pp. 1061-1070
- J20. Dezhen Song, A Frank van der Stappen, and Ken Goldberg, *Exact Algorithms for Single Frame Selection on Multi-Axis Satellites*, IEEE Transactions on Automation Science and Engineering, Vol. 3, No. 1. January 2006, pp.16-28.
- J21. K. Goldberg, A. Pashkevich, D. Song, *Geometrical calibration of robotic web-cameras*, Transactions of Belarusian Engineering Academy, vol. 1(15)/1, 2003, pp. 12-14.
- J22. Ken Goldberg, Dezhen Song, and Anthony Levandowski, *Collaborative Teleoperation with Using Networked Spatial Dynamic Voting*, The Proceedings of THE IEEE, Vol 91, Number 3, March 2003, pp 430-439.
- J23. D. Song and L. Dai (1996) *Online adaptive estimation and control of raw gas endpoint*. Journal of Zhejiang University. Special issue in process control., pp:404-407 (In Chinese)

BOOK CHAPTERS

- B1. D. Song, K. Goldberg, and N. Y. Chong, Chapter 44: *Networked Robots*, Springer Handbook on Robotics, 2nd edition, Editors: B. Sciliano and O. Khatib, Springer 2016, Pages 1109-1134
- B2. W. Li and D. Song, *Featureless Motion Vector-Based Simultaneous Localization, Planar Surface Extraction, and Moving Obstacle Tracking*, Algorithmic Foundations of Robotics XI, H.

- Levent Akin, Nancy M. Amato, Volkan Isler, A. Frank van der Stappen (Eds.), Springer, 2015, Pages 245-261.
- B3. Yan Lu and Dezhen Song, (2014). *Robust Recognition of Planar Mirrored Walls*, Household Service Robotics, 1st Edition, Editors: Yangsheng Xu, Huihuan Qi, and Xinyu Wu (Eds.), Elsevier.
- B4. Yiliang Xu and Dezhen Song, (2013). *Collaborative Crowd Surveillance Using Networked Robotics Cameras*, Bentham E-books: Networking Humans, Robots, and Environments, Editor: Nak-Young Chong.
- B5. Yizhai Zhang, Jingang Yi and Dezhen Song, (2013). *Dynamic Modeling of Riderless Motorcycles*, Modelling, Simulation and Control of Two-Wheeled Vehicles, M. Tanelli (Ed.), John Wiley & Sons, Ltd, London, UK.
- B6. Yizhai Zhang, Jingang Yi and Dezhen Song, (2013). *Autonomous Control of Riderless Motorcycles*, Modelling, Simulation and Control of Two-Wheeled Vehicles, M. Tanelli (Ed.), John Wiley & Sons, Ltd, London, UK.
- B7. Dezhen Song, Hyunnam Lee, and Jingang Yi, *On the Analysis of the Depth Error on the Road Plane for Monocular Vision-Based Robot Navigation*, Algorithmic Foundations for Robotics VIII, Springer tracts on advanced robotics, Springer, 2008
- B8. Dezhen Song and Ken Goldberg, *Networked Robotic Cameras for Collaborative Observation of Natural Environments*, Robotics Research, The 12th International Symposium, Editors: Sebastian Thrun, Hugh Durrant-Whyte, and Rodney Brooks, Springer tracts on advanced robotics, Springer 2007, pages 510-519
- B9. D. Song, K. Goldberg, and N. Y. Chong, Chapter 32: *Networked Telerobots*, Springer Handbook on Robotics, Editors: B. Sciliano and O. Khatib, 2008, pages 759-771. (**Award for Excellence in Physical Sciences & Mathematics, 2009, for Springer Handbook of Robotics, Association of American Publishers, Inc.**)
- B10. D. Song, A.F. van der Stappen, and K. Goldberg, *Exact and Distributed Algorithms for Collaborative Camera Control*, Editors: J.-D. Boissonnat, J. Burdick, K. Goldberg, and S. Hutchinson, Algorithmic Foundations of Robotics V, Springer tracts on advanced robotics, Springer, 2002, pages 167-184

REFEREED CONFERENCE PAPERS

- C1. Shan Xu, Gaofeng Li, Dezhen Song, Lei Sun, and Jingtai Liu, *Real-time Shape Recognition of a Deformable Link by Using Self-Organizing Map*, The 14th IEEE International Conference on Automation Science and Engineering (CASE), Munich, Germany, August 20-24, 2018
- C2. Chieh Chou, Aaron Kingery, Di Wang, Haifeng Li, and Dezhen Song, *Encoder-Camera-Ground Penetrating Radar Tri-Sensor Mapping for Surface and Subsurface Transportation Infrastructure Inspection*, IEEE International Conference on Robotics And Automation (ICRA), Brisbane, Australia, May 21-25, 2018
- C3. Hsin-Min Cheng and Dezhen Song, *Localization in Inconsistent WiFi Environments*, International Symposium on Robotics Research (ISRR), Puerto Varas, Chile, Dec. 11-14, 2017
- C4. Yan Lu, Joseph Lee, Shu-Hao Yeh, Hsin-Min Cheng, Baifan Chen, and Dezhen Song, *Sharing Heterogeneous Spatial Knowledge: Map Fusion between Asynchronous Monocular Vision and Lidar or Other Prior Inputs*, International Symposium on Robotics Research (ISRR), Puerto Varas, Chile, Dec. 11-14, 2017
- C5. Binbin Li and Dezhen Song, *Probabilistic Boundary Coverage for Unknown Target Fields with Large Perception Uncertainty and Limited Sensing Range*, International Symposium on Robotics Research (ISRR), Puerto Varas, Chile, Dec. 11-14, 2017
- C6. Chieh Chou, Shu-Hao Yeh, and Dezhen Song, *Mirror-Assisted Calibration of a Multi-modal Sensing Array with a Ground Penetrating Radar and a Camera*, IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Vancouver, Canada, Sept. 24-28, 2017
- C7. Joseph Lee, Yan Lu, Yiliang Xu, Dezhen Song, *Visual Programming for Mobile Robot Navigation Using High-level Landmarks*, IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Daejeon, Korea, Oct. 9-14, 2016

- C8. Aliasghar Arab, Kaiyan Yu, Jingang Yi, and Dezhen Song, *Motion Planning for Aggressive Autonomous Vehicle Maneuvers*, IEEE Conference on Automation Science and Engineering (CASE), Fort Worth, TX, USA, August 21-24, 2016
- C9. Chieh Chou, Shu-Hao Yeh, Jingang Yi, Dezhen Song, *Extrinsic Calibration of a Ground Penetrating Radar*, IEEE Conference on Automation Science and Engineering (CASE), Fort Worth, TX, USA, August 21-24, 2016
- C10. Gaofeng Li, Lei Sun, Shan Xu, Dezhen Song, Jingtai Liu, *A Hybrid Model and Kinematic-free Control Framework for a Low-cost Deformable Manipulator Using in Home Service*, IEEE Conference on Automation Science and Engineering (CASE), Fort Worth, TX, USA, August 21-24, 2016
- C11. Yan Lu and Dezhen Song, *Robust RGB-D Odometry Using Point and Line Features*, IEEE International Conference on Computer Vision (ICCV), Santiago, Chile, Dec. 13-16, 2015
- C12. Yan Lu and Dezhen Song, *Robustness to Lighting Variations: An RGB-D Indoor Visual Odometry Using Line Segments*, IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Hamburg, Germany, September 28 - October 02, 2015 [Acceptance rate 46%]
- C13. Kuo Chen, Mitja Trkov, Jingang Yi, Yizhai Zhang, Tao Liu, and Dezhen Song, *A Robotic Bipedal Model for Human Walking with Slips*, IEEE International Conference on Robotics and Automation (ICRA), Seattle, WA, May, 2015, [Acceptance rate 41%]
- C14. Yiliang Xu, Dezhen Song, and Anthony Hoogs, *An Efficient Online Hierarchical Supervoxel Segmentation Algorithm for Time-critical Applications*, British Machine Vision Conference (BMVC), Sep. 2014, Nottingham, UK [Acceptance rate 30%]
- C15. Wen Li and Dezhen Song, *Featureless Motion Vector-based Simultaneous Localization, Planar Surface Extraction, and Moving Obstacle Tracking*, The Eleventh International Workshop on the Algorithmic Foundations of Robotics (WAFR), August 2014, Istanbul, Turkey
- C16. Joseph Lee, Yan Lu, and Dezhen Song, *Planar Building Facade Segmentation and Mapping Using Appearance and Geometric Constraints*, IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Chicago, US, Sept., 2014 [Acceptance rate 47%]
- C17. Wen Li and Dezhen Song, *Toward Featureless Visual Navigation: Simultaneous Localization and Planar Surface Extraction Using Motion Vectors in Video Streams*, IEEE International Conference on Robotics and Automation (ICRA), Hong Kong, China, May-June, 2014, [Acceptance rate 48%]
- C18. Yan Lu, Dezhen Song, and Jingang Yi, *High Level Landmark-Based Visual Navigation Using Unsupervised Geometric Constraints in Local Bundle Adjustment*, IEEE International Conference on Robotics and Automation (ICRA), Hong Kong, China, May-June, 2014, [Acceptance rate 48%]
- C19. Yizhai Zhang, Pengcheng Wang, Jingang Yi, and Dezhen Song, *Balance Control of a Bikebot for Studying Human Dynamic Postural Balance Motor Control*, IEEE International Conference on Robotics and Automation (ICRA), Hong Kong, China, May-June, 2014, [Acceptance rate 48%]
- C20. Yan Lu, Dezhen Song, Haifeng Li, and Jingtai Liu, *Automatic Recognition of Spurious Surface in Building Exterior Survey*, IEEE International Conference on Automation Science and Engineering Madison (CASE), Wisconsin, USA, August 17-21, 2013
- C21. Yan Lu, Dezhen Song, Yiliang Xu, A. G. Amitha Perera, and Sang Min Oh, *Automatic Building Exterior Mapping Using Multilayer Feature Graphs*, IEEE International Conference on Automation Science and Engineering Madison (CASE), Wisconsin, USA, August 17-21, 2013
- C22. Dan Xu, Xinyu Wu, Dezhen Song, Nannan Li, and Yen-Lun Chen, *Hierarchical Activity Discovery within Spatio-Temporal Context for Video Anomaly Detection*, IEEE International Conference on Image Processing (ICIP), Sep. 2013, Melbourne, Australia, [Acceptance rate ~40%]
- C23. Chang Young Kim, Dezhen Song, and Jingang Yi, *Decentralized Searching of Multiple Unknown and Transient Radio Sources*, IEEE International Conference on Robotics and Automation (ICRA), May 6-10, 2013, Karlsruhe, Germany, [Acceptance rate 39%]
- C24. Wen Li and Dezhen Song, *Automatic Bird Species Detection Using Periodicity of Salient Extremities*, IEEE International Conference on Robotics and Automation (ICRA), May 6-10, 2013, Karlsruhe, Germany, [Acceptance rate 39%]

