PETER K. ALLEN

as of April 1, 2018

EDUCATION

Ph.D.(honors), University of Pennsylvania, 1985, Computer Science.
M.S., University of Oregon, 1976, Computer Science.
A.B., Brown University, 1971, Mathematics-Economics.

APPOINTMENTS

2000-   Professor, Dept. of Computer Science, Columbia University.

1994-99   Associate Professor (w/tenure), Dept. of Computer Science, Columbia University.

1990-93   Associate Professor, Dept. of Computer Science, Columbia University.

1985-90   Assistant Professor, Dept. of Computer Science, Columbia University.

AWARDS

Computing Research Association Undergraduate Research Award, 2014. Awardee: Danfei Xu. Faculty Advisor: Peter K. Allen

Best Student Paper Award, World Haptics Conference 2007 (awarded to M. Ciocarlie, C. Lackner and P. Allen co-authors)

Wegbreit Prize for best manipulation paper: *Automatic Grasp Planning using Shape Primitives*, authors A. Miller, S. Knoop, H. Christensen and P. Allen, *IEEE Int. Conf. on Robotics and Automation*, Sep. 14-19, 2003.

Anton Philips Award for best paper, 1991 IEEE Robotics and Automation Conference (awarded to K. Tarabanis, co-authors P.K. Allen and R. Tsai).

Rockwell Trust Presidential Investigator Award, 1989-1994.

NSF Presidential Young Investigator Award, 1987.

Rubinoff Prize for innovative uses of computer technology, Univ. of Pennsylvania, 1986.

Army Research Office Fellowship 1984-1985.

CBS Foundation Fellowship, 1982-1983.

PROFESSIONAL ACTIVITIES

Chair, New England Manipulation Symposium, May 17, 2014; Editorial Board, Autonomous Robots Journal, 1995-2004; Organizer and Co-Chair, Engineering the Future of Surgery Symposium, Columbia University, April 8, 2002; Associate Editor, IEEE Transactions on Robotics and Automation, 1998-2002; Program Committees: ICRA 2014-2015; RSS 2011-2015; IROS 2007-2016; 3DIMPV 2011, 3DIM 2010, 2009;; 3DPVT 2008; ICRA 2007; 3DIM 2007; International Symposium on 3D Data Processing, Visualization and Transmission (3DPVT) 2006; International Workshop on 3D Virtual Reconstruction and Visualization of Complex Architectures (3D-Arch 2005); Intelligent Robots and Systems (IROS 2005); 3D Digital Imaging and Modeling (3DIM 2005); International Workshop on 3D Virtual Intelligent Robots and Systems (IROS 2005); 3D Digital Imaging and Modeling (3DIM 2005); Virtual Systems and Multimedia (VSMM 2005). IAS 2004, CIRA 2003, ACVA 2003, 3D Imaging 2003, Virtual and Augmented Architecture 2001, CIRA 2001, IROS O1, IAS; 01, CVPR 2001, 3D Imaging 2001; WACV 2000; IROS 2O0; Multi-Sensor Fusion 1999; Computer Vision and Pattern Recognition 1999; IEEE/RSJ Conference on Intelligent Robots and Systems 1999; IEEE International Conference on Robotics and Automation 1998; IEEE/RSJ Conference on Intelligent Robots and Systems 1998; IEEE International Conference on Robotics and Automation, 1997; IEEE/RSJ Conference on Intelligent Robots and Systems 1997; Multi-Sensor Fusion 1996; Workshop on Computer Vision, IROS 1995; NSF review panelist. Whitaker foundation review panelist.

PATENTS

US patent 9,730,761 issued Aug. 15, 2017, "Insertable device and system for minimal access procedure"

U.S Patent 9,418,442 "Tool Tracking During Surgical Procedures", August 16, 2016.

U.S Patent 9,393,076 "Insertable Device and System for Minimal Access Procedure", July 19, 2016.

U.S. Patent 8,810,638 Insertable surgical imaging device, Aug. 19, 2014.

U.S. Patent 8,096,941 Insertable device and system for minimal access procedure, Jan. 7, 2012.

