

Curriculum Vitae

Maxim Batalin

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Education

2002-2005 **PhD in Computer Science**, Specialty: Robotics, Sensor Networks, Intelligent Systems

2001-2002 **Master of Science in Computer Science**
University of Southern California, Los Angeles, CA, USA

Thesis Advisor: Prof. Gaurav S. Sukhatme (USC)

1997-2002 **Master of Science in Management (With Distinction)**, Specialty: General Management
Tavriya National University, Simferopol, Republic of Crimea, Russia

Thesis: "Restructuring of the Marketing Strategy." Case study was based on the JSC "Zavod Phiolent"

Thesis Advisor: Prof. Gennady N. Rotanov

2002 **Certified in United States as Master of Science in Managerial Economics**

1998-2001 **Bachelor of Science in Computer Science**
Bachelor of Science in Mathematics
University of Oregon, Eugene, OR, USA

Professional Experience

From Feb 2012 **Associate Director, Intelligent Systems (UCLA Engineering Institute for Technology Advancement (ITA), University of California Los Angeles)**

Research program management, business development and commercialization in the area of intelligent systems, spanning the fields of robotics, sensor-actuator networks, mobile computing, biomedical systems, data analytics and mining, sensor fusion and classification, IT infrastructure development, social media, and security.

Aug 2009 – Feb 2012 **Senior Technology Strategist (UCLA Engineering Institute for Technology Advancement (ITA), University of California Los Angeles)**

Project Management and technology commercialization in the area of sensor-actuator systems, mobile and embedded computing, biomedical systems and secure IT infrastructure design, with applications in the fields of wireless health and telemedicine, social media, environmental technologies and resource conservation.

2008 – Nov 2011 **Research Program Manager (Wireless Health Institute (WHI), University of California Los Angeles)**

Lead a group of over 15 graduate students and staff members in a variety of programs within the Wireless Health Institute, especially focusing on aspects of security, signal search, state classification, sensor fusion and automated diagnosis. In these projects I have coordinated

efforts of several groups within the Schools of Engineering, Computer Science, Nursing, Public Health and Medicine. I have also coordinated collaboration with industrial partners in support of multiple programs. Developed the scientific vision for the WHI's program development; producing grant and reporting documentation to various agencies; presenting research work and results at key conferences, sponsor meetings, various boards, etc.; assist in transition of the developed technology towards commercialization.

Sample of programs that I have lead include:

Wireless Health Systems for First Responder Safety

Leading a program in the area of applying Wireless Health technology to health and safety of firefighters. Performing program management and leading development of systems in support of the program objectives. Coordinating program activities between all team members.

SIRRACT

Coordinating faculty and students, as well as leading development of the automated motion monitoring and classification system in support of an international trial (over 15 sites around the world) with application to Neurological Rehabilitation.

Signal Search Engine

Leading a group of faculty, staff members, and students across the Schools of Engineering, Computer Science and Medicine to produce a system capable of:

- searching for a specific event or feature within a healthcare *signal* database,
- providing classification and state identification corresponding to the query,
- cross correlating the results from other users, their outcomes and diagnosis
- providing an ontology tying together signal domain with text-based medical terminology

The current results of SSE are effectively applied towards:

- Studying recovery and progress of the neurology rehabilitation patients
- Monitoring and understanding the sleep disorders
- Quantifying progress in clinical studies
- First Responder physiological monitoring
- Projects in Exercise Physiology (including osteoporosis monitoring and intervention)

Critical Power and Heart Rate modeling

Leading the development of the models optimizing the potential of a human body to perform further work safely. These systems currently find applications in optimization of training (e.g. athletes or other people with a fitness goal) and safe assignment of tasks in-mission for firefighters.

Sensor Fusion and State Identification

Developing an automated system that determines the minimum set of sensors to diagnose a condition with requested accuracy

2005 – **Development Engineer and Lead Researcher**
2008 **Center for Embedded Networked Sensing (CENS)**

At CENS my work is mostly involved with ASCENT laboratory, where I am supervising and leading teams of graduate and undergraduate students (approx. 10-20 students) in a variety of projects. Developing the scientific vision for the lab's future projects; producing grant and reporting documentation to various agencies; presenting research work and results at key conferences, sponsor meetings, various boards, etc.; assist in transition of the developed technology towards commercialization.