- C25. Yuanyuan Liu, Xinyu Wu, Dezhen Song, Ruiqing Fu, Duan Zheng, Yangsheng Xu, *Path Planning for Clothes Climbing Robots on Deformable Clothes Surface*, IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), October 7-12, 2012, Vilamoura, Algarve, Portugal, [Acceptance rate 45%]
- C26. Haifeng Li, Dezhen Song, Yan Lu, and Jingtai Liu, *A Two-View based Multilayer Feature Graph for Robot Navigation*, IEEE International Conference on Robotics and Automation (ICRA), May 14-18, 2012, St. Paul, MN, [Acceptance rate 40%]
- C27. Chang Young Kim, Dezhen Song, Yiliang Xu, and Jingang Yi, *Localization of Multiple Unknown Transient Radio Sources using Multiple Paired Mobile Robots with Limited Sensing Ranges*, IEEE International Conference on Robotics and Automation (ICRA), May 9-13, 2011, Shanghai, China [Acceptance rate 49.0%]
- C28. Yizhai Zhang, Jingliang Li, Jingang Yi, and Dezhen Song, *Balance Control and Analysis of Stationary Riderless Motorcycles*, IEEE International Conference on Robotics and Automation (ICRA), May 9-13, 2011, Shanghai, China [Acceptance rate 49.0%]
- C29. Ali-akbar Agha-mohammadi and Dezhen Song, *Robust Recognition of Planar Mirrored Walls Using a Single View*, IEEE International Conference on Robotics and Automation (ICRA), May 9-13, 2011, Shanghai, China [Acceptance rate 49.0%]
- C30. Yiliang Xu, Dezhen Song and Jingang Yi, *Exact Algorithms for Non-Overlapping 2-Frame Problem with Non-Partial Coverage for Networked Robotic Cameras*, the 6th annual IEEE Conference on Automation Science and Engineering (CASE 2010), August 21-24, 2010, Toronto, Ontario, Canada [Acceptance rate 56.0%]
- C31. Dezhen Song, Chang Young Kim, and Jingang Yi, *Stochastic Modeling of the Expected Time to Search for an Intermittent Signal Source Under a Limited Sensing Range*, The 2010 Robotics: Science and Systems (RSS) Conference, June 27-June 30, 2010, Zaragoza, Spain. [Acceptance rate 16.0%]
- C32. Ji Zhang and Dezhen Song, *Error Aware Monocular Visual Odometry using Vertical Line Pairs for Small Robots in Urban Areas*, Special Track on Physically Grounded AI (PGAI), the Twenty-Fourth AAAI Conference on Artificial Intelligence (AAAI-10), Atlanta, Georgia, USA, July 11–15, 2010 [Acceptance rate 26.9%]
- C33. Dezhen Song and Yiliang Yu, *A Low False Negative Filter for Detecting Rare Bird Species from Short Video Segments using a Probable Observation Data Set-based EKF Method*, Special Track on Physically Grounded AI (PGAI), the Twenty-Fourth AAAI Conference on Artificial Intelligence (AAAI-10), Atlanta, Georgia, USA, July 11–15, 2010 [Acceptance rate 26.9%]
- C34. Jingang Yi, Yizhai Zhang, Dezhen Song, *Autonomous Motorcycles for Agile Maneuvers, Part I: Dynamic Modeling*, the 48th IEEE Conference on Decision and Control (CDC), Shanghai, Dec. 16-18, 2009. [Acceptance rate 50%]
- C35. Jingang Yi, Yizhai Zhang, Dezhen Song, *Autonomous Motorcycles for Agile Maneuvers, Part II: Control Systems Design*, the 48th IEEE Conference on Decision and Control (CDC), Shanghai, Dec. 16-18, 2009. [Acceptance rate 50%]
- C36. Siamak Faridani, Bryce Lee, Selma Glasscock, John Rappole, Dezhen Song, Ken Goldberg, *A Networked Telerobotic Observatory for Collaborative Remote Observation of Avian Activity and Range Change*, the IFAC workshop on networked robots, Oct. 6-8, 2009, Golden, Colorado [Acceptance rate N/A]
- C37. Yiliang Xu and Dezhen Song, *Systems and Algorithms for Autonomously Simultaneous Observation of Multiple Objects Using Robotic PTZ Cameras Assisted by a Wide-Angle Camera*, The 2009 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), St. Louis, USA, Oct. 11-15, 2009 [Acceptance rate 54.5%]
- C38. Ji Zhang and Dezhen Song, *On the Error Analysis of Vertical Line Pair-based Monocular Visual Odometry in Urban Area*, The 2009 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), St. Louis, USA, Oct. 11-15, 2009 [Acceptance rate 54.5%]
- C39. Dezhen Song, Chang Young Kim, Jingang Yi, *Monte Carlo Simultaneous Localization of Multiple Unknown Transient Radio Sources Using a Mobile Robot with a Directional Antenna*, IEEE International Conference on Robotics and Automation (ICRA), Kobe, Japan, May 12-17, 2009. [Acceptance rate 43%]