U.S Patent 7,066,879: "Insertable Device and System for Minimal Access Procedure", June 27, 2006.

U.S. Patent 6,249,600: "System and Method for Generation of a Three-Dimensional Solid Model", June 19, 2001.

BOOKS

Whittaker, W., T. Kanade, P. K. Allen, A. K. Bejczy, J. W. Lowrie, H. G. McCain, M. D. Montemerlo, T. B. Sheridan, *Space Robotics in Japan*, Japanese Technology Evaluaton Center, January 1991.

Allen, Peter *Robotic object recognition using vision and touch*, Kluwer Academic Publishing, 1987.

BOOK CHAPTERS

Robert Ying, Jon Weisz, and Peter K. Allen, Grasping with your Face, Springer Proceedings in Advanced Robotics, Vol. 2, Wolfram Burgard and Antonio Bicchi (Eds): ROBOTICS RESEARCH, 978-3-319-51531-1, 416128_1_En (20)

Peter K. Allen, Matei Ciocarlie, and Corey Goldfeder, Grasp Planning Using Low Dimensional Subspaces, in The Human Hand: A Source of Inspiration for Robotic Hands, Springer Tracts in Advanced Robotics, 2014, (STAR) series, Balasubramanian, R. and Santos, V.J., Eds., Springer, Heidelberg.

Yoshimi, Billibon and Peter K. Allen "Visual Control of Grasping" in *Lecture Notes in Control: Confluence of Vision and Control*, ed. G. Hager, D. Kriegman, S. Morse, Springer-Verlag, 1998, pp. 195-209.

Allen, Peter K., "Integrating vision and touch for object recognition tasks" in *Multisensor Integration and Fusion for Intelligent Machines and Systems,* R. Luo and M. Kay, eds., Ablex, 1995, pp. 407-440..

Allen, P. K., A. Timcenko, B. Yoshimi and P. Michelman "Hand-eye coordination for robotic tracking and grasping" in *Visual Servoing: Automatic Control of Mechanical Systems with Visual Sensors"* K. Hashimoto, editor, World Publishing, 1993, pp. 33-69.

Allen, Peter, "Object recognition using active tactile sensing" in *Advanced Tactile Sensing for Robotics,* H. Nicholls, editor, World Publishing, 1992, pp. 221-247.

Allen, Peter, Paul Michelman and Kenneth Roberts "Experiments in active haptic perception with the utah-mit dextrous hand" in *Advanced Tactile Sensing for Robotics,* H. Nicholls, editor, World Publishing, 1992, pp. 249-271.

Tarabanis, K., R. Tsai and P. K. Allen, "Overview of the MVP sensor planning system for robotic vision tasks", in *Engineering Systems with Intelligence*, S. Tzafestas, editor, Kluwer Academic Publishers, 1991.

Allen, Peter, "Active sensing with a dextrous robotic hand" in *NATO ASI series F 63: Traditional and Non-Traditional Sensors,* Springer-Verlag, 1990.

Michelman, Paul and Peter Allen ''Haptic perception with a robot hand: Requirements and realization'' in *NATO ASI series on Active Perception and Robot Vision,* Springer-Verlag, 1990.

Allen, Peter, ''3-D Modeling for robotic tactile object recognition'' in *CAD/CAM, Robotics and Factories of the Future,* B. Prasad, editor, Springer-Verlag, 1989.

Allen, Peter and Bajcsy, Ruzena, ''Two sensors are better than one: example of integration of vision and touch'', in *Robotics Research,* O. Faugeras and G. Giralt eds., MIT Press, Cambridge, MA, 1986.

Bajcsy, Ruzena and Allen, Peter ''Multiple sensor integration'' in *The Encyclopedia of Artificial Intelligence,* John Wiley and Sons, New York 1986.

Allen, Peter and Bajcsy, Ruzena, ''Converging disparate sensory data'', in *Robotics Research,* H. Hanafusa and H. Inoue, eds., MIT Press, Cambridge, MA, 1985.

