

André Gonçalves Mateus

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Short Bio

Since September of 2021, I have been an Experienced Research at Ericsson Research with the Internet-of-things and Cyber-Physical Systems team. I hold a M.Sc. (2015) and a Ph. D. (2022) in Electrical and Computer Engineering from Instituto Superior Técnico, Universidade de Lisboa. Since 2018, I have been a Member of the Institute of Electrical and Electronics Engineers (IEEE). My research interests include Computer Vision and Robotics, particularly Visual Servoing; Active Vision; Structure-from-Motion; and SLAM.

Experience

- **Experienced Researcher** [2021-]
 - at Ericsson Research, Stockholm

Activities

- **Research Assistant** [2015-2021]
 - at Institute of Systems and Robotics, Lisbon

Education

- **Ph.D. Student** [2017-2022]
 - of the Doctoral Programme in Electrical and Computer Engineering at Instituto Superior Técnico, University of Lisboa
- **M.Sc. in Electrical and Computer Engineering** [2012-2015]
 - from Instituto Superior Técnico, University of Lisboa;
Major in Systems, Decision, and Control;
Minor in Computers;
Master Thesis: “Human-Aware Navigation in Networked Robot Systems”
- **B. Sc. in Electrical and Computer Engineering** [2009-2012]
 - from Instituto Superior Técnico, University of Lisboa;

Research Projects

- **INSIDE:** Intelligent Networked Robot Systems for Symbiotic Interaction with Children with Impaired Development
 - Research Assistant [2015-2017]
- **SocRob** – Soccer Robots and Society of Robots
 - Research Assistant [2014-2016]
- **STORE-SLAM**
 - Ph. D. Grant [2021]

Awards

- **Academic Merit (two times)** [2012,2013]

Research Grants

- **Ph. D. grant** [2017-2021]
 - Awarded by the Portuguese Foundation for Science and Technology (FCT).
Reference: PD/BD/135015/2017

Publications

- **Journal Papers**
 - [1] **A. Mateus**, O. Tahri, A. P. Aguiar, P. U. Lima, and P. Miraldo. On Incremental Structure-from-Motion using Lines. *IEEE Transactions on Robotics (T-RO)*, 2021.
 - [2] F. S. Melo, A. Sardinha, D. Belo, M. Couto, M. Faria, A. Farias, H. Gambôa, C. Jesus, M. Kinarullathil, P. Lima, L. Luz, **A. Mateus**, I. Melo, P. Moreno, D. Osório, A. Paiva, J. Pimentel, J. Rodrigues, P. Sequeira, R. Solera-Ureña, M. Vasco, M. Veloso, and R. Ventura. Project INSIDE: towards autonomous semi-unstructured human-robot social interaction in autism therapy. *Artificial Intelligence in Medicine (AIM)*, 96:198–216, 2019.
 - [3] **A. Mateus**, D. Ribeiro, P. Miraldo, and J. C. Nascimento. Efficient and Robust Pedestrian Detection using Deep Learning for Human-Aware Navigation. *Robotics and Autonomous Systems (RAS)*, 113:23–37, 2019.
- **Conference Papers**
 - [4] **A. Mateus**, P. U. Lima, and P. Miraldo. An observer cascade for velocity and multiple line estimation. In *IEEE Int'l Conference on Robotics and Automation (ICRA)*, 2022.
 - [5] **A. Mateus**, S. Ramalingam, and P. Miraldo. Minimal solvers for 3d scan alignment with pairs of intersecting lines. In *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, pages 7234–7244, 2020.
 - [6] **A. Mateus**, O. Tahri, and P. Miraldo. Active Estimation of 3D Lines in Spherical Coordinates. In *American Control Conf. (ACC)*, pages 3950–3955, 2019.
 - [7] **A. Mateus**, O. Tahri, and P. Miraldo. Active Structure-from-Motion for 3D Straight Lines. In *IEEE/RSJ Int'l Conf. Intelligent Robots and Systems (IROS)*, pages 5819–5825, 2018.
 - [8] D. Ribeiro, **A. Mateus**, P. Miraldo, and J. C. Nascimento. A Real-Time Deep Learning Pedestrian Detector for Robot Navigation. In *IEEE Int'l Conf. Autonomous Robot Systems and Competitions (ICARSC)*, pages 165–171, 2017.

- [9] **A. Mateus**, P. Miraldo, P. U. Lima, J. Sequeira, Human-aware navigation using external omnidirectional cameras. In Iberian Robotics Conference, 2015, pp. 283–295.

Press Coverage

- Our work in Human-Aware Navigation [3], and [7] (with D. Ribeiro, P. Miraldo, and J. C. Nascimento) has been mentioned in a Matlab Community Video [2018]. [Link](#).

Teaching

- **Optimization and Algorithms** [2018-2019]
 - Teaching Assistant
- **Systems Programming** [2021]
 - Teaching Assistant

Students

- **M. Sc.**
 - Soraia Mendes Ferreira (co-supervisor);
Title: “Mobile Arm Visual Servoing for Object Manipulation”

Languages

- **Mother tongue:** Portuguese
- **Foreign language:** English (proficient), Swedish (Basic)