- C40. Hongpeng Wang, Junjie Zhang, Jingang Yi, Dezhen Song, Suhada Jayasuriya, Jingtai Liu, *Modeling and Analysis of Skid-Steered Mobile Robots*, IEEE International Conference on Robotics and Automation (ICRA), Kobe, Japan, May 12-17, 2009. [Acceptance rate 43%]
- C41. Dezhen Song, Hyunnam Lee, and Jingang Yi, *On the Analysis of the Depth Error on the Road Plane for Monocular Vision-Based Robot Navigation*, The Eighth International Workshop on the Algorithmic Foundations of Robotics (WAFR), Dec. 7-9, 2008, Guanajuato, México
- C42. Jingang Yi, Hongpeng Wang, Jingtai Liu, Dezhen Song, *LMST-Based Safety-Preserved Consensus Control of Multi-Robot Systems with Kinodynamic Constraints*, Dynamic Systems and Control Conference (DSCC), Ann Arbor, Michigan, October 20-22, 2008 [Acceptance rate N/A]
- C43. Wai Kin Victor Chan, Jingang Yi, Shengwei Ding, and Dezhen Song, *Optimal Scheduling of K-Unit Production of Multi-Cluster Tools with Single-Blade Robots*, IEEE International Conference on Automation Science and Engineering (CASE), Washington DC, August, 2008 [Acceptance rate 57%] (**Finalist, Best Conference Paper Award**)
- C44. Dezhen Song, Ni Qin, Yiliang Xu, Chang Young Kim, David Luneau, and Ken Goldberg, *System and Algorithms for an Autonomous Observatory Assisting the Search for the Ivory-Billed Woodpecker*, IEEE International Conference on Automation Science and Engineering (CASE), Washington DC, August, 2008 [Acceptance rate 57%]
- C45. Jeremy Schiff, Anand Kulkarni, Danny Bazo, Vincent Duindam, Ron Alterovitz, Dezhen Song, Ken Goldberg, *Actuator networks for navigating an unmonitored mobile robot*, IEEE International Conference on Automation Science and Engineering (CASE), Washington DC, August, 2008 [Acceptance rate 57%]
- C46. Yiliang Xu, Dezhen Song, Jingang Yi, and A. Frank van der Stappen, *An Approximation Algorithm for the Least Overlapping p-Frame Problem with Non-Partial Coverage for Networked Robotic Cameras*, IEEE International Conference on Robotics and Automation (ICRA), Pasadena, CA, May 2008. [Acceptance rate 43.4%]
- C47. Ni Qin and Dezhen Song, *On-Demand Sharing of a High-Resolution Panorama Video from Networked Robotic Cameras*, IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Oct, 2007, San Diego, CA [Acceptance rate 52.4%]
- C48. Jingang Yi, Junjie Zhang, Dezhen Song, and Suhada Jayasuriya, *IMU-based Localization and Slip Estimation for Skid-Steered Mobile Robots*, IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Oct, 2007, San Diego, CA [Acceptance rate 52.4%]
- C49. Jingang Yi, Dezhen Song, Junjie Zhang, and Zane Goodwin, *Adaptive Trajectory Tracking Control of Skid-Steered Mobile Robots*, IEEE International Conference on Robotics and Automation (ICRA), April, 2007, Roma, Italy [Acceptance rate 43.7%]
- C50. Jingang Yi, Shengwei Ding, Dezhen Song, and Mike Tao Zhang, *Multi-Robot Scheduling in Cluster Tools with Buffer/Process Modules*, IEEE International Conference on Robotics and Automation (ICRA), April, 2007, Roma, Italy [Acceptance rate 43.7%]
- C51. Dezhen Song, Jingang Yi, and Zane Goodwin, *Localization of Unknown Networked Radio Sources Using a Mobile Robot with a Directional Antenna*, American Control Conference (ACC), July 2007, New York, NY [Acceptance rate 60%]
- C52. Dezhen Song, Hyun Nam Lee, Jingang Yi, and Anthony Levandowski, *Vision-based Motion Planning for an Autonomous Motorcycle on Ill-Structured Road*, IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Oct. 2006, Beijing, China, pp. 3279-3286 [Acceptance rate 46%]
- C53. Dezhen Song, Ni Qin, and Ken Goldberg, *A Minimum Variance Calibration Algorithm for Pan-Tilt Robotic Cameras in Natural Environments*, IEEE International Conference on Robotics and Automation (ICRA), May. 2006, Orlando, Florida, pp. 3449 - 3456 [Acceptance rate 38.7%]
- C54. Ni Qin, Dezhen Song, and Ken Goldberg, *Aligning Windows of Live Video from an Imprecise Pan-Tilt-Zoom Robotic Camera into a Remote Panoramic Display*, IEEE International Conference on Robotics and Automation (ICRA), May. 2006, Orlando, Florida, pp. 3429 - 3436 [Acceptance rate 38.7%]
- C55. Jingang Yi, Dezhen Song, Anthony Levandowski, and Suhada Jayasuriya, *Trajectory Tracking and Balance Stabilization Control of Autonomous Motorcycles*, IEEE International Conference on Robotics and Automation (ICRA), May. 2006, Orlando, Florida, pp. 2583 - 2589 [Acceptance rate 38.7%]

- C56. Dezhen Song and Ken Goldberg, *Networked Robotic Cameras for Collaborative Observation of Natural Environments*, The 12th International Symposium of Robotics Research (ISRR 2005), October 12th-15th, 2005, San Francisco, CA, pp. xxx-xxx, [Acceptance rate N/A]
- C57. Dezhen Song, Qiang Hu, Ni Qin, and Ken Goldberg, *Automating Inspection and Documentation of Remote Building Construction using a Robotic Camera*, IEEE International Conference on Automation Science and Engineering (CASE) 2005, August 1 & 2, 2005, Edmonton, Canada, Page(s):172 - 177 [Acceptance rate around 50%]
- C58. Jingang Yi, Shengwei Ding, and Dezhen Song, *Steady-State Throughput and Scheduling Analysis of Multi-Cluster Tools for Semiconductor Manufacturing Using a Decomposition Method*, (**Kayamori Best Paper Award**) IEEE International Conference on Robotics and Automation (ICRA), Barcelona, Spain, Apr. 2005, pp. 292 - 298 [Acceptance rate 45%]
- C59. Dezhen Song, A. Frank van der Stappen, and Ken Goldberg, *An Exact Algorithm Optimizing Coverage-Resolution for Automated Satellite Frame Selection*, IEEE International Conference on Robotics and Automation (ICRA), New Orleans, LA, Apr. 2004, vol. 1, Page(s):63 - 70 [Acceptance rate 58%]
- C60. Ken Goldberg, Dezhen Song, In Yong Song, Jane McGonigal, Wei Zheng, and Dana Plautz, *Unsupervised Scoring for Scalable Internet-Based Collaborative Teleoperation*, IEEE International Conference on Robotics and Automation (ICRA), New Orleans, LA, Apr. 2004 Vol.5, Page(s):4551 - 4556 [Acceptance rate 58%]
- C61. Dezhen Song, *Algorithms and Systems for Shared Access to a Robotic Streaming Video Camera*, Doctoral Symposium, ACM Multimedia 2003 (MM2003), Berkeley, California, Nov., 2003 [Acceptance rate 20%]
- C62. D. Song and K. Goldberg, *ShareCam Part I: Interface, System Architecture, and Implementation of a Collaboratively Controlled Robotic Webcam*, IEEE/RSJ International Conference on Intelligent Robots and Systems, Las Vegas, Nevada, Oct. 2003. [Acceptance rate round 50%] (**Finalist, NTF Award on Entertainment Robots and Systems, IROS 2007**)
- C63. D. Song, K. Goldberg, and A. Pashkevich, *ShareCam Part II: Approximate and Distributed Algorithms for a Collaboratively Controlled Robotic Webcam*, IEEE/RSJ International Conference on Intelligent Robots and Systems, Las Vegas, Nevada, Oct.2003. [Acceptance rate round 50%]
- C64. S. Har-Peled, V. Koltun, D. Song, and K. Goldberg, *Efficient Algorithms for Shared Camera Control*, In Proceedings of the 19th ACM Symposium on Computational Geometry, 2003. [Acceptance rate 36%]
- C65. D. Song, A.F. van der Stappen, and K. Goldberg, *Exact and Distributed Algorithms for Collaborative Camera Control*, the Fifth International Workshop on Algorithmic Foundations of Robotics. Nice, France, Dec 15~17, 2002. [Acceptance rate around 40%]
- C66. K. Goldberg, D. Song, Y. Khor, D. Pescovitz, A. Levandowski, J. Himmelstein, J. Shih, A. Ho, E. Paulos, J. Donath, *Collaborative Online Teleoperation with Spatial Dynamic Voting and a Human ``Tele-Actor''*, the IEEE International Conference on Robotics and Automation, Washington D.C. May 11~15, 2002. [Acceptance rate 58%]
- C67. D. Song and D.B. Kaber (2000). *Web-based interface design for teleoperation*. In the Proceedings of the XIVth Triennial Congress of the International Ergonomics Association and 44th Annual Meeting of the Human Factors and Ergonomics Society (pp. 449-452). Human Factors and Ergonomics Society: Santa Monica, CA. [Acceptance rate N/A]
- C68. D. Song and D. B. Kaber, (1999) *Teleoperation test-bed development for human factors research*. The 2nd Annual Student's Symposium on Human Factors & Ergonomics of Complex Systems. Greensboro, NC, April [Acceptance rate N/A]
- C69. D. B. Kaber, R. Zhou, and D. Song. (1999). *Design and prototyping of an economical teleoperations test-bed for human factors research: Cost, resource requirements and capability assessment*. The 25th International Conference on Computers & Industrial Engineering. New Orleans, LA, Mar. 27-29 [Acceptance rate N/A]
- C70. D. Song and L. Dai (1997) *A hybrid model based soft-sensor and application*. Proceedings of the 4th International Conference on Measurement and Control of Granular Materials, MCGM97, Shenyang, P R China, 17-19 September 1997, pp:171-177 [Acceptance rate N/A]