JOURNAL ARTICLES

Yinxiao Li, Yan Wang, Yonghao Yue, Danfei Xu, Michael Case, Shih-Fu Chang, Eitan Grinspun, and Peter K. Allen Model-Driven Feedforward Prediction for Manipulation of Deformable Objects, IEEE Transactions on Automation Science and Engineering, Volume: PP, Issue: 99, 2018

Weisz, J., Allen, P.K., Barszap, A.G. and Joshi, S.S. Assistive Grasping with an Augmented Reality UI, International Journal of Robotics Research (IJRR), 36(5-7), pp.543-562. 2017

Hao Dang and Peter K. Allen, Semantic Grasping: Planning Task-Specific Stable Robotic Grasps, Autonomous Robots 37 (3), 2014, 301-316.

Austin Reiter, Peter K Allen and Tao Zhao, Appearance learning for 3D tracking of robotic surgical tools, The International Journal of Robotics Research November, 2013.

Hao Dang and Peter K. Allen, Stable grasping under pose uncertainty using tactile feedback, Autonomous Robots 36 (4), 309-330.

N. Simaan, A Bajo, A Reiter, L Wang, P Allen, D. Fowler, Lessons learned using the insertable robotic effector platform (IREP) for single port access surgery, J. Robotic Surgery, April 2013.

Ding, J.; Goldman, R. E.; Xu, K.; Allen, P. K.; Fowler, D. L.; Simaan, N.; Design and Coordination Kinematics of an Insertable Robotic Effectors Platform for Single-Port Access Surgery, Mechatronics, IEEE/ASME Transactions on, vol.PP, no.99, pp.1-13, 2012.

Corey Goldfeder and Peter Allen, Data Driven Grasping, Autonomous Robots, Apr. 2011, pp. 1-20.

Matei Ciocarlie and Peter Allen, A constrained optimization framework for compliant underactuated grasping Mechanical Sciences 2, 17-26, 2011.

Paul S. Blaer and Peter K. Allen, View planning and automated data acquisition for three-dimensional modeling of complex sites, Journal of Field Robotics, Volume 26 Issue 11-12 (November - December 2009).

Dennis L. Fowler, Tie Hu, Tejas Nadkarni, Peter K. Allen and Nancy J. Hogle. Initial trial of a stereoscopic, insertable, remotely controlled camera for minimal access surgery. Surgical Endoscopy (2010) 24:915

Tie Hu, Peter Allen, Nancy Hogle and Dennis Fowler, Insertable Surgical Imaging Device with Pan, Tilt, Zoom, and Lighting, International Journal of Robotics Research, Vol. 28, No. 10, 1373-1386 (2009).

Matei Ciocarlie and Peter Allen, Hand Posture Subspaces for Dexterous Robotic Grasping, International Journal of Robotics Research, Vol. 28, No. 7,. 851 - 867 (2009).

Nancy J. Hogle, Tie Hu, Peter K. Allen and Dennis L. Fowler, Comparison of Monoscopic Insertable, Remotely Controlled Imaging Device With a Standard Laparoscope in a Porcine Model, Surgical Innovation, Vol. 15, No. 4, Dec. 2008, pp 271-276.

Alejandro Troccoli and Peter K. Allen, Building illumination coherent 3D models of large-scale outdoor scenes, International Journal of Computer Vision (IJCV), Volume 78, Numbers 2-3 / July, 2008, p. 261-280.

Alejandro Troccoli and Peter K. Allen, *Shadow Based Texture Registration Method for 3D Outdoor Scenes*, Machine Vision and Applications, V. 18, No. 2, April 2007, pp. 65-72.

Atanas Georgiev, Sergey Vorobiev, William Edstrom, Ting Song, Andrew Laine, John Hunt and Peter Allen, *Automated Streak Seeding With Micromachined Silicon Tools*, Acta Crystallographa (2006), D62, pp. 1039-1045.

Andrew Miller, Peter K. Allen, V. Santos and F. Valero-Cuevas,*From Robot Hands to Human Hands: A Visualization and Simulation Engine for Grasping Research*, Industrial Robot, V. 32, N. 1, pp. 55-63.

Atanas Georgiev and Peter K. Allen, "Localization Methods for a Mobile Robot in Urban Environments", *IEEE Trans. on Robotics and Automation*, V. 20, N. 5, Oct. 2004, pp. 851-864.