Types of the completed projects:

- Wireless Telehealth System and Architecture for Biomedical Applications
- IDM: Incremental Diagnosis Method for an efficient diagnosis of the patient condition with minimum sensor set
- SmartCane system for intelligent assistance and training in geriatrics and rehabilitative care
- Cabled-robotics
- Multitier multiscale sampling algorithms for spatiotemporal phenomena monitoring
- Robot path optimization for efficient environmental sampling
- Spatial and semantic mapping with a miniature underwater sonar
- IDEA: Autonomous Iterative experiment Design for Environmental Applications
- Design of an energy aware platform for biomedical and environmental applications – MicroLEAP

Fall
2010 **Consulting in Novel Technology Capabilities Development,**
Neato Robotics, Newark, CA

Summer
2003 **Research Scientist**
Intel Research, Hillsboro, OR

Research and development of a novel sensor network mediated mobile robot navigation.

2001- 2005 **Research Assistant, Robotic Embedded Systems Laboratory**
University of Southern California, Los Angeles

Research and development of algorithms and systems that use mobile robots and sensor networks together to solve problems of coverage and exploration, mobile robot navigation, task allocation, sensor network maintenance, deployment and repair.

Honors and Awards

Sigma Xi Scientific Research Society: <http://www.sigmaxi.org>

Phi Beta Kappa (ΦBK) Honorary Society: <http://www.pbk.org>

Golden Key Honor Society: <http://www.goldenkey.org>

Skills

Languages: English (fluent), Russian (native), Ukrainian (fluent)

Operating Systems/Environments: Mobile Platforms and Development (e.g. Android), Linux/Unix, Windows, Matlab, TinyOS, MS Windows Productivity Suite, MS Project, MS Visio

Tool Development: Player/Stage/Gazebo engine, developed and maintaining a Java Client for the engine

Analytical: Working knowledge of applied mathematics, physics, algorithm design and analysis, problem solving techniques, modeling

Project Leadership: Have substantial experience with successfully completing projects that required management of large multi-disciplinary teams and complex project requirements; interacting with various agencies, industry partners and investment organizations.

Other: Can work equally well as part of a team or alone; Research and development background enables me to learn new areas fast