REFEREED VIDEO

- V1. A. Levandowski, A. Schultz, C. Smart, A. Krasnov, H. Chau, B. Majusiak, F. Wang, D. Song, J. Yi, H. Lee, and A. Parish, *Autonomous Motorcycles*, IEEE International Conference on Robotics and Automation (ICRA), May. 2006, Orlando, Florida,

TECHNICAL REPORTS

- T1. Haifeng Li, Dezhen Song, Yong Liu and Binbin Li, Automatic Pavement Crack Detection by Multi-Scale Image Fusion, TR-2017-11-01, Department of Computer Science and Engineering, Texas A&M University, 2017.
- T2. Chieh Chou, Shu-Hao Yeh, and Dezhen Song, *Mirror-Assisted Calibration of a Multi-modal Sensing Array with a Ground Penetrating Radar and a Camera*, TR-2017-06-01, Department of Computer Science and Engineering, Texas A&M University, 2017.
- T3. Wen Li and Dezhen Song, *Toward Featureless Visual Navigation: Simultaneous Localization and Planar Surface Extraction Using Motion Vectors in Video Streams*, TR 2014-2-2, Department of Computer Science and Engineering, Texas A&M University, 2013.
- T4. Yan Lu, Dezhen Song, Yiliang Xu, A. G. Amitha Perera, and Sangmin Oh, *Automatic Building Exterior Mapping Using Multilayer Feature Graphs*, TR 2013-6-1, Department of Computer Science and Engineering, Texas A&M University, 2013.
- T5. Chang-Young Kim, Dezhen Song, and Jingang Yi, *Decentralized Searching of Multiple Unknown and Transient Radio Sources*, TR 2013-1-1, Department of Computer Science and Engineering, Texas A&M University, 2013.
- T6. Wen Li and Dezhen Song, *Automatic Video-based Bird Species Filtering Using Periodicity of Salient Extremities*, TR 2012-8-2, Department of Computer Science and Engineering, Texas A&M University, 2012
- T7. Chang-Young Kim, Dezhen Song, Yiliang Xu, and Jingang Yi, *Localization of Multiple Unknown Transient Radio Sources using Multiple Paired Mobile Robots with Limited Sensing Ranges*, TR 2010-11-2, Department of Computer Science and Engineering, Texas A&M University, 2010.
- T8. Dezhen Song and Yiliang Xu, *Monocular Vision-based Detection of a Flying Bird*, TR 2008-11-3, Department of Computer Science and Engineering, Texas A&M University, 2008.
- T9. Dezhen Song, Chang Young Kim, and Jingang Yi, *Monte Carlo Simultaneous Localization of Multiple Unknown Transient Radio Sources Using a Mobile Robot with a Directional Antenna*, TR 2008-11-1, Department of Computer Science and Engineering, Texas A&M University, 2008.
- T10. Dezhen Song, *Probabilistic Modeling of Leach Protocol and Computing Sensor Energy Consumption Rate in Sensor Networks*. Technical report, TR 2005-2-2, Department of Computer Science, Texas A&M University, 2005.
- T11. Dezhen Song, Ni Qin, and Ken Goldberg, *Algorithms for Maintaining a High-Resolution Panoramic Display with a Tele-Operated Robotic Camera*, TR 2005-5-1, Department of Computer Science, Texas A&M University, 2005

TECHNICAL DEMONSTRATIONS AND EXHIBITIONS

- D1. Bryce Lee, Anand Kulkarni, Ken Goldberg, Dezhen Song, Deanna Wilkes-Gibbs, *Science and Social TV: Collaborative Observatories for Field Biology*, First International Conference on Designing Interactive User Experiences for TV and Video (uxTV), October 22 - 24, 2008, Silicon Valley (San Francisco Bay Area), California, USA
- D2. Dezhen Song and Ken Goldberg, *ShareCam: Shared Access to a Robotic Streaming Video Camera*, Technical Demos, ACM Multimedia 2003 (MM2003) Nov, 2003.
- D3. Ken Goldberg, Dezhen Song, In Yong Song, Jane McGonigal, Wei Zheng, *Collaborative Tele-Experiences: Tele-Actor, Co-Opticon and Tele-Twister*, dorkbot-sf, rxGallery, Oct, 2003
- D4. Ken Goldberg, Dezhen Song et al., *The Tele-Actor Project*, Teleopolis, 2nd Wednesdays Art Series at the Exploratorium, San Francisco, February 13, 2002

THESES AND THESES SUPERVISED

- S1. Joseph Lee, Ph. D. thesis, *Appearance and Geometry Assisted Visual Navigation in Urban Areas*, Texas A&M University, May. 2016
- S2. Yan Lu, Ph. D. thesis, *Visual Navigation for Robots in Urban and Indoor Environments*, Texas A&M University, Aug. 2015
- S3. Wen Li, Ph.D. thesis, *Exploring Motion Signatures for Vision-based Tracking, Recognition and Navigation*, Texas A&M University, Aug. 2014
- S4. Chang Young Kim, Ph.D. thesis, *Robotic Searching for Stationary, Unknown, and Transient Radio Sources*, May 2012
- S5. Yiliang Xu, Ph.D. thesis, *Systems and Algorithms for Automated Collaborative Observation Using Networked Robotic Cameras*, May 2011
- S6. Ji Zhang, Master thesis, *Two Case Studies on Vision-based Moving Objects Measurement*, Texas A&M University, May 2011
- S7. Hyunnam Lee, Ph.D. thesis, *Vision-based navigation for mobile robots on ill-structured robots*, Department of Electrical and Computer Engineering, Texas A&M University, August 2008.
- S8. Ni Qin, Ph.D. thesis, *Algorithms, protocols, and systems for remote observation using networked robotics cameras*, Department of Computer Science and Engineering, Texas A&M University, May 2008
- S9. Qiang Hu, Master thesis, *Robotic localization of hostile networked radio sources using a directional antenna*, Department of Electrical and Computer Engineering, Texas A&M University, Dec. 2005
- S10. Dezhen Song. Ph.D. thesis: *Systems and Algorithms for Collaborative Tele-Operation*. Department of Industrial Engineering and Operations Research, University of California, Berkeley, Aug 2004.
- S11. Dezhen Song, Master thesis: *Soft sensor and its applications*, Department of Control Science and Engineering, Zhejiang University, Mar. 1998

PATENT

1. *Remote collaborative control and direction*, U.S. Pat. No. 7,937,285, With Goldberg, Kenneth Y.; (San Francisco, CA) ; Donath, Judith; (Boston, MA) ; Paulos, Eric J.; (San Francisco, CA) ; Pescovitz, David; (San Francisco, CA) ; Dobson, Kelly; (Cambridge, MA) ; Lee, Matthew; (Cambridge, MA) ; Levandowski, Anthony; (Albany, CA) ; Spiegel, Dana; (Boston, MA) ; Tang, Derek; (Cambridge, MA)

TEACHING AND ADVISING

COURSES

- Spring 2017 CSCE 452 Introduction to Robotics & CSCE 643 Robot Vision
- Fall 2016: CSCE 483 Computer System Design
- Spring 2016: CSCE 483 Computer System Design & CSCE 452 Introduction to Robotics
- Fall 2015: CSCE 483 Computer System Design
- Spring 2015: CSCE 313 Introduction to Computer Systems & CSCE 452 Introduction to Robotics
- Fall 2014: CSCE 483 Computer System Design
- Spring 2014: CSCE 452 Introduction to Robotics
- Fall 2013: CSCE 483 Computer System Design & CSCE 643 Robot Vision
- Spring 2013: CSCE 452 Introduction to Robotics & CSCE 483 Computer System Design
- Fall 2012: CSCE 206:504-506: Structured Programming in C
- Spring 2011: CSCE 452: Introduction to Robotics
- Fall 2010: CPSC 689-604: Computer Vision
- Spring 2010: CPSC 452 Introduction to Robotics & CPSC 643 Advanced Robotics
- Fall 2009: CPSC 483 Computer System Design

- Spring 2009: CPSC 452 Introduction to Robotics & CPSC 643 Advanced Robotics
- Fall 2008: CPSC 689-602: Computer Vision
- Spring 2008: CPSC 452 Introduction to Robotics & CPSC 643 Advanced Robotics
- Fall 2007: CPSC 689-601: Computer Vision: Multi-view Geometry
- Spring 2007: CPSC 452 Introduction to Robotics & CPSC 643 Advanced Robotics
- Spring 2006: CPSC 452 Introduction to Robotics
- Fall 2005: CPSC 689-601 Networked Robots
- Spring 2005: CPSC 452 Introduction to Robotics
- Fall 2004: CPSC 689-609 Networked Robots