Andrew Miller and Peter K. Allen, "Graspit!: A Versatile Simulator for Robotic Grasping", *IEEE Robotics Magazine*, Dec. 2004.

Peter K. Allen, Ioannis Stamos, Alejandro Troccoli, Benjamin Smith, M. Leordeanu and Stephen Murray. " New Methods for Digital Modeling of Historic Sites", *IEEE Computer Graphics and Applications*, Nov/Dec 2003, pp. 32-41.

Stamos, Ioannis and Peter Allen, "Geometry and Texture Recovery of Scenes of Large Scale", *Computer Vision and Image Understanding (CVIU)*, V. 88, N. 2, Nov. 2002, pp. 94-118.

Oh, Paul, and Peter K. Allen, "Visual Servoing by Partitioning Degrees-of-Freedom", *IEEE Trans. on Robotics and Automation*, V. 17, N. 1, February 2001, pp. 1-17.

Reed, Michael and Peter K. Allen, "Constraint Based Sensor Planning for Scene Modeling", *IEEE Trans. on PAMI No. 12, Dec. 2000, pages 1460-1467.*

Abrams, Steven and Peter K. Allen, "Computing Swept Volumes", *Journal of Visualization and Computer Animation,* V. 11, 2000, pp. 69-82.

Abrams, Steven , Allen, Peter K. and Tarabanis, Konstantinos, "Computing Camera Viewpoints in an Active Robot Work-Cell", *International Journal of Robotics Research,* Vol. 18, No. 3, pp. 267-285, March 1999.

Reed, Michael, and Peter Allen, "3-D Modeling from range imagery: An incremental method with a planning component", *Journal of Image and Vision Computing,* Vol. 17, No. 2, pp. 99-111, Feb. 1999.

Allen, P., Miller, Andrew T., Oh, P., and B. Leibowitz, "Integration of Vision, Force and Tactile Sensing for Grasping" Int. Journal of Intelligent Mechatronics, Vol. 4, No. 1, January 1999, pp. 129-149.

Yoshimi, Billibon and Peter Allen, "Alignment Using an Uncalibrated Camera System", *IEEE Transactions on Robotics and Automation.* V. 11, N. 5, August, 1995, pp. 516-521.

Tarabanis, K., Roger Tsai and Peter Allen, "The MVP sensor planning system for robotic vision tasks", *IEEE Transactions on Robotics and Automation.* V. 11, N. 1, Feb. 1995, pp. 72-85.

Tarabanis, K., and Peter Allen, "Sensor Planning in Computer Vision", *IEEE Transactions on Robotics and Automation.* V. 11, N. 1, Feb. 1995, pp. 86-105.

Tarabanis, K., Roger Tsai and Peter Allen, "Analytical characterization of the feature detectability constraints of resolution, focus and field-of-view for vision sensor planning", *Computer Vision, Graphics, and Image Processing,* V. 59, N. 3, May 1994, pp. 340-358.

Jiang, J. C, V. Faynberg, P. K. Allen and R. C. White, "Fabrication of micromachined silicon tip transducer for tactile sensing", *Journal of Vac. Sci. Tech.* 1994.

Allen, Peter, A. Timcenko, B. Yoshimi and P. Michelman "Automated Tracking and Grasping of a Moving Object with a Robotic Hand-Eye System", *IEEE Transactions on Robotics and Automation,* April 1993, pp. 152-165.

Singh, Ajit and Peter Allen, "Image flow computation: an estimation-theoretic framework and a unified perspective", *Computer Vision, Graphics and Image Processing.* Vol. 56, No. 2, September 1992, pp. 152-177.

Allen, Peter, Paul Michelman and Kenneth Roberts, "A system for programming and controlling a multi-sensor robotic hand", *IEEE Transactions on Systems, Man and Cybernetics,* Nov/Dec 1990, pp. 1450-1456.

Allen, Peter and Paul Michelman "Acquisition and interpretation of 3-D sensor data from touch", *IEEE Transactions on Robotics and Automation,* August 1990, pp. 397-404.

