

# Anil Özdemir

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## Academic Profile

- 2019 – present    **Research Associate in Next-Generation Artificial Intelligence**, Department of Computer Science, The University of Sheffield  
PIs: Dr Michael Mangan, Dr Eleni Vasilaki
- 2015 – 2019    **PhD in Robotics and Computational Intelligence**, Department of Automatic Control and Systems Engineering (ACSE), The University of Sheffield  
Thesis title: *Synthesis and Analysis of Minimalist Control Strategies for Swarm Robotic Systems*  
Supervisors: Dr Roderich Groß, Dr Andreas Kolling
- 2011 – 2015    **BSc in Mechanical Engineering**, Faculty of Engineering, Yeditepe University, Turkey. Awarded with first-class honours (*GPA 3.66/4.00*)
- 2010 – 2014    **BSc in Mathematics**, Faculty of Arts and Sciences, Yeditepe University, Turkey. Awarded with first-class honours (*GPA 3.99/4.00*)

## Research Publications

### Journal Articles

- 1 A. Özdemir, M. Gauci, S. Bonnet and R. Groß, 'Finding consensus without computation,' *IEEE Robotics and Automation Letters*, vol. 3, no. 3, pp. 1346–1353, 2018, ISSN: 2377-3766. DOI: 10.1109/LRA.2018.2795640.

### Conference Proceedings

- 1 M. D. Hall, A. Özdemir and R. Groß, 'Self-reconfiguration via active subtraction with modular robots,' in *Robotics: Science and System XVI*, RSS Foundation, 2020.
- 2 A. Özdemir, J. W. Romanishin, R. Groß and D. Rus, 'Decentralized gathering of stochastic, oblivious agents on a grid: A case study with 3d m-blocks,' in *2019 International Symposium on Multi-Robot and Multi-Agent Systems (MRS)*, IEEE, 2019, pp. 245–251.
- 3 J. A. Marques, A. Özdemir, M. J. Doyle, D. Rus and R. Groß, 'Decentralized pose control of modular reconfigurable robots operating in liquid environments,' in *2019 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, IEEE, 2019, pp. 4855–4861.
- 4 A. Özdemir, M. Gauci, A. Kolling, M. D. Hall and R. Groß, 'Spatial coverage without computation,' in *2019 IEEE International Conference on Robotics and Automation (ICRA)*, IEEE, 2019, pp. 9674–9680.
- 5 A. Özdemir, M. Gauci and R. Groß, 'Shepherding with robots that do not compute,' in *Artificial Life Conference Proceedings 14*, MIT Press, 2017, pp. 332–339. DOI: 10.7551/eal\_a\_056.

## Oral Presentations

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- 2018 ■ International Conference on Robotics and Automation (Brisbane, Australia)
- Departmental Postgraduate Research Symposium (Sheffield, UK)
- 2017 ■ European Conference on Artificial Life (Lyon, France)
- Engineering Faculty Researcher Symposium (Sheffield, UK)
- 2016 ■ UK-Japan Workshop on Bio-Inspired Soft Robotics (Cambridge, UK)

## Awards

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- 2015 ■ **Departmental Prize Scholarship**, Automatic Control and Systems Engineering, The University of Sheffield. For PhD course fees and maintenance stipend for over three years.
- 2011 ■ **University Scholarship**, Mechanical Engineering, Yeditepe University. For undergraduate course fee over four years.
- 2010 ■ **University Scholarship**, Mathematics, Yeditepe University. For undergraduate course fee over four years.

## Professional Experience

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- Peer Reviewing ■ **Journals** ACM Transactions on Autonomous and Adaptive Systems, Autonomous Robots, IEEE Robotics and Automation Letters, Swarm Intelligence,
- **Conferences** Int. Conf. Autonomous Agents and Multiagent Systems (AAMAS), Int. Conf. Robotics and Automation (ICRA), Int. Joint Conf. Artificial Intelligence (IJCAI), Int. Conf. Intelligent Robots and Systems (IROS), Robotics: Science and Systems (RSS),
- Organisation ■ **DARS 2016** Member of the local organisation committee and editor of the conference brochure
- **Sheffield Robotics** Seminar organisation (2017–2018) and member of Operations Committee (2020–)
- **Department of Computer Science** Researcher representative for Equality, Diversity & Inclusion committee (2020–)
- Misc ■ **AIhub.org** Content producer for community-driven AI news webpage (2021–)
- **ML Challenge** Participated in Machine Learning reproducibility challenge 2020

## Skills

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- Programming ■ Proficient in Python, C/C++, R, Shell scripting.
- Libraries/packages including PyTorch, TensorFlow, OpenAI Gym, OpenCV, Qt.
- Working knowledge of FORTRAN, Haskell, MATLAB/Simulink, Perl, HTML, CSS, JavaScript.
- Misc ■ Git, GPU and High-Performance Computing, Unity 3D, Webots and V-REP robotics simulators.