CURRENT GRADUATE STUDENTS

Ph.D.:

- Chieh "Jay" Chou (Fall 2014-)
- Hsin-min "Jasmine" Cheng (Fall 2014-)
- Binbin Li (Fall 2015-)
- Shu-Hao "Eric" Yeh (Fall 2015-)
- Aaron Kingery (Fall 2017-)
- Aaron Angert (Fall 2017-)

Master:

- Meng Jin
- Di Wang

GRADUATED STUDENTS

Ph.D.:

- Dr. Joseph Lee (co-advisor: Prof. Ricardo Gutierrez-Osuna, TADEC, May 2016)
- Dr. Yan Lu, (Amazon/Honda Research, August 2015)
- Dr. Wen Li, (Youtube/Google, August 2014)
- Dr. Chang Young Kim (Amazon/Kespry, Neato Robotics, May 2012)
- Dr. Yiliang Xu (Amazon, Apple, Kitware, May 2011)
- Dr. Hyun Nam Lee (Samsung, Aug. 2008)
- Dr. Ni Qin (Spotmau, May 2008)

Master:

- Ji Zhang (CMU, Spring 2011)
- Qiang Hu (Microsoft, Spring 2006)

Visiting Students:

- Mr. Gaofeng Li (Dec. 2015- Dec. 2016)
- Dr. Haifeng Li (Sep. 2010- Sep. 2011)
- Dr. Hongpeng Wang (Sep. 2007 – Aug. 2008)

POSTDOC AND VISITING SCHOLARS

- Ms. Ting Sun (Visiting Doctoral Student, Hong Kong University of Science and Technology, Aug 2017 - Feb. 2018)
- Dr. Haifeng Li (Assistant Professor, Civil Aviation University of China, Tianjin, China Mar. 2017 – Mar. 2018)
- Dr. Hongpeng Wang, (Associate Professor, Nankai University, China, Dec. 2014 – Feb. 2015, Mar. 2016 – Mar. 2017)
- Dr. Baifan Chen (Central South University, China, Dec. 2014 - Dec. 2015)

- Dr. Min Jiang (Associate Professor, Shanghai Institute of Technology, China, Feb. 2014- Feb. 2015)
- Dr. Zhongcheng Gui (Postdoc, Dongfang Electric Corporation, July 2013- June 2014)
- Dr. Chang Young Kim (Postdoc, May 2012-Apr. 2013)
- Dr. Xiaoyong Liu (Associate Prof., Xi'an Jiangtong Univ., China, Sep. 2012 - Aug. 2013)
- Dr. Zhongli Ma (Associate Prof., Harbin Engineering Univ., China, Feb. 2012 - Feb. 2013)
- Dr. Zhigang Bing (Oct. 2008- Apr. 2009)

OTHER SUPERVISED STUDENTS AND TEACHERS

- Jonathan Weishuhn (CSCE 491H, Fall 2018)
- Weixin Jiang (Visiting MS student, Shanghai Jiaotong Univ, Summer 2018)
- Ankit Ramchandani (USRG, Summer 2018)
- Muin B. Momin (CSCE 491, Fall 2017)
- Yuanfei Sun (CSCE 691, Fall 2015 - Fall 2017)
- Chuan-kuo "Titus" Wong, (REU, Summer 2017)
- Mehmet Ucar (RET, Summer 2017)
- Jicheng Gong (CSCE 691, Fall 2016 – Summer 2017)
- Jinhao Chen, (Fall 2016 - Spring 2017)
- Hojun Ji (CSCE 691, Summer 2016 – Fall 2016)
- Cristal Johnson (RET, Summer 2016)
- Jim Giumarra (RET, Summer 2016)
- Guillermo Trujillo Zarate (CANIETI, Summer 2016)
- Zach Smith (REU, Summer 2016)
- Yuan-Peng "Patrick" Yu (Summer 2016-)
- Aaron Kingery (Summer 2016 - Spring 2017)
- Qingqing Li (CSCE 491, Summer 2016)
- Jay Khatri (Spring 2016)
- Matthew Hielsberg (CSCE 691, Fall 2012- Spring 2016)
- Rui Liu (University Undergrad Scholar, Summer 2014 - Spring 2015)
- Nicholas Chehade (REU, Summer 2015)
- Xinran Wang (CSCE 691, Fall 2014 - Spring 2015)
- Vania Willms (Research Experience for Teacher, Summer 2015)
- Jason Cordes (Research Experience for Teacher, Summer 2015)
- Bart Taylor (Research Experience for Teacher, Summer 2014)
- Luis Avila (Research Experience for Teacher, Summer 2014)
- Kevin Yan (High School Student, Summer 2014)
- Jorge Gutierrez (CANIETI, Summer 2014)
- Thomas Whitney (USRG, Summer 2014)
- Thomas Lavastida (REU, Summer 2014)
- Yanyun Liu (MS Student, Spring 2014)
- Parker Peelen (Fall 2013-Spring 2014)
- Stanley A. Jacob (Summer 2013-Spring 2014)
- Anh Nguyen Tuan (Fall 2013)
- Seunghwan Mun (Summer 2013- Fall 2013)
- Maria Emília Midori Hiram (CSCE 491, Summer 2013-Fall 2013)
- Shiqiang Guo (CSCE 691, Fall 2012-Spring 2013)
- Hancheng Ge (CSCE 691, Fall 2011- Fall 2012)
- AliAkbar Aghamohammadi (CPSC 691, Spring 2009- Summer 2010)
- Haifeng Li (visiting Ph.D. student from Nankai University, Sep. 2010- Sep. 2011)
- Xinwo Wang (Summer Intern, 2010)
- Shiyu Hu (CPSC 691, Fall 2009)
- Van D. Quach (Undergrad Research Assistant, ECE, Spring 2010- Summer 2010)

- Cole Jones (CPSC 485, Spring 2010)
- Bin Qian (CPSC 691, Fall 2009)
- John Glassmyer (CPSC 491, Fall 2008)
- Pedro Davalos (CPSC 685, Summer 2008)
- Tyler Southard (REU, Summer 2008)
- Benjamin Fine (REU, Summer 2008)
- Hongpeng Wang (visiting Ph.D. student from Nankai University, Sep. 2007-Aug. 2008)
- Philip Ritchey (CPSC 485, Spring 2008)
- Jonathan Kelm (CPSC 485, Spring 2008)
- Brandon A. Green (CPSC 691, Fall 2007-Spring 2008)
- Zane Goodwin (CPSC 691, Fall 2005-Spring 2007)
- Terry Peng (CPSC 691, Spring 2007)
- Justin Yang (CPSC 691, Spring 2007)
- Joe Hasty (CPSC 485, Summer 2006)
- Craig M. Eidson (CPSC 485, Summer 2006)
- Nathan Williams (REU, Summer 2006)
- Michael Pellon (REU, Summer 2006)
- Luis Castillo (CPSC 485, Spring 2006)
- Yong Kyung Choi (CPSC 485, Spring 2006)
- Mathew E. Riley (CPSC 685, Spring 2006)
- Tan Van Lao (CPSC 485, Fall 2005)
- Amanda Coots (CPSC 485, Summer, Fall 2005)
- Mike Pantaleano (REU&USRG, Summer 2005)
- Elizabeth A Grant (CPSC 485, Spring 2005)

PROFESSIONAL ACTIVITIES AND SERVICE

AFFILIATED SOCIETY MEMBERSHIP

- Senior Member, Institute of Electrical and Electronics Engineers (IEEE)
- Member, IEEE Robotics and Automation Society (IEEE RAS)
- Founding Member, IEEE RAS Technical Committee on: Networked Robots
- Founding Member, IEEE RAS Technical Committee on: Automation in Logistics
- Founding Member, IEEE RAS Technical Committee on: Multi-Robot Systems

EDITORIAL

- Senior Editor, IEEE Robotics and Automation Letters (RA-L), Sept. 2017 -- present
- Member, Multimedia Editorial Board, Springer Handbook of Robotics, Second Edition, Jan. 2013--present
- Editor, IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) Editorial Board, 2014 - 2016
- Associate Editor (AE), IEEE Robotics and Automation Letters, June. 2015 - August 2017
- Associate Editor (AE), Robotic Control Systems, Frontiers in Robotics and AI, April 2015 -- present
- Associate Editor (AE), IEEE Transactions on Automation Science and Engineering (T-ASE), Feb. 2010 – Dec. 2014
- Associate Editor (AE), IEEE Transactions on Robotics (T-RO), July 2008-- June 2012
- Guest Editor, Special issue on Ubiquitous Networked Robots, Annals of Telecommunications, 2012
- Guest Editor, Special issue on Networked Robots, Journal of Intelligence Service Robot (JISR), 2009
- Associate Editor (AE), IEEE Robotics and Automation Society, Conference Editorial Board (CEB), 2007-2009, 2013