Allen, Peter, "An intelligent grasping system", *IEEE Computer* , March 1989, pp. 50-52.

Allen, Peter, "Integrating vision and touch for object recognition tasks", *International Journal of Robotics Research,* Vol. 7 No. 6, 1988, pp. 15-33.

REFEREED PAPERS

Iretiayo Akinola, Boyuan Chen, Jonathan Koss, Aalhad Patankar, Jake Varley and Peter Allen Task Level Hierarchical System for BCI-enabled Shared Autonomy, IEEE/RAS International Conference on Humanoid Robotics, Nov. 2017

Jacob Varley, Chad DeChant, Adam Richardson, JoaquÃn Ruales, and Peter Allen. Shape Completion Enabled Robotic Grasping, IEEE Int. Conf. Robots and System (IROS), 2017

Jorge Guerra, Jasim Uddin, Dawn Nilsen, James McInerney Ammarah Fadoo, Isirame B. Omofuma, Shatif Hughes, Sunil Agrawal, Peter Allen, and Heidi M. Schambra. Capture, Learning, and Classification of Upper Extremity Movement Primitives in Healthy Controls and Stroke Patients, International Conf. on Rehabilitation Robots (ICORR), 2017.

Yinxiao Li, Xiuhan Hu, Danfei Xu, Yonghao Yue, Eitan Grinspun, and Peter Allen. Multi-Sensor Surface Analysis For Robotic Ironing, IEEE International Conference on Robotics and Automation (ICRA), Stockholm, May 2016.

Jonathan Weisz, Yipeng Huang, Florian Lier, Simha Sethumadhavan, and Peter Allen. RoboBench: Towards Sustainable Robotics System Benchmarking, IEEE International Conference on Robotics and Automation (ICRA), Stockholm, May 2016.

Jiongxin Liu, Yinxiao Li, Peter Allen, and Peter Belhumeur. Articulated Pose Estimation Using Hierarchical Exemplar-based Models, 30th AAAI Conference on Artificial Intelligence (AAAI), Phoenix, Feb. 2016.

Jacob Varley, Jonathan Weisz, Jared Weiss, and Peter Allen, Generating Multi-Fingered Robotic Grasps via Deep Learning. IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2015, Hamburg.

Yinxiao Li, Y. Yue, Danfei Xu, Eitan Grinspun, Peter K. Allen, Folding Deformable Objects using Predictive Simulation and Trajectory Optimization. IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2015, Hamburg.

Robert Ying, Jonathan Weisz and Peter K. Allen, Grasping with your brain: a brain-computer interface for fast grasp selection. International Symposium on Robotics Research (ISRR), September 12 to 15, 2015, Sestri Levante, Italy

Y. Li, D. Xu, Y. Yue, Y. Wang, S-F Chang, E. Grinspun, and P. K. Allen, Regrasping and Unfolding of Garments Using Predictive Thin Shell Modeling, IEEE International Conference on Robotics and Automation (ICRA), Seattle, May 2015.

J Weisz, AG Barszap, SS Joshi, P.K. Allen, Single muscle site sEMG interface for assistive grasping, IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2014, pp. 4007-4012.

A Reiter, A Sigaras, D Fowler, P.K. Allen, Surgical Structured Light for 3D minimally invasive surgical imaging, IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2014, pp. 1282-1287.

Y Li, Y Wang, M Case, SF Chang, P.K. Allen, Real-time pose estimation of deformable objects using a volumetric approach, IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2014, pp. 1046-1052.

Yinxiao Li, Chih-Fan Chen, and Peter K. Allen, Recognition of Deformable Object Category and Pose, IEEE International Conference on Robotics and Automation, June 2014, Hong Kong.

Youngbum Jun, Paul Oh, Jonathan Weisz and Peter Allen, Real-Time Teleop with Non-Prehensile Manipulation, IEEE International Conference on Technologies for Practical Robot Applications (TePRA), April, 2014.

Hao Dang and Peter K. Allen, Grasp Adjustment on Novel Objects Using Tactile Experience from Similar Local Geometry, 2013 IEEE/RSJ International Conference on Intelligent Robots and Systems.