Selected Publications and Presentations

Journal Articles

1. Brett Dolezal, Marlon Abrazado, Maxim Batalin, Denise Smith and Christopher Cooper, "Deployment of Remote Advanced Electrocardiography for Improved Cardiovascular Risk Assessment in Career Firefighters," In *Telemedicine and E-Health*, 20(7): 660-663. doi:10.1089/tmj.2013.0321, July 2014.
2. Thomas Storer, Brett Dolezal, Marlon Abrazado, Denise Smith, Maxim Batalin, Chi-Hong Tseh and Christopher Cooper, "Firefighter health and fitness assessment: a call to action," In *The Journal of Strength and Conditioning Research*, 28(3):661-71. doi: 10.1519/JSC.0b013e31829b54da, March 2014.
3. Maxim A. Batalin, Christopher B. Cooper, and Jalal Mapar. "PHASER To The Rescue," In *FireRescue Magazine*, April 2012
4. Lawrence K. Au, Alex A.T. Bui, Maxim A. Batalin, and William J. Kaiser, "Energy-Efficient Context Classification With Dynamic Sensor Control," In *IEEE Transactions on Biomedical Circuits and Systems*, 6(2):167-78. doi: 10.1109/TBCAS.2011.2166073, April 2012.
5. Bruce Dobkin, Seth Thomas, Celia Xu, Maxim Batalin and William Kaiser, "Reliability of bilateral ankle accelerometer algorithms for activity pattern recognition and walking speed after stroke," In *Journal Stroke*, 42(8):2246-50. doi: 10.1161/STROKEAHA.110.611095, June 2011.
6. Per Henrik Borgstrom, Brett L. Jordan, Gaurav S. Sukhatme, Maxim A. Batalin, William J. Kaiser, "Rapid Computation of Optimally Safe Tension Distributions for Cable-Driven Robots," In *IEEE Transactions on Robotics*, vol. 25/6, pp. 1271-1281, 2009.
7. Per Henrik Borgstrom, Brett Jordan, Bengt Jonas Borgstrom, Michael J. Stealey, Gaurav S. Sukhatme, Maxim A. Batalin, and William J. Kaiser, "NIMS-PL: A Novel Redundant Cabled Robot with Self-Calibration Capabilities", In *IEEE Transactions on Robotics*, vol. 25/5, pp. 1005-1015, October 2009.
8. Per Henrik Borgstrom, Nils Peter Borgstrom, Michael J. Stealey, Brett Jordan, Gaurav S. Sukhatme, Maxim A. Batalin, and William J. Kaiser, "Design and Implementation of NIMS3D, a Three-Dimensional Cabled Robot for Actuated Sensing Applications", In *IEEE Transactions on Robotics*, Vol. 25/2, p 325, 2009.
9. David A. Caron, Beth Stauffer, Stefanie Moorthi, Amarjeet Singh, Maxim A. Batalin, Eric Graham, Mark Hansen, William J. Kaiser, Jnaneshwar Das, Arvind Pereira, Amit Dhariwal, Bin Zhang, Carl Oberg and Gaurav S. Sukhatme, "Macro- to fine-scale spatial and temporal distributions and dynamics of phytoplankton and their environmental driving forces in a small subalpine lake in southern California, USA", In *Journal of Limnology and Oceanography*, 2008
10. Amarjeet Singh, Maxim A. Batalin, Stealey, M., Zhang, B., Dhariwal, A., Stauffer, B., Moorthi, S., Oberg, C., Pereira, A., Chen, W., Lam, Y., Caron, D., Hansen, M., Kaiser, W. and Sukhatme, G., "Human assisted robotic

team campaigns for aquatic monitoring," In *Journal of Field Robotics, Special Issue: Special Issue on Teamwork in Field Robotics*, Volume 24, Issue 11-12, pp. 969–989, 2007.

11. Maxim Batalin and Gaurav S. Sukhatme, "The Design and Analysis of an Efficient Local Algorithm for Coverage and Exploration Based on Sensor Network Deployment", In *IEEE Transactions on Robotics*, 23(4), pp. 661-675, Aug 2007.
12. Winston Wu, Alex Bui, Maxim A. Batalin, Duo Liu and William J. Kaiser, "Incremental Diagnosis Method for Intelligent Wearable Sensor Systems," In *IEEE Transactions on Information Technology in Biomedicine*, 11(5), pp. 553-562, Sep 2007.
13. Winston Wu, Alex Bui, Maxim A. Batalin, L.A. Au, J.D. Binney and W.J. Kaiser, "MEDIC: Medical Embedded Device for Individualized Care", In *Artificial Intelligence in Medicine*, 42(2), pp. 137-152, doi: 10.1016/j.artmed.2007.11.006, Feb 2008.
14. Maxim Batalin and Gaurav S. Sukhatme, "Coverage, Exploration and Deployment by a Mobile Robot and Communication Network," In *Telecommunication Systems Journal, Special Issue on Wireless Sensor Networks*, Vol. 26, No. 2, pp. 181-196, 2004.