- Associate Editor (AE), IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) Editorial Board, 2013

PROPOSAL REVIEWER AND PANELIST

- ENG-CMMI, National Science Foundation, May, 2018
- Army Research Lab, June 2017
- CISE-IIS, National Science Foundation, Mar. 2016
- CISE-IIS, National Science Foundation, Dec. 2015
- Collaborative Incentive Research Grant (CIRG) Program, The City University of New York, 2014
- University of Macau (UM) Research Committee, 2011
- NIH, Multi-agency robotics SBIR, Mar. 2011
- Texas A&M-CONACYT Collaborative Research Grant Program, May 2009, June 2010
- Cyber Physical System, National Science Foundation, April 2009
- Robust Intelligence, National Science Foundation, April 2008
- Qatar National Research Fund (QNRF), managed by the U.S. Civilian Research & Development Foundation (CRDF), Sep. 2007
- Human-Robot Interaction, National Science Foundation, March 2007
- IIS-GENI Workshop, National Science Foundation, November 2006

EXTERNAL CONFERENCE, WORKSHOP, PANEL, AND COMMITTEE

- Area Chair, International Conference on Robotics Science and Systems (RSS), 2016
- Program Co-Chair, IEEE International Conference on Automation Science and Engineering (CASE), Dallas, Texas, 2016
- Innovative Session Co-Chair, IEEE International Conference on Intelligent Robots and Systems (IROS), Hamburg, Germany, Oct. 2015
- Chair, Best Automation Paper Committee, IEEE International Conference on Robotics and Automation (ICRA), Seattle, May 2015
- Co-Chair, IEEE/NSF Workshop on Cloud Manufacturing and Automation, Madison, Wisconsin, Aug. 17, 2013
- Workshops/Tutorials Chair, The 2012 IEEE International Conference on Multisensor Fusion and Integration for Intelligent System (MFI 2012), Hamburg, Germany, September, 2012
- Member, Early Career Award Evaluation Panel, IEEE Robotics and Automation Society, 2012-2014
- Member, Electronic Products and Services Board, IEEE Robotics and Automation Society, 2012-present
- Member, Student Travel Awards Committee, IEEE International Conference on Robotics and Automation (ICRA), St. Paul, MN, May 2012
- Chair, Student Travel Awards Committee, IEEE/RSJ International Conference on Intelligence Robots and Systems (IROS), San Francisco, Oct. 2011
- Co-Chair, IEEE ICRA Workshop on Uncertainty in Automation, Shanghai, China, May 9, 2011
- Co-Chair, Technical Committee on Networked Robots, IEEE Robotics and Automation Society, 2007- 2009
- Co-Chair, the Workshop on Network Robot Systems: Ubiquitous, Cooperative, Interactive Robots for Human Robot Symbiosis, San Diego, California, U.S.A. October 29 (full day), IROS 2007.
- Graduate Student Representative: Academic Senate: Computing & Communications Committee (COMP), University of California, Berkeley (2002-2003)

INTERNAL COMMITTEE AND SERVICE

- Transportation Technology Conference Planning Committee, 2016 (joint effort by CoE, TEES, TTI, and President)
- Departmental Faculty Search Committee, 2016-17
- College Faculty Search Committee for Autonomous Systems, 2016-17

- Promotion and Tenure Committee, 2016 (Appointed)
- Departmental Representative on Engineering Innovation Center, College of Engineering, Dec. 2013-present
- Departmental Representative on Advanced Manufacturing Working Group, College of Engineering Dec. 2013-present
- Member, Engineering Faculty Advisory Council (EFAC), College of Engineering, May 2013-Apr. 2016 (Elected)
- Department Awards Committee, 2012-present
- Advisory Committee (AdCom), Computer Science and Engineering Department, 2008-2011, 2012-2016 (Elected)
- Graduate Admission Committee, 2012-2013, 2014-2016
- Chair, Graduate Advisory Committee (GAC), Sep. 2013- Oct. 2013
- Departmental Climate Committee, 2012-2013
- Industrial Affiliates Program (IAP) Liaison (Valero, 2010-), (Pariveda Solutions, 2012-)
- Undergraduate Curriculum Committee (UGCC), Computer Science and Engineering Department, 2008-2009, 2009-2010, 2010-2011, 2012-2013
- Faculty Advisor, Upsilon Pi Epsilon (UPE), Computer Science and Engineering Department, 2010-2011, 2012-present
- Web Committee, Computer Science Department, 2007-2008
- Communication Committee, Computer Science Department, 2006-2007
- Space Committee, Computer Science Department, 2005-2006
- Library Committee, Computer Science Department, 2004-2005

CONFERENCE PROGRAM COMMITTEE MEMBER

- International Workshop on Algorithmic Foundations of Robotics (WAFR), 2006, 2014-2016
- The 4th International Conference on Simulation, Modeling, and Programming for Autonomous Robots (SIMPAN 2014), Bergamo, Italy, October 20-23, 2014
- International Conference on Robotics Science and Systems (RSS), 2006-2009, 2013-2015
- IEEE International Conference on Automation Science and Engineering (CASE), 2012
- IEEE International Conference on Mechatronics and Automation (ICMA), 2010
- IFAC Workshop on Networked Robotics October 6-8, 2009, Golden, Colorado, USA
- International Workshop on Robotic Wireless Sensor Networks (RWSN 2009), Held in conjunction with the International Conference on Distributed Computing in Sensor Systems (DCOSS)
- Special track on Physically Grounded Artificial Intelligence (PGAI), AAAI 2008
- IEEE International Conference on Robotics and Automation (ICRA), 2006
- IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2006, 2005
- The First Workshop on Wireless Multihop Communications in Networked Robotics, April 4th, 2008, Berlin, Germany, <http://www.wmcnr.org>
- International Conference on Advanced Robotics (ICAR), 2007, 2005
- IEEE International Conference on Mechatronics and Automation (ICMA), 2005

CONFERENCE SESSION CHAIR OR CO-CHAIR

- Session Co-Chair: Perception 2, Dec. 13, 2017, International Symposium on Robotics Research (ISRR), Puerto Varas, Chile, Dec. 11-14, 2017
- Session Co-chair: TuDT3, Computer Vision 2, Tuesday, September 29, 2015, 14:00-15:30, Track 3, Saal 7, IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Hamburg, Germany, 2015
- Session Chair: FrA2T2, Visual Perception II, Friday, May 29, 2015, 11:00-12:15, Track T2, S222, IEEE International Conference on Robotics and Automation (ICRA), 2015
- Session Chair: ThA1T2, Visual Tracking, Thursday, May 28, 2015, 09:15-10:30, Track T2, Room T2, IEEE International Conference on Robotics and Automation (ICRA), 2015

- Session Chair: TuD3, Sensing I: Sensing for Human Environments, Tuesday, Sep. 16th, IEEE/ RSJ International Conference on Intelligent Robots and Systems (IROS), Chicago, 2014
- Session Chair, August 3rd, The 11th International Workshop on Algorithmic Foundations for Robotics (WAFR), August, 2014, Istanbul, Turkey
- Session chair: MoA02, Monday, June 2, 2014, 09:30-10:50, Track 2, Theatre 2, Computer Vision: SLAM, Regular Session, IEEE International Conference on Robotics and Automation (ICRA), June 2014
- Session chair: MoC15, Monday, June 2, 2014, 14:00-16:00, Track 15, S425, SLAM: Visual II, Regular Session, IEEE International Conference on Robotics and Automation (ICRA), June 2014
- Session co-chair, ThB09, Thursday, May 17, 2012, 10:30-12:00, 09, Meeting Room 9 (Sa) Vision-Based Attention and Interaction, Regular Session, IEEE International Conference on Robotics and Automation (ICRA), May 2012
- Session chair, TuA214, Tuesday, May 10, 2011, 10:05-11:20, 14, Room 5J, Visual Navigation II, IEEE International Conference on Robotics and Automation (ICRA), May 2011
- Session chair, Session TuDT9: Surveillance with Vision, IEEE/ RSJ International Conference on Intelligent Robots and Systems (IROS), Oct. 13, 2009
- Session co-chair, IEEE International Conference on Automation Science and Engineering (CASE), August, 2008
- Session co-chair, IEEE International Conference on Robotics and Automation (ICRA), May 2008
- Session chair, networked teleoperation, IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Oct. 31, 2007

