Thomas Gossard

Robotics Engineer

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Profile

Robotics engineer with expertise across the full robotic stack, including system identification, state estimation, perception, modeling, and control. Experienced in developing integrated robotic systems from sensing and physical modeling to real-time control and deployment.

Education

2020 – 2021 **M2 – Advanced Systems and Robotics**, *Sorbonne University*, Paris
Nonlinear and robust control, system identification, state estimation

2017 – 2021 **Master's Degree in Science and Executive engineering**, *Mines Paris – PSL University*, Paris
Applied mathematics, robotics, computer vision, automatic control

2015 – 2017 **Scientific Preparatory Classes (PCSI/PSI*)**, *Collège Stanislas*, Paris, France
Courses in mathematics, physics and engineering sciences

Experience

Professional Experience

2025 – now **AI and Control Engineer**, *Wandercraft*, Paris
Whole Body Control Team

2021 – 2025 **PhD Researcher – Cognitive Systems**, *University of Tübingen*, Germany
Table tennis Robot control with event cameras.

2021 **Master Thesis – Intelligent Autonomous Systems**, *TU Darmstadt*, Germany
Bayesian system identification based on a differentiable implementation RNEA, with probabilistic parameter estimation for robot dynamics.

2020 **Robotics Intern**, *Sony AI*, Tokyo, Japan
Table tennis simulation and racket inverse control problems, as well as RGB-D perception pipelines and robot arm control for manipulation tasks.

2019 **GNSS Data Fusion Intern**, *Sony Aerial Robotics*, Zurich, Switzerland
Kalman filtering for GNSS–IMU fusion with satellite selection and prototyping with event-based vision sensors.

2018 – 2019 **Research Intern (part-time)**, *Parrot*, Paris, France
Attitude estimation of drone gimbals using IMU data with complementary, Madgwick, Mahony and Kalman filters.

Miscellaneous

2022-Now **Reviewer**
Reviewer international conferences and workshops: ICRA, IROS, RAL, Neurips and CVPR.

2022-2025 **Teaching Assistant**, *University of Tübingen*, Tübingen, Germany
Supervising the Mobile Robot Practical Course: ROS2 and programming of standard robotics algorithms in C++

2017-2019 **School Project – Hydrocontest**, *Mines Paristech*, Paris, France
Participating in the student international naval competition : - Design and construction of a boat capable of transporting a 200 kg payload - Electronic Manager (power supply, command and information chain)

Skills

Python	Numpy, Opencv, PyTorch, ROS2, Casadi
C/C++	OpenCV, ROS2, Eigen, Ceres
CAD	Fusion 360, KiCad, EasyEDA
Others	Git, Latex, Office Suite
Langues	French (native), English (native), German (fluent), Japanese (basic)

Publications

2025 **TT4D: A Pipeline and Dataset for Table Tennis 4D Reconstruction From Monocular Videos**. Under review at *ACMM*. Nima Rahmanian*, Daniel Kienzle*, Thomas Gossard*, Dvij Kalaria, Rainer Lienhart, S. Shankar Sastry.

2025 **BlurBall: Joint Ball and Motion Blur Estimation for Table Tennis Ball Tracking**. Preprint. Thomas Gossard, Filip Radovic, Andreas Ziegler, Andreas Zell.

2025 **TT3D: Table Tennis 3D Reconstruction**. *CVPR Workshops (CVSport)*. Thomas Gossard, Andreas Ziegler, Andreas Zell.

2025 **Sound-Based Spin Estimation in Table Tennis: Dataset and Real-Time Classification Pipeline**. *IEEE STAR Workshop*. Thomas Gossard*, Julian Schmalzl*, Andreas Ziegler, Andreas Zell.

2025 **BiasBench: A Reproducible Benchmark for Tuning the Biases of Event Cameras**. *CVPR Workshops (EventVision)*. Andreas Ziegler*, David Joseph*, Thomas Gossard*, Emil Moldovan, Andreas Zell.

2025 **Detection of Fast-Moving Objects with Neuromorphic Hardware**. *ICRA*. Andreas Ziegler, Karl Vetter, Thomas Gossard, Jonas Tebbe, Sebastian Ott, Andreas Zell.

2024 **eWand: An Extrinsic Calibration Framework for Wide-Baseline Frame-Based and Event-Based Camera Systems**. *ICRA*. Thomas Gossard*, Andreas Ziegler*, Levin Kolmar, Andreas Zell.

2024 **Table Tennis Ball Spin Estimation with an Event Camera**. *CVPR Workshops (CVSport)*. Thomas Gossard*, Julian Krismer*, Andreas Ziegler, Andreas Zell.

2023 **SpinDOE: A Ball Spin Estimation Method for Table Tennis Robots**. *IROS*. Thomas Gossard, Jonas Tebbe, Andreas Ziegler, Andreas Zell.