Refereed Book Chapters

1. Batalin, M and Sukhatme, G.S., "Sensor Network-Mediated Multi-Robot Task Allocation", In *Multi-Robot Systems. From Swarms to Intelligent Automata Volume III*, Proceedings from the Third International Naval Research Laboratory Multi-Robot Systems Workshop, edited by Lynne E. Parker, Frank E. Schneider and Alan C. Schultz, Springer, pp. 27-38, Mar 2005.
2. Amarjeet Singh, Maxim A. Batalin, M., Stealey, M., Chen, W., Lam, Y., Hansen, M., Harmon, T., Sukhatme, G., Kaiser, W., "Mobile robot sensing for environmental applications", In *Field and Service Robotics, Springer Tracts in Advanced Robotics, Proceedings of the 6th International Conference on Field and Service Robotics*, Volume 42, 2008, pp 125-135
3. Maxim A. Batalin and Gaurav S. Sukhatme, "Spreading Out: A Local Approach to Multi-robot Coverage," In *Distributed Autonomous Robotic Systems 5, Proceedings of the International Symposium on Distributed Autonomous Robotic Systems*, Chapter 10, pp. 373-382, 2002.

Refereed Conference and Workshop Papers (chronological order, latest-first):

1. Maxim A. Batalin, Eric Yuen, Brett Dolezal, Denise Smith, Christopher Cooper and Jalal Mapar, "PHASER: Physiological Health Assessment System for emergency responders," In *Proceedings of the IEEE International Conference on Body Sensor Networks (BSN)*, pp. 1 – 6, 6-9 May 2013.
2. Xiaoyu Xu, Maxim A. Batalin, Yan Wang and William J. Kaiser, "Gait Quality Evaluation Method For Post-stroke Patients," In *Proceedings of the IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, pp. 613 – 616, 25-30 March 2012.
3. Yang Wang, Xiaoyu Xu, Maxim A. Batalin, and William J. Kaiser, "Detection of Upper Limb Activities using Multimode Sensor Fusion," In *Proceedings of the IEEE Biomedical Circuits and Systems Conference*, pp. 436 – 439, 10-12 Nov. 2011
4. Xiaoyu Xu, Digvijay Singh, Maxim A. Batalin, and William J. Kaiser, "StepFit: A Novel Fitness Evaluation System," In *Proceedings of the 6th International Conference on Body Area Networks*, pp. 34-39, 2011.

