

CURRICULUM VITAE

Dr. Yehuda Elmaliah

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Personal Details

First Name: Yehuda
Surname: Elmaliah
Date of birth: September 17, 1976
Place of birth: Israel
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Education

PhD, 2009 Institute: Computer Science Department, Bar Ilan University, Ramat Gan,
Supervisors: Prof. Gal A. Kaminka
Subject: Coordinated Multi-Robot Surveillance

MSc, 2004 Institute: Computer Science Department, Bar Ilan University, Ramat Gan,
Supervisor: Prof. Gal A. Kaminka
Subject: Single-Operator Control of Multi-Robot Teams

BSc, 1998 Institute: Computer Science Department, Ashkelon college.
Studies: Computer Science and Mathematics

Academic Appointments

2018-present Senior lecturer, school of computer science, COMAS
2011–2018 Dean of the school of computer science at the college of
management academic studies, Rishon Lezion (COMAS)
2011 Senior lecturer at the school of computer science, college
of management academic studies, Rishon Lezion (COMAS)
2008 Lecturer at the school of computer science, college
of management academic studies, Rishon Lezion
(COMAS)

Professional Experience

2007–present Co-Founder and CEO, CogniTeam (www.cogniteam.com)
2014-2019 Committee member of the technological incubator, Innovation authority, Ministry of Economy
2016-Present Board member at BladeRanger (<http://www.bladeranger.com/>). Cogniteam is co-founder of BladeRanger

Research Interests

1. Robot and handheld mapping
 2. Multi robot patrolling, Multi robot coordination
 3. Navigation and obstacle avoidance for outdoor robots
 4. SLAM (Simultaneous Localization and Mapping)
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Teaching Experience

Lecturer:

Introduction to Computer Science	Undergraduate;	COMAS
Introduction to AI Robotics	Undergraduate;	COMAS
Algorithms I	Undergraduate;	COMAS
Algorithms II	Undergraduate;	COMAS, Ashkelon College
Algorithms programming in Java	Undergraduate;	COMAS, Ashkelon College
Data Bases	Undergraduate;	COMAS
Object Oriented Programming	Undergraduate;	Bar-Ilan University, COMAS

Awards

2011	Best researcher award, COMAS
2009	Outstanding lecturer award, COMAS
2004	President scholarship for excellent Ph.d. students (Bar-Ilan University)
2003	Outstanding lecturer award, Ashkelon College

Grants

1. Handheld 3D Mapping, Meymad - Ministry of Economy 2012-2014.
2. DARPA grand challenge, ROBIL, 2012-2018.
3. Multi Robot patrol algorithms, Magnetron- Ministry of Economy, 2010.

Publications

Peer reviewed papers

- [1] Yehuda Elmaliach, Noa Agmon, and Gal A. Kaminka. Multi-Robot Area Patrol under Frequency Constraints. *Annals of Math and Artificial Intelligence*, volume 57 number 3-4 pages 293 – 320, 2010
- [2] Yehuda Elmaliach and Gal A. Kaminka. Robust Multi-Robot Formations under Human Supervision and Control. *Journal of Physical Agents*, 2(1):31–52, 2008.

Papers and Abstracts - Proceedings of Conferences

- [1] Gal A. Kaminka, Meytal Traub, Yehuda Elmaliach, Dan Erusalimchik, and Alex Fridman. On the Use of Teamwork Software for Multi-Robot Formation Control (An Extended Abstract). *In Proceedings of the Twelfth International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-13)*, 2013.
- [2] Noa Agmon, Chien-Liang Fok, Yehuda Elmaliach, Peter Stone, Christine Julien, and Sriram Vishwanath. On Coordination in Practical Multi-Robot Patrol. *Proceedings of IEEE International Conference on Robotics and Automation (ICRA-12)*, 2012.
- [3] Noa Agmon and Yehuda Elmaliach. Robot Navigation with Weak Sensors. *To be in proceeding of the Autonomous Robots and Multirobot Systems workshop of AAMAS 2011 Conference*.
- [4] Yehuda Elmaliach, Dan Erusalimchik and Ari Yakir. On Robot Death and Robot Life In Robot Teams. *In Proceedings of the Israeli Conference on Robotics (ICR2010)*. Extended abstract
- [5] Noa Agmon, Yehuda Elmaliach and Yaron Mor. Robot Indoor Navigation With Possible Limited Sensors. *In Proceedings of the Israeli Conference on Robotics (ICR2010)*. Extended abstract
- [6] Yehuda Elmaliach, Asaf Shiloni, and Gal A. Kaminka. A Realistic Model of Frequency-Based Multi-Robot Fence Patrolling. *In Proceedings of the Seventh International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-08)*, pp. 63–70, 2008.
- [7] Yehuda Elmaliach, Noa Agmon, and Gal A. Kaminka. Multi-robot area patrol under frequency constraints. *In Proceedings of IEEE International Conference on Robotics and Automation (ICRA-07)*, 2007.
- [8] Yehuda Elmaliach, Noa Agmon and Gal Kaminka. Multi-Robot Area Patrol under Frequency Constraints. *Proceedings of 9th Bar Ilan Symposium of Foundation of Artificial Intelligence (BISFAI-2007)*
- [9] Yehuda Elmaliach and Sharoni Feldman. BDI-Based Teamwork between a UGV and UAV Flyer. *In Proceedings of the Israeli Conference on Robotics (ICR2008)*. Extended abstract
- [10] Meir Kalech, Gal A. Kaminka, Amnon Meisels, and Yehuda Elmaliach. Diagnosis of multi-robot coordination failures using distributed CSP algorithms. *In Proceedings of the Twenty-First National Conference on Artificial Intelligence (AAAI-06)*, 2006.
- [11] Meir Kalech, Gal A. Kaminka, Amnon Meisels, and Yehuda Elmaliach. Diagnosis of multi-robot coordination

failures using distributed csp algorithms. In *Proceedings of the ECAI workshop on Model-Based Systems*, 2006. A slightly modified version appears in AAAI 2006.

[12] Gal A. Kaminka and Yehuda Elmaliach. Experiments with an ecological interface for monitoring tightly-coordinated robot teams. In *Proceedings of IEEE International Conference on Robotics and Automation (ICRA-06)*, 2006.

[13] Gal A. Kaminka and Yehuda Elmaliach. Single operator, multiple robots: Call-request handling in tight-coordination tasks. In *Proceedings of Distributed Autonomous Robotic Systems 8*. Springer-Verlag, 2006.

[14] Yehuda Elmaliach and Gal A. Kaminka. Towards single-operator control of tightly-coordinated robot teams. In *Proceedings of the AAMAS 2004 Workshop on Coalitions and Teams*, 2004.

[15] Gal A. Kaminka, Yehuda Elmaliach, Inna Frenkel, Ruti Glick, Meir Kalech, and Tom Shpigelman. Towards a comprehensive framework for teamwork in behavior-based robots. In *Proceedings of the Eighth Conference on Intelligent Autonomous Systems (IAS-8)*. 2004.

Patents

Robotic Cooperative Systems

Gal A. Kaminka, Assaf Friedler, Ari Yakir, Dan Erusalimchik, Yehuda Elmaliach. International application #PCT/IL2016/051163. US provisional filed 2015.