Jonathan Weisz, Carmine Elvezio, and Peter K. Allen, A Brain-Computer Interface for Grasping, IEEE/RSJ International Conference on Robots and Systems (IROS), Nov. 2013. Tokyo.

Hao Dang, Yongbum Jun, Paul Oh and Peter K. Allen, Planning Complex Physical Tasks for Disaster Response with a Humanoid Robot, IEEE International Conference on Technologies for Practical Robot Applications (TePRA), April 22 - 23, 2013

Hao Dang and Peter K. Allen, Semantic Grasping: Planning Robotic Grasps Functionally Suitable for An Object Manipulation Task, 2012 IEEE/RSJ International Conference on Intelligent Robots and Systems October 7-12, 2012. Vilamoura, Algarve, Portugal.

Austin Reiter, Peter K. Allen and Tao Zhao, Feature Classification for Tracking Articulated Surgical Tools, MICCAI 2012, Part II, LNCS 7511, pp. 592600.

Weisz,J., Shababo,B., Dong,L. and Allen,P., Grasping with Your Face, 13th International Symposium on Experimental Robotics (ISER) June 17-21, 2012.

Reiter, A., Allen, P.K., Zhao, T. Learning Features on Robotic Surgical Tools, Workshop on Medical Computer Vision, IEEE Conference on Computer Vision and Pattern Recognition (CVPR), June 16-21, 2012, Providence, Rhode Island

Reiter, A., Bajo, A., Iliopoulos, K., Simaan, N., and Allen, P.K., Learning-Based Configuration Estimation of a Multi-Segment Continuum Robot, IEEE RAS/EMBS International Conference on Biomedical Robotics and Biomechatronics (BioRob), June 24-27, 2012, Rome, Italy

Reiter, A., Allen, P. K., and Zhao, T., Marker-less Articulated Surgical Tool Detection, Computer Assisted Radiology and Surgery (CARS), June 27-30, 2012, Pisa, Italy.

Jonathan Weisz and Peter K. Allen, Pose Error Robust Grasping from Contact Wrench Space Metrics, IEEE Int. Conf. on Robotics and Automation, Minneapolis, May 2012.

Hao Dang and Peter K. Allen, Learning Grasp Stability, IEEE Int. Conf. on Robotics and Automation, Minneapolis, May 2012.

F. L. Hammond III, J. Weisz, A. de la LleraKurth, P. Allen, and R. Howe, Towards a Design Optimization Method for Reducing the Mechanical Complexity of Underactuated Robotic Hands, 2012 IEEE Int. Conf. on Robotics and Automation, Minneapolis, May 2012

Austin Reiter, Roger E. Goldman, Andrea Bajo, Konstantinos Iliopoulos, Nabil Simaan, and Peter K. Allen, A Learning Algorithm for Visual Pose Estimation of Continuum Robots, 2011 IEEE/RSJ International Conference on Intelligent Robots and Systems, Sep. 26-29, 2011, San Francisco.

Long Wang, Joseph DelPreto, Sam Bhattacharyya, Jonathan Weisz, Peter K. Allen, A highly-underactuated robotic hand with force and joint angle sensors,2011 IEEE/RSJ International Conference on Intelligent Robots and Systems, Sep. 26-29, 2011, San Francisco.

H. Dang, J. Weisz, and P. K. Allen, Blind grasping: Stable robotic grasping using tactile feedback and hand kinematics, in Int. Conf. Robotics and Automation (ICRA), 2011.

Austin Reiter and Peter K. Allen, An Online Learning Approach To In-Vivo Tracking Using Synergistic Features, 2010 IEEE/RSJ International Conference on Intelligent Robots and Systems October 18-22, 2010, Taipei, Taiwan

Hao Dang and Peter K. Allen, Robot Learning of Everyday Object Manipulations via Human Demonstration, 2010 IEEE/RSJ International Conference on Intelligent Robots and Systems October 18-22, 2010, Taipei, Taiwan

M. Ciocarlie and P. Allen. Data-driven optimization for underactuated robotic hands. In IEEE Intl. Conf. on Robotics and Automation, 2010.