5. Lawrence Au, Alex Bui, Maxim Batalin, Xiaoyu Xu, and William Kaiser, "CARER: Efficient Dynamic Sensing for Continuous Activity Monitoring," In *Conference Proceedings of the IEEE Engineering in Medicine and Biology Society*, 2011:2228-32. doi: 10.1109/IEMBS.2011.6090422, 2011.
6. Celia Xu, Maxim Batalin, Bruce Dobkin and William Kaiser, "Robust Hierarchical System for Classification of Complex Human Mobility Characteristics in the Presence of Neurological Disorders," In *Proceedings of the International Conference on Body Sensor Networks*, pp. 65 – 70, 23-25 May 2011.
7. Lawrence K. Au, Maxim Batalin, Brett Jordan, Celia Xu, Alex A. T. Bui, Bruce Dobkin, and William J. Kaiser, "Demonstration of whi-fit: a wireless-enable cycle restorator," In *Proceedings of the Wireless Health 2010*, pages 190-191, New York, NY, USA, 2010 (Best Demo Award)
8. Per Henrik Borgstrom, Maxim A. Batalin, Gaurav Sukhatme, and William J. Kaiser, "Weighted Barrier Functions for Computation of Force Distributions with Friction Cone Constraints," In *Proceedings of the IEEE International Conference on Robotics and Automation*, pp. 785 – 792, 3-7 May 2010.
9. L. Au, M. Batalin, T. Stathopoulos, A. Bui, W. Kaiser, "Episodic Sampling: Towards Energy-Efficient Patient Monitoring with Wearable Devices", In *Proceedings of the 31st Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC'09)*, pp. 6901 – 6905, Sept 2 - 7, 2009.
10. Per Henrik Borgstrom, Brett L. Jordan, Maxim A. Batalin, Gaurav Sukhatme, William J. Kaiser, "Field-Tests of a Redundantly Actuated Cabled Robot for Environmental Sampling Application," In *Proceedings of the IEEE Conference on Automation Science and Engineering*, pp. 615 – 620, 2009
11. Per Henrik Borgstrom, Amarjeet Singh, Gaurav Sukhatme, Maxim Batalin, and William Kaiser, "Energy Based Path Planning for a Novel Cabled Robotic System," In *Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems*, pp. 1745 – 1751, 2008
12. W.H. Wu, L.K. Au, B. Jordan, T. Stathopoulos, M.A. Batalin, W.J. Kaiser, A. Vahdatpour, M. Sarrafzadeh, M. Fang and J. Chodosh, "Smart Cane System: An Assistive Device for Geriatrics", In *Proceedings of the Third International Conference on Body Area Networks (BodyNets 2008)*, Article No. 2, ISBN: 978-963-9799-17-2, March 13-17, 2008.
13. L.K. Au, W.H. Wu, M.A. Batalin, and W.J. Kaiser, "Active Guidance Towards Proper Cane Usage," In *Proceedings of the 5th International Workshop on Wearable and Implantable Body Sensor Networks*, pp. 205 - 208, June 1-3, 2008.
14. Per Henrik Borgstrom, Peter Nils Borgstrom, Michael Stealey, Brett Jordan, Gaurav Sukhatme, Maxim A. Batalin, William Kaiser, "Generation of Energy Efficient Trajectories for NIMS3D, a Three-Dimensional Cabled Robot", In *Proceedings of the IEEE International Conference on Robotics and Automation*, pp. 2222 – 2227, 19-23 May 2008.
15. Michael J. Stealey, Amarjeet Singh, Maxim A. Batalin, Brett Jordan, William J. Kaiser, "NIMS-AQ: A novel system for autonomous sensing of aquatic environments", In *Proceedings of the IEEE International Conference on Robotics and Automation*, pp. 621 - 628, 19-23 May 2008.
16. Victor Chen, Maxim A. Batalin, William Kaiser, Gaurav Sukhatme, "Towards Spatial and Semantic Mapping in Aquatic Environments", In *Proceedings of the IEEE International Conference on Robotics and Automation*, pp. 629 - 636, 19-23 May 2008.
17. Lawrence K. Au, Winston H. Wu, Maxim A. Batalin, Dustin H. McIntire and William J. Kaiser, "MicroLEAP: Energy-aware Wireless Sensor Platform for Biomedical Sensing Applications", In *Proceedings of the IEEE Biomedical Circuits and Systems Conference*, pp. 158 - 162, 27-30 Nov. 2007
18. Per Henrik Borgstrom, Peter Nils Borgstrom, Michael Stealey, Brett Jordan, Gaurav Sukhatme, Maxim A. Batalin, William Kaiser, "Discrete Trajectory Control Algorithms for NIMS3D, an Autonomous Underconstrained Three-Dimensional Cabled Robot", In *Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems*, pp. 253 - 260, Oct 29 - Nov 2, 2007, Sheraton Hotel, San Diego, CA, USA