INVITED TALKS - EXTERNAL

- TE1. *Sensor Fusion in Action: From Autonomous Driving, Robonaut, to Railway Inspection*, The Third Westlake International Robot Forum (WIRF), Hangzhou, China, Dec 21-23, 2016
- TE2. *From Autonomous Motorcycle to Bridge Deck Scanning: Visual Navigation for Size and Power Constrained Mobile Robots*, Zhejiang University, Hangzhou, China, July 28, 2017
- TE3. *From Autonomous Motorcycle to Bridge Deck Scanning: Visual Navigation for Size and Power Constrained Mobile Robots*, Zixing Artificial Intelligence Institute, Changsha, China, July 17, 2017
- TE4. *Robotic Search of Transient Targets*, Zhongnan University, Changsha, China, July 17, 2017
- TE5. *From Autonomous Motorcycle to Bridge Deck Scanning: Visual Navigation for Size and Power Constrained Mobile Robots*, University of Shanghai for Science and Technology, Shanghai, China, Oct. 16, 2016
- TE6. *From Autonomous Motorcycle to Bridge Deck Scanning: Visual Navigation for Size and Power Constrained Mobile Robots*, Zhejiang University, Hangzhou, China, July 28, 2016
- TE7. *Robotic Search of Transient Targets*, Chinese University of Hong Kong (Shenzhen), Shenzhen, China, July 27, 2016
- TE8. *Robotic Search of Transient Targets*, Shenzhen Institute of Advanced Technology (SIAT), Chinese Academy of Science (CAS), Shenzhen, China, July 25, 2016
- TE9. *From Autonomous Motorcycle to Bridge Deck Scanning: Visual Navigation for Size and Power Constrained Mobile Robots*, Kunshan Industrial Technology Research Institute, Kunshan, Jiangsu Province, China, May 27, 2016.
- TE10. *From Autonomous Motorcycle to Bridge Deck Scanning: Visual Navigation for Size and Power Constrained Mobile Robots*, The Second Westlake International Robot Forum, Hangzhou, China, May 23, 2016
- TE11. *Robotic Search of Transient Targets*, University of Colorado, Boulder, April 7, 2016
- TE12. *Robotic Search of Transient Targets*, TAMU Robotics Workshop, April 1, 2016
- TE13. *A Remote Testbed in the Wilderness: Collaborative Observation of Natural Environments*, NSF Workshop on Accessible Remote Testbed (ART), Nov. 11-13, Washington DC, 2015
- TE14. *Monocular Visual Navigation for Size and Power Constrained Mobile Robots*, Zhejiang University (ZJU), Hangzhou, China, June 9, 2014

- TE15. *Cloud Mediated Nature Observation - From Teleoperation to Cloud Robotics*, IEEE ICRA Workshop on “Crossing the Reality Gap: Control, Human Interaction and Cloud Technology for Multi- and Many- Robot Systems,” Hong Kong, China, June 1, 2014
- TE16. *Visual Navigation and Cloud Mediated Nature Observation*, University of Science and Technology, China (USTC), Hefei, China, May 19, 2014
- TE17. *Cloud Robotics and Manufacturing*, Advance Manufacturing Working Group, College of Engineering, Feb. 21, 2013
- TE18. *Cloud Mediated Nature Observation*, IEEE/NSF Workshop on Cloud Manufacturing and Automation, Madison, Wisconsin, Aug. 17, 2013
- TE19. *Collaborative Observation of Natural Environments*, Nankai University, Tianjin, China, July. 4, 2013
- TE20. *Collaborative Observation of Natural Environments*, Shenyang Institute of Automation (SIAT), Chinese Academy of Science (CAS), Shenyang, China, July. 3, 2013
- TE21. *How to Publish High Quality Papers*, Shenzhen Institute of Advanced Technology (SIAT), Chinese Academy of Science (CAS), Shenzhen, China, Jun. 27, 2013
- TE22. *Robotic Localization of Hostile Sensor Network*, Nankai University, Tianjin, China, Dec. 6, 2011
- TE23. *Vision-based Navigation: Two Case Studies*, Kunshan Industrial Technology Research Institute, Shanghai, China, Dec. 1, 2011
- TE24. *Vision-based Navigation: Two Case Studies*, the Shenzhen Institute of Advanced Technology (SIAT), Chinese Academy of Science (CAS), Shenzhen, China, Nov. 18, 2011
- TE25. *Vision-based Navigation: Two Case Studies*, Dongfang Electric Corporation, Chengdu, Sichuan Province, China, Nov. 18, 2011
- TE26. *Collaborative Observatories for Natural Environments*, UAS Video Tracking Workshop and Challenge, 25-26 October 2011, Texas A&M University, College Station, TX
- TE27. *Collaborative Observatories for Natural Environments*, Department of Computer and Information Engineering, HoHai University, Changzhou, China, May 20, 2011
- TE28. *Robotic Localization of Hostile Sensor Network*, the Shenzhen Institute of Advanced Technology (SIAT), Chinese Academy of Science (CAS), Shenzhen, China, May 19, 2011
- TE29. *Vision-Based Navigation for an Autonomous Motorcycle*, Nanjing University of Science and Technology, Nanjing, China, May 18, 2011
- TE30. *Vision-based Bird-Detection: Assisting the Search for Ivory-Billed Woodpeckers*, Seminar Series Oct. 26, 2010 – Texas A&M University at Galveston
- TE31. *Collaborative Observatories for Natural Environments*, Workshop on Intelligent Systems: A Festschrift for Richard Volz Texas A&M University, College Station, TX April 8-10, 2010
- TE32. *Collaborative Observatories for Natural Environments*, Workshop on Human-Environment Mobile-Based Interactions, MIT Media Lab, Sep. 15, 2009
- TE33. *Collaborative Observatories for Natural Environments*, Rio Brazos Audubon, July 8, 2009
- TE34. *Collaborative Observatories for Natural Environments*, Kavraki Lab, Department of Computer Science, Rice University, April 7, 2009
- TE35. **Keynote Speaker:** *Collaborative Observatories for Natural Environments*, International Workshop on Distributed Sensing and Collective Intelligence in Biodiversity Monitoring, Amsterdam, The Netherlands, Dec. 3-5, 2008
- TE36. *Collaborative Observatories for Natural Environments*, Center for Perceptual Robotics, Intelligent Sensors and Machines, The City University of New York, Nov. 17, 2008
- TE37. *Collaborative Observatories for Natural Environments*, the Workshop on Network Robot Systems: Ubiquitous, Cooperative, Interactive Robots for Human Robot Symbiosis, IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), San Diego, California, U.S.A. October 29, 2007
- TE38. *Collaborative Observatories for Natural Environments*, the Workshop on Robotic Sensor Networks, Robotic Science and Systems Conference, Atlanta, GA, Jun. 30, 2007
- TE39. *Collaborative Observatories for Natural Environments*, Institute of Automation, China Academe of Science, Beijing, China, Oct. 13, 2006
- TE40. *Networked Robotic Cameras for Collaborative Observation of Natural Environments*, Institute of Robotics and Automatic Information System, Nankai University, Tianjin, China, Jul 25, 2006

- TE41. *Networked Robotic Cameras for Collaborative Observation of Natural Environments*, Workshop on Network Robot Systems: Toward Intelligent Robotic Systems Integrated with Environments, IEEE International Conference on Robotics and Automation (ICRA), Orlando, Florida, May 19, 2006
- TE42. *Collaborative Observatory for Natural Environments*, the 12th International Symposium of Robotics Research, Oct 12th-15th, 2005, San Francisco, CA, USA
- TE43. *Networked Robotic Cameras (NRC): Algorithms and Systems*, Center for Intelligent System Seminar, University of California, Berkeley (Mar. 17, 2005)
- TE44. *Wireless Network Architectures for Collaborative Tele-operation*, Workshop on Wireless and Networked Robot, IEEE International Conference on Robotics and Automation (ICRA 2004), New Orleans, April, 2004
- TE45. *Systems and Algorithms for Collaborative Teleoperation*, Department of Computer Science, Texas A&M University, April 20, 2004
- TE46. *Algorithms and Systems for Shared Access to a Robotic Streaming Video Camera*, ACM Multimedia 2003, Doctoral Symposium, November 2-8, Berkeley, CA, USA