Ding, J., Xu, K., Goldman, R., Allen, P., Fowler, D., Simaan, N. Design, Simulation and Evaluation of Kinematic Alternatives for Insertable Robotic Effectors Platforms in Single Port Access Surgery. IEEE International Conference on Robotics and Automation, 2010.

Corey Goldfeder, Matei Ciocarlie, Jaime Peretzman, Hao Dang and Peter K. Allen, Data-Driven Grasping with Partial Sensor Data, IEEE/RSJ International Conference on Intelligent Robots and Systems, October 11-15, 2009 St. Louis, pp. 1278-1284.

Matei Ciocarlie and Peter Allen, Design and Analysis Tool for Underactuated Compliant Hands , IEEE/RSJ International Conference on Intelligent Robots and Systems, October 11-15, 2009 St. Louis, pp. 5234-5239.

Kai Xu, Roger E. Goldman, Jienan Ding, Peter K. Allen, Dennis L. Fowler and Nabil Simaan, System Design of an Insertable Robotic Effector Platform for Single Port Access (SPA) Surgery, IEEE/RSJ International Conference on Intelligent Robots and Systems, October 11-15, 2009 St. Louis, pp. 5546-5552.

Corey Goldfeder, Matei Ciocarlie, Hao Dang and Peter K. Allen, The Columbia Grasp Database, Int. Conference on Robotics and Automation, May 18-22, 2009, Kobe.

Matei Ciocarlie, Hao Dang, Jamie Lukos, Marco Santello, Peter Allen, Functional Analysis of Finger Contact Locations during Grasping, Third Joint EUROHAPTICS Conference and symposium on haptic interfaces for virtual environment and teleoperator systems, March 18-20, 2009, Salt Lake City.

Tie Hu, Peter K. Allen, Tejas Nadkarni, Nancy J. Hogle and Dennis L. Fowler, Insertable Stereoscopic 3D Surgical Imaging Device with Pan and Tilt, Proc. IEEE BIOROB, Oct. 20, 2008.

Matei T. Ciocarlie, Samuel T. Clanton, M. Chance Spalding, and Peter K. Allen, Biomimetic Grasp Planning for Cortical Control of a Robotic Hand, IROS 2008, Nice, Sep. 23-26, 2008.

Atanas Georgiev and Peter Allen, Two-Stage Robotic Crystal Mounting of Protein Crystals for X-Ray Data Collection, IEEE Conference on Automation Science and Engineeeering (CASE), Aug. 2008.

Matei Ciocarlie and Peter K. Allen, On-Line Interactive Dexterous Grasping, Proc. Eurohaptics 08, Madrid.

Corey Goldfeder and Peter K. Allen, Autotagging to Improve Text Search for 3D Models, Shape Modeling International (SMI), June 4-6, Stony Brook, NY.

Corey Goldfeder, Haoyen Fang and Peter K. Allen, Training Set Expansion via Autotags, Shape Modeling International (SMI) Shape Recognition contest entry, June 4-6, Stony Brook, NY.

Corey Goldfeder and Peter K. Allen, Autotagging to Improve Text Search for 3D Models, Joint Conference on Digital Libraries (JCDL), June 16-20, Pittsburgh, PA.

Tie Hu, Peter K. Allen, Nancy J. Hogle and Dennis L. Fowler, Insertable Surgical Imaging Device with Pan, Tilt, Zoom, and Lighting. IEEE International Conference on Robotics and Automation (ICRA), May 23, 2008, Pasadena, CA.

Tie Hu, Peter K. Allen, Roger Goldman, Nancy J. Hogle, and Dennis L. Fowler, In Vivo Pan/Tilt Endoscope with Integrated Light Source, Zoom and Auto-focusing, MMVR 2008, Long Beach,

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Matei Ciocarlie, Corey Goldfeder and Peter Allen, Dimensionality reduction for hand-independent dexterous robotic grasping, IROS 2007, San Diego, Oct. 29- Nov. 2

Paul S. Blaer and Peter K. Allen, Data Acquisition and View Planning for 3-D Modeling Tasks, IROS 2007, San Diego, Oct. 29- Nov. 2

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