19. Winston Wu, Maxim A. Batalin, L.K. Au, A.A.T Bui, W.J. Kaiser, "Context-aware Sensing of Physiological Signals," In *Proceedings of the 29th Conference of IEEE Engineering in Medicine and Biology Society*, pp. 5271 – 5275, Aug 23-26, 2007, Lyon, France.
20. Winston Wu, Maxim A. Batalin, A.A.T. Bui, M. Sarrafzadeh and W.J. Kaiser, "A novel method and testbed for sensor management and patient diagnosis," In *Proceedings of the Joint Workshop On High Confidence Medical Devices, Software, and Systems (HCMDSS) and Medical Device Plug-and-Play (MD PnP) Interoperability*, pp. 76 – 87, Boston, MA, June 2007.
21. Amarjeet Singh, Maxim A. Batalin, Chen, W., Stealey, M., Jordan, B., Fisher, J., Harmon, T., Hansen, M. and Kaiser, W., "Autonomous robotic sensing experiments at San Joaquin river", In *Proceedings of the IEEE International Conference on Robotics and Automation*, pp. 4987 - 4993, April 10-14, 2007, Rome, Italy.
22. Brett L. Jordan, Maxim A. Batalin, William J. Kaiser, "NIMS RD: A Rapidly Deployable Cable Based Robot", In *Proceedings of the IEEE International Conference on Robotics and Automation*, pp. 144 - 150, April 10-14, 2007, Rome, Italy
23. Amarjeet Singh, Krause, A., Guestrin, C., Kaiser, W., Maxim A. Batalin, "Efficient planning of informative paths for multiple robots," In *Proceedings of the International Joint Conference on Artificial Intelligence*, pp. 2204-2211, January 6-12, 2007, Hyderabad, India
24. Amarjeet Singh, Diane Budzik, Willie Chen, Maxim A. Batalin and William J. Kaiser, "Multiscale Sensing: A new paradigm for actuated sensing of high frequency dynamic phenomena," In *Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems*, pp. 328 – 335, Beijing, China, October 2006.
25. Per Henrik Borgstrom, Michael Stealey, Maxim A. Batalin and William J. Kaiser, "NIMS RD-3D: A Novel Rapidly Deployable Robot for 3-Dimensional Applications," In *Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems*, pp. 3628 - 3635, Beijing, China, October 2006.
26. Maxim A. Batalin and Gaurav S. Sukhatme, "The Analysis of an Efficient Algorithm for Robot Coverage and Exploration based on Sensor Network Deployment," In *Proceedings of the IEEE International Conference on Robotics and Automation*, pp. 3478 - 3485, Barcelona, Spain, Apr 2005.
27. Maxim A. Batalin, William Kaiser, Richard Pon, Gaurav S. Sukhatme, Gregory Pottie, Yan Yu, Jason Gordon, Mohammad H. Rahimi, and Deborah Estrin, "Task Allocation for Event-Aware Spatiotemporal Sampling of Environmental Variables," In *Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems*, pp. 721 – 728, Edmonton, Canada, Aug 2005.
28. Richard Pon, Maxim A. Batalin, Jason Gordon, Mohammad H. Rahimi, William Kaiser, Gaurav S. Sukhatme, Mani Srivastava, and Deborah Estrin, "Networked Infomechanical Systems: A Mobile Wireless Sensor Network Platform," In *Proceedings of the IEEE/ACM Fourth International Conference on Information Processing in Sensor Networks (IPSN-SPOTS)*, pp. 376-381, Apr 2005.
29. Maxim A. Batalin and Gaurav S. Sukhatme, "Using a Sensor Network for Distributed Multi-Robot Task Allocation," In *Proceedings of the IEEE International Conference on Robotics and Automation*, pp. 158-164, New Orleans, Louisiana, Apr 2004.
30. Maxim A. Batalin, Gaurav S. Sukhatme, and Myron Hattig, "Mobile Robot Navigation using a Sensor Network," In *Proceedings of the IEEE International Conference on Robotics and Automation*, pp. 636-642, New Orleans, Louisiana, Apr 2004.
31. Maxim A. Batalin, Gaurav S. Sukhatme, Yan Yu, Mohammad H. Rahimi, Gregory Pottie, William Kaiser, and Deborah Estrin, "Call and Response: Experiments in Sampling the Environment," In *Proceedings of the ACM SenSys*, pp. 25-38, Baltimore, Maryland, Nov 2004.
32. Richard Pon, Maxim A. Batalin, Yan Yu, Deborah Estrin, Gregory Pottie, Mani Srivastava, Gaurav S. Sukhatme, and William Kaiser, "Self-Aware Distributed Embedded Systems," In *Proceedings of the 10th IEEE International Workshop on Future Trends of Distributed Computing Systems*, pp. 102-107, May 2004.
33. Maxim A. Batalin, Gaurav S. Sukhatme, Yan Yu, Mohammad H. Rahimi, Gregory Pottie, William Kaiser, and Deborah Estrin, "Sensor Network as a Distributed Manager for Multi-Robot Task Allocation," In *Proceedings of the ACM SenSys*, pp. 320-321, November 2003, Los Angeles, CA

