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Computer Science & Engineering
Robotic Sensor Networks Lab.
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EDUCATION

Bogazici University, Istanbul, Turkey
Ph.D. in Electrical & Electronics Engineering, 2006 - 2013
Thesis: Multi-robot Communication and Task Coordination
Advisor: Prof. Isil Bozma / Co-advisor: Prof. Aysin Ertuzun

Bogazici University, Istanbul, Turkey
M.Sc. in Systems and Control Engineering, *2003 - 2006*
Thesis: Robot Parts' Rearrangement - Sensor Uncertainty Reduction Using Particle Filters
Advisor: Prof. Isill Bozma / Co-advisor: Prof. Aysin Ertuzun

Erciyes University, Kayseri, Turkey
B.Sc. in Control and Computer Engineering, *1997 - 2002*

WORK EXPERIENCE RELATED TO ACADEMIA

University of Minnesota, Minneapolis, MN, US
Post-doctoral Researcher in Robotic Sensor Networks Lab., Computer Science & Engineering, 2014- Current

Bogazici University, Istanbul, Turkey
Post-doctoral Researcher in Intelligent Systems Lab., Electrical & Electronics Engineering, 2013 - 2014

Bogazici University, Istanbul, Turkey
Teaching and Research Assistant in Electrical & Electronics Engineering, 2006 - 2013

Bogazici University, Istanbul, Turkey
Research Assistant in Systems and Control Engineering, *2003 - 2006*

RESEARCH INTERESTS

Active localization algorithms, multi-robot communication and task allocation, navigation, precision agriculture, formation control, electro-mechanical design of robots.

PROJECTS

NSF (National Science Foundation), "1111638", RI: Large: Collaborative Research: A Robotic Network for Locating and Removing Invasive Carp from Inland Lakes, 2014-current, Post-Doc.

TUBITAK (The Scientific and Technological Research Council of Turkey), "111E285", Hybrid Mapping and Scene Perception by Comparison Methodology for Multirobots, 2012- 2013, Phd Student; 2013- 2014, Post-Doc.

Bogazici University BAP (Scientific Research Projects), "5720", Different Perception Types and Sharing via Communication for Multirobot Systems, 2011-2012, Phd Student.

Bogazici University BAP, "5169", Design and Manufacturing EDARG2 Robot, 2010-2012, Phd Student.

Bogazici University BAP, "09HA210D", Scene Recognition with Multirobots, 2009-2010, Phd Student.

TUBITAK, "107M240", Scene Recognition, Navigation and Coordination on Mobile Robots based on Attention, 2007-2010, PhD Student.

PUBLICATIONS

JOURNALS

H. Bayram, J. V. Hook, V. Isler, "Gathering Bearing Data for Target Localization", *IEEE Robotics and Automation Letters*, vol. 1, no. 1, pp. 369-374, 2016.

H. Bayram, H.I. Bozma, "Coalition Formation Games for Dynamic Multirobot Tasks", *The International Journal of Robotics and Research*, vol. 35, no. 5, pp. 514-527, 2016.

H. Bayram, H.I. Bozma, "Assistance Networks for Dynamic Multirobot Tasks", *Autonomous Robots*, vol. 40, no. 4, pp. 615-630, 2016.

H. Bayram, H.I. Bozma, "Decentralized Network Topologies in Multirobot Systems", *Advanced Robotics*, vol. 28, no. 14, pp. 967-982, 2014.

BOOK CHAPTER

H. Bayram, H. I. Bozma, "Coalition Formation Games for Dynamic Multirobot Tasks", *Algorithmic Foundations of Robotics XI*, Springer International Publishing, 37-54, 2015.

CONFERENCES

H. Bayram, K. Doddapaneni, N. Stefas, V. Isler, "Active Localization of VHF Collared Animals with Aerial Robots", *The Twelfth Annual IEEE International Conference on Automation Science and Engineering* (CASE), Texas, USA, 2016, (to be presented).

N. Stefas, H. Bayram, V. Isler, "Vision-Based UAV Navigation in Orchards", *The 5th IFAC Conference on Sensing, Control and Automation for Agriculture* (AGRICONTROL), Seattle, WA, USA, 2016 (to be presented).

H. Bayram, J. V. Hook, V. Isler, "Gathering Bearing Data for Target Localization", *IEEE International Conference on Robotics and Automation* (ICRA), Stockholm, Sweden, 2016.

H. Bayram, H.I. Bozma, "Coalition Formation Games for Dynamic Multirobot Tasks", *The Eleventh International Workshop on the. Algorithmic Foundations of Robotics* (WAFR), Istanbul, 2014.

H. Bayram, H. I. Bozma, "Multirobot Communication Network Topology via Centralized Pairwise Games", *IEEE International Conference on Robotics and Automation* (ICRA), Karlsruhe, Germany, pp. 2506-2511, 2013.

H. Karaoguz, H. Bayram, H.I. Bozma, "Communication Integrated Control Architecture in Multirobot Systems", *ICRA Workshop on Towards Fully Decentralized Multi-Robot Systems: Hardware, Software and Integration*, Karlsruhe, Germany, 2013.

H. Bayram, H.I. Bozma, "Pairwise vs coalition game networks for multi-robot systems", *18th IFAC World Congress*, Milan, Italy, pp. 13570-13575, 2011.

H. Bayram, H.I. Bozma, "Planar multi-robot realizations of connectivity graphs using genetic algorithms", IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Taipei, Taiwan, pp. 5163-5168, 2010.

H. Bayram, H.I. Bozma, "Multi-robot Navigation with Limited Communication - Deterministic vs Game-theoretic Networks", *IEEE/RSJ International Conference on Intelligent Robots and Systems* (IROS), Taipei, Taiwan, pp. 1825-1830, 2010.

H. Bayram, A. Ertüzün, H.I. Bozma, "Event Driven Parts' Moving under Sensory Inaccuracy: Particle Filter Approach", *IEEE International Conference on Robotics and Automation* (ICRA), Orlando, FL, USA, pp.2029-2034, 2006.

INVITED TALKS

Gathering Bearing Data for Target Localization. Invited talk at the "On-line Decision-making in Multi-robot Coordination" workshop at RSS 2016.

TEACHING RELATED EXPERIENCE

Bogazici University, Courses Assisted as TA

EE 201 Electrical Circuits I
EE 202 Electrical Circuits II
EE 450 Control Technology & Design
EE 451 Introduction to Robot Control
EE 497 Java Programming
EE 552 Digital Control