

Intelligent and Interactive Systems

Making robots learn to perceive and act with understanding

At IIS we enable autonomous robots to perceive and act flexibly and robustly in unstructured environments, leveraging machine learning methods to build perceptual, motor and reasoning skills.

We seek to answer the question: *How can we enable robots to acquire the knowledge and understanding they require to interact sensibly with unstructured environments?*

Our research addresses complete perception-action loops, from computer vision to grasping and manipulation, using reactive algorithms and/or cognitive models. Much of our work uses machine learning to enable robots to synthesize and improve complex and robust sensorimotor behavior with experience. Related areas of interest include human-robot interaction, image and video analysis, and visual neuroscience.

Working With Us

- We are hiring [two Ph.D. students](#).
- Check our thesis topics for [Bachelor and Master students](#).



Group picture taken at our retreat in Obergurgl

News

2019-06-13 Simon Haller gives an invited talk *Coding Literacy – Konzepte und Anwendungen in der Schule und im Alltag*, [Künstliche Intelligenz und Robotik als theologisch-ethische Herausforderung](#), Universität Innsbruck.

2019-06-13 Justus Piater gives an invited talk *Künstliche Intelligenz in einer menschlichen Gesellschaft*, [Künstliche Intelligenz und Robotik als theologisch-ethische Herausforderung](#), Universität Innsbruck.

- 2019-05-24 Philipp Zech and Erwan Renaudo co-organize the [2nd International Workshop on Computational Models of Affordance in Robotics](#) .
- 2019-05-02 Justus Piater gives an invited talk *Digitalization: Promises and Challenges, Möglichkeiten und Herausforderungen der Digitalisierung*, Universität Innsbruck.
- 2019-04-26 Justus Piater appears in the media: TV interview on educational and societal aspects of robot technology by ORF 2 Tirol Heute (in German).
- 2019-03-28 Simon Haller teaches a tutorial *Coding und Robotik - Makerspaces mit Einplatinencomputern.*, [eFuture-Day](#), Grillhof Vill.
- 2019-03-26 Justus Piater co-organizes the [GMAR Robotics Talk: Robotik in Fertigung, Montage und Forschung](#).
- 2019-02-20 Justus Piater gives an invited talk *Künstliche Intelligenz in der Robotik, Smart City Finale 2019*, HTL Dornbirn.
- 2019-01-10 Justus Piater gives an invited talk *High-Level, Skill-Based Robot Programming Using Autonomous Playing and Autonomous Testing, Taste Digitalization – CAMPUS:digi:TOUR (4)*, ICT, Universität Innsbruck.
- 2018-10-05 Justus Piater gives an invited talk *Perception of Abstract Concepts, Unconventional Sensing and Processing for Robotic Visual Perception*, Madrid, Spain.

[Older News](#)

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