34. Maxim A. Batalin and Gaurav S. Sukhatme, "Efficient Exploration Without Localization," In *Proceedings of the IEEE International Conference on Robotics and Automation*, pp. 2714-2719, Taipei, Taiwan, Sep 2003.
35. Maxim A. Batalin and Gaurav S. Sukhatme, "Dynamic Coverage via Multi-Robot Cooperation," In *Proceedings from the International Workshop on Multi-Robot Systems*, pp. 295-296, Washington DC, Mar 2003.
36. Maxim A. Batalin and Gaurav S. Sukhatme, "Sensor Network-based Multi-Robot Task Allocation," In *Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems*, pp. 1939-1944, Las Vegas, Nevada, Oct 2003.
37. Maxim A. Batalin and Gaurav S. Sukhatme, "Coverage, Exploration and Deployment by a Mobile Robot and Communication Network," In *Proceedings of the International Workshop on Information Processing in Sensor Networks*, pp. 376-391, Palo Alto Research Center (PARC), Palo Alto, Apr 2003.
38. Maxim A. Batalin and Gaurav S. Sukhatme, "Sensor Coverage using Mobile Robots and Stationary Nodes," In *Proceedings of the SPIE Conference on Scalability and Traffic Control in IP Networks II (Disaster Recovery Networks)*, pp. 269-276, Aug 2002.

Refereed Posters

1. Christopher B. Cooper, Jonathan Y. Lee, John Carney, Brett A. Dolezal, Worawan Sirichana and Maxim A. Batalin, "An automated application for analysis of incremental exercise tests," In *European Respiratory Journal*, vol. 44, September 1, 2014.
2. David Boland, Brett Dolezal, Maxim Batalin, Denise Smith, Christopher Cooper, "Individualized Feedback to Firefighters via PHASER-Net Enhances Adherence and Benefits of Exercise Training," In *MEDICINE AND SCIENCE IN SPORTS AND EXERCISE* 46 (5), p. 119, 2014
3. Marlon Abrazado, Brett Dolezal, Maxim Batalin, Thomas Storer and Christopher Cooper, "Investigation Of The Relationship Between Heart Rate And Accelerometry During Treadmill Exercise," In *MEDICINE AND SCIENCE IN SPORTS AND EXERCISE* 45 (5), p. 665, 2013
4. Michael Lau, Brett A. Dolezal, Thomas W. Storer, Marlon Abrazado and Maxim Batalin, "Validity of Two Wireless-enabled Bioelectrical Impedance Analyzers for Measurement of Body Fat Percentage," In *MEDICINE AND SCIENCE IN SPORTS AND EXERCISE* 45 (5), p. 451, 2013

Invited Talks

1. "PHASER: Physiological Health Assessment System for emergency responders," At the *IEEE International Conference on Body Sensor Networks (BSN)*, Boston, May 2013.
2. "Physiological Health Assessment System for Emergency Responders," At the *Congressional Fire Service Institute National Advisory Committee Meeting*, Washington, DC, May, 2013
3. "Physiological Health Assessment System for Emergency Responders," At the *Workshop on performance requirements for emergency responder interoperable and compatible electronic safety equipment*, Atlanta, GA, September 20, 2012
4. "Physiological Health Assessment System for Emergency Responders (PHASER): A Program for Emergency Responder Safety and Protection," At the *Firehouse World*, San Diego Convention Center, San Diego, CA, Feb. 26 - Mar. 2, 2011.