INVITED TALKS – INTERNAL

- TI1. *From Autonomous Motorcycle to Bridge Deck Scanning: Visual Navigation for Size and Power Constrained Mobile Robots*, System, Control and Robotics (SCR) Seminar, TAMU, Oct. 7, 2016
- TI2. *From Autonomous Motorcycle to Bridge Deck Scanning: Visual Navigation for Size and Power Constrained Mobile Robots*, , NSF REU and RET Program on Mechatronics, Robotics and Automated System Design, June 24, 2016
- TI3. *Visual Navigation for Autonomous Robots and Vehicles*, NSF REU and RET Program on Mechatronics, Robotics and Automated System Design, July 17, 2015
- TI4. *Visual Navigation for Autonomous Robots and Vehicles*, NSF REU and RET Program on Mechatronics, Robotics and Automated System Design, July 1, 2014
- TI5. *Visual Navigation for Autonomous Robots and Vehicles*, CSCE 181, Department of Computer Science and Engineering, April 17, 2014
- TI6. *Virtual Nexus: A CSE Perspective on Cyber Enabled Manufacturing*, Advanced Manufacturing Workgroup, College of Engineering, Texas A&M University, Mar. 21, 2014
- TI7. *Cloud Robotics and Manufacturing*, Advanced Manufacturing Workgroup, College of Engineering, Texas A&M University, Feb. 21, 2014
- TI8. *Enable Cloud-Assisted Robot Navigation with a Multi-Layer Feature Graph*, Industry Affiliates Program, Department of Computer Science, Texas A&M University, Mar. 2013
- TI9. *Collaborative Observation of Natural Environments*, Industry Affiliates Program, Department of Computer Science, Texas A&M University, Mar. 2008
- TI10. *ICRA 2006 Preview: A Minimum Variance Calibration Algorithm for Pan-Tilt Robotic Cameras in Natural Environments*, Parasol Seminar, Department of Computer Science, Texas A&M University, Apr. 28, 2006
- TI11. *Robot Cameras for Rediscovery of Ivory Billed Woodpecker*, CPSC 681 Seminar, Department of Computer Science, Texas A&M University, Mar. 20, 2006 *Internet-Based Collaborative Teleoperation*, Industrial Affiliates Program (IAP) Event, Department of Computer Science, Texas A&M University, Sep. 14~15, 2004
- TI12. *Network Human with Robot: Scalable Algorithms and Systems for Collaborative Teleoperation*, CPSC 681 Seminar, Department of Computer Science, Texas A&M University, Sep. 6, 2004
- TI13. *Network Human with Robot: Scalable Algorithms and Systems for Collaborative Teleoperation*, Parasol Seminar, Department of Computer Science, Texas A&M University, Sep. 3, 2004
- TI14. *Systems and Algorithms for Collaborative Teleoperation*, Department of Industrial Engineering and Operations Research, University of California, Berkeley, August 30, 2002, Berkeley, CA, USA

SELECTED MEDIA COVERAGE

- M1. *A&M, NASA partner to design 'Robonaut,'* The BATT, Mar. 27, 2017

- M2. *Robonaut – Perception in space*, By Rachel Rose, phys.org, Mar. 21, 2017
- M3. *Dezhen Song awarded NSF grant to study new robotic system*, By: Kathy Flores, August 27, 2014, TAMU Engineering news.
- M4. *Dr. Dezhen Song Awarded NSF Grant*, By: Tony Okonski, November 12, 2013, TAMU Engineering news.
- M5. *Big Brother at the Bird Feeder* – by Anne Pinckard Berkeley Alumni Magazine, September/October, 2008
- M6. *Ideal remote camera for locating Ivory-bills is just an idea*, by Matt Mendenhall, Associate Editor, December 2007, Birder's world
- M7. *4 Robots That Are Saving the World: Smart machines help fix humanity's ecological screwups*, by Brittany Grayson, 09.07.2007, DISCOVER Magazine
- M8. *Seeking Ivory-Billed Woodpecker, Multimedia Gallery*, National Science Foundation, August, 2007.
- M9. *SF Bird-Watching Game Debuts From Craig's Backyard*, (CBS 5 / BCN) SAN FRANCISCO.\
- M10. *Remote Biology*, by Chad Vander Veen, Jul 5, 2007, www.govtech.com
- M11. *Birdwatching goes hi-tech with online video camera game*, By Sarah Yang, Media Relations, 19 April 2007, UC Berkeley News, ACM TechNews, Issue: Apr. 20, 2007
- M12. *Robot Enlisted to Spot Rare Woodpecker*, Irene Klotz, Mar 5, 2007, Discovery News.
- M13. *Automating The Search For the Ivory-Billed Woodpecker*, February 23, 2007: Podcast: 60-Second Science, ScientificAmerican.com.
- M14. *Robot Bird-Watcher: An intelligent video system in an Arkansas bayou searches for an elusive bird*, By Rachel Ross, Tuesday, February 20, 2007, MIT Technology Review
- M15. *We're going the way of the robot*, BY BRYN NELSON, February 20, 2007, newstoday.com
- M16. *Robotic Cameras Join Search For 'Holy Grail Of Bird-watching'*, by Sarah Yang, 20-Feb-2007, ScienceDaily.com
- M17. *AAAS: Big Brother for Birds*, Monday, 19 February 2007, Wired News
- M18. *Robot hunts 'the Elvis of extinct birds,'* by Mark Henderson, Science Editor, February 19, 2007, TimesOnline
- M19. *Robotic Eye on Celebrated Bird*, Monday, by Marc Kaufman, February 19, 2007; Page A07, Washingtonpost
- M20. *Robot birdwatcher joins hunt for elusive woodpecker*, 12:39 19 February 2007, NewScientist.com news service Gaia Vince, San Francisco.
- M21. *Robotic Cameras help Naturalists Locate Ivory-Billed Woodpecker*, by Shubha Krishnappa - February 19, 2007, www.themoneytimes.com
- M22. *Robotic cameras to locate ivory-billed woodpecker*, Author : Mike Burns, Feb. 19, 2007, earthtimes.org
- M23. *Robots join search for ivory-billed woodpecker*, Feb. 19, 2007, CNN news
- M24. *Robotic Cameras Join Search for Elusive Woodpecker*, By REUTERS Published: February 18, 2007, New York Times
- M25. *ACONE versus Woody*, Feb 17, 2007, p2pnet.net
- M26. *Computer scientists join in search for ivory-billed woodpecker*, by Susan E. Cotton, Feb. 17, 2007, Eurekalert.org
- M27. *Robotic cameras join search for 'Holy Grail of bird-watching'*, by Sarah Yang, 17-Feb-2007, Eurekalert.org
- M28. *Computer scientists join in search for ivory-billed woodpecker*, by Susan E. Cotton, Feb. 17, 2007, www.biologynews.net
- M29. *Hunt for Woodpecker Goes High-Tech*, Mike Lafferty, THE COLUMBUS DISPATCH, February 20th, 2007, AdvancedImagingPro.com
- M30. *Song wins NSF CAREER award for teleoperated robotics research*, News Story 1398, November 16, 2006, by Susan E. Cotton, Texas A&M Engineering News, <http://engineeringnews.tamu.edu/news/1398>
- M31. *The Ghost Bird and the Robot*, by David Pescovitz, Forefront Magazine (UC Berkeley Alumni Magazine), fall 2006
- M32. *Robot Cameras in the Wild*, by David Pescovitz, Lab Notes, College of Engineering, Berkeley, mentioned by ACM Tech news, Volume 8, Issue 885: Wednesday, January 4, 2006

- M33. *Computer scientist's robotic research to rival Animal Planet*, by Susan E. Cotton, Texas A&M Engineering News, August 19, 2005
- M34. *Students design driverless motorcycle for competition*, By: Steven Romo, May 3, 2005, The Battalion Online.
- M35. *Texas A&M-Berkeley team to compete in 2005 DARPA Grand Challenge*, by Bonnie L. Shortner, College of Engineering, Texas A&M University, April 20, 2005
- M36. *Public Access to Robotic Camera Fosters Discourse*, The Daily Californian, By ANGELA CHEN, Contributing Writer, Wednesday, October 6, 2004
- M37. *10,000 People, One Eye*, Computer Power User Magazine, Sep, 2004
- M38. *Tele-Twister project proves that fun and games can also be educational*, Berkeley Engineering News, October 6 , 2003, Vol. 74, No. 7F.
- M39. *Sharing A Vision* by David Pescovitz, Volume 3, Issue 5, June/July 2003, Lab Notes, College of Engineering, Berkeley
- M40. *Robotic Tele-actor: A virtual tour guide with soul*, Forefront Magazine (UC Berkeley Alumni Magazine), Fall 2002
- M41. *Who's In Control?* Rhizome Online, Feb 12, 2003
- M42. *'Tele-actor?tours - the next best thing to being there?* Berkeleyan, Apr.24, 2002
- M43. *TechTV report*, TechTV, Spring 2002
- M44. *Your wish is my command* , New Scientist, Dec. 22, 2001
- M45. *Let's Take a Walk to a New Frontier* , LA Times, Dec. 13, 2001
- M46. *Robots: It's an Art Thing* , Wired News, Nov. 12, 2001
- M47. *Being There*, Business 2.0, Oct, 2001