5. "Physiological Health Assessment System for Emergency Responders," At the *IAFF Redmond Symposium, Crossroads: Health, Safety and EMS*, New York, NY, Aug 14-18, 2011.
6. "Physiological Health Assessment System for Emergency Responders," At the *WPI Body Area Network Workshop*, Worcester, MA, June, 2011.
7. "Physiological Health Assessment System for Emergency Responders," At the *Fire PPE Symposium*, Charlotte, NC, May 2-4, 2011.
8. "Machine learning techniques for automated classification of human motion, " at the *Human Motion Monitoring and Classification Workshop*, San Diego, CA, May 2010.
9. "Actuated Sensor Systems: From Automated Environmental Sampling to Physiological Monitoring of Humans," At the *NEATO Robotics*, Palo Alto, CA, October, 2010
10. "Mobile robot sensing for environmental applications", At the *6th International Conference on Field and Service Robotics*, Chamonix, France, July 2007.
11. "A novel method and testbed for sensor management and patient diagnosis," At the *Joint Workshop On High Confidence Medical Devices, Software, and Systems (HCMDSS) and Medical Device Plug-and-Play (MD PnP) Interoperability (HCMDSS/MD PnP'07)*, Boston, MA, June 2007.
12. "Autonomous robotic sensing experiments at San Joaquin river," At the *IEEE International Conference on Robotics and Automation (ICRA)*, April 10-14, 2007, Rome, Italy
13. "Sensor Network-Mediated Multi-Robot Task Allocation." At the *Third International Naval Research Laboratory Multi-Robot Systems Workshop*, Washington DC, March 2005.
14. "Actuated Sensor Systems for Environmental Observation," At the *iRobot Corporation*, Boston, MA, 2006
15. "Using a Sensor Network for Distributed Multi-Robot Task Allocation," At the *IEEE International Conference on Robotics and Automation*, New Orleans, Louisiana, Apr 2004.
16. "Mobile Robot Navigation using a Sensor Network," At the *IEEE International Conference on Robotics and Automation*, New Orleans, Louisiana, Apr 2004.
17. "Call and Response: Experiments in Sampling the Environment," At the *ACM SenSys*, Baltimore, Maryland, Nov 2004.
18. "Sensor Network as a Distributed Manager for Multi-Robot Task Allocation," At the *ACM SenSys*, November 2003, Los Angeles, CA
19. "Collaboration between Mobile Robots and Sensor Networks," At the *Intel Research Seminar Series*, Portland, OR, August 2003
20. "Dynamic Coverage via Multi-Robot Cooperation," At the *International Workshop on Multi-Robot Systems*, Washington DC, Mar 2003.
21. "Sensor Network-based Multi-Robot Task Allocation," At the *IEEE/RSJ International Conference on Intelligent Robots and Systems*, Las Vegas, Nevada, Oct 2003.
22. "Coverage, Exploration and Deployment by a Mobile Robot and Communication Network," At the *International Workshop on Information Processing in Sensor Networks*, Palo Alto Research Center (PARC), Palo Alto, Apr 2003.

23. "Sensor Coverage using Mobile Robots and Stationary Nodes," At the *SPIE Conference on Scalability and Traffic Control in IP Networks II (Disaster Recovery Networks)*, San Diego, CA, Aug 2002.
24. "Spreading Out: A Local Approach to Multi-robot Coverage," At the *International Symposium on Distributed Autonomous Robotic Systems*, Fukuoka, Japan, 2002.

Inventions and Patents: 1 granted patent, 9 innovation disclosures and patents pending;

Memberships

IEEE: <http://www.ieee.org>

Center for Robotic and Embedded Systems (CRES): <http://www-robotics.usc.edu/~cres>

NSF Center for the Embedded Networked Sensing (CENS): <http://www.cens.ucla.edu>

New York Academy of Sciences: <http://www.nyas.org>

Reviewing

Journals: IEEE Transactions on Robotics and Automation, IEEE Computer Journal, IEEE/ACM Transactions on Networking, IEEE Transactions on Mobile Computing, Autonomous Robots, IEEE Pervasive Computing magazine, IEEE Transactions on Systems, Man and Cybernetics, IEEE Transactions on Embedded Computing Systems

Conferences: IEEE International Conference on Robotics and Automation (ICRA), IEEE/RSJ International Conference of Robots and Systems (IROS), International Symposium on Distributed Autonomous Robotic Systems, IEEE Wireless Communications and Networking Conference, International Conference on Body Area Networks, IEEE Conference on Automation Science and Engineering, IEEE/ASME International Conference on Advanced Intelligent Mechatronics