

# 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 an **Assistant Professor (with Tenure-Track Option)** of Computer Science in [Embodied Artificial Intelligence and Machine Learning](#). Applications must be received by August 29, 2018.
- Check our thesis topics for [Bachelor and Master students](#).



Group picture taken at our retreat in Obergurgl

## News

2018-10-05 Justus Piater gives an invited talk *Perception of Abstract Concepts*, [Unconventional Sensing and Processing for Robotic Visual Perception](#), Madrid, Spain.

- 2018-09-21 Justus Piater gives an invited talk *Concept Learning For Robot Intelligence*, [Conference on Quantum Machine Learning Plus](#), Innsbruck, Austria.
- 2018-07-17 Simon Haller and Nicolas Stolz appear in the media: [Roboter zu Besuch in Liechtenstein](#).
- 2018-07-03 Simon Haller teaches a tutorial *Wie kann ein Roboter lernen, die Welt zu verstehen?*, Campustag BORG Schwaz, Universität Innsbruck.
- 2018-06-30 Philipp Zech, Barry Ridge, and Emre Ugur co-organize the [1st International Workshop on Computational Models of Affordance in Robotics](#).
- 2018-06-30 Justus Piater gives an invited talk *Objects, Parts, Functions, Affordances, Actions, and Tasks*, [1st International Workshop on Computational Models of Affordance in Robotics](#), Pittsburgh, PA, USA.
- 2018-06-12 Justus Piater, Simon Haller, and Olaf Köhler appear in the media: [Music Globe und Cubeat](#).
- 2018-06-12 Simon Haller teaches a tutorial *Robotics im Klassenzimmer*, [InDay Teachers 2018](#), Universität Innsbruck.
- 2018-04-24 Justus Piater gives an invited talk *Intelligente Roboter – Freund, Feind oder Hirngespinnst?*, [Popular science talk within the WissensDurst series](#), Innsbruck, Austria.
- 2018-04-11 Justus Piater is a panelist at a public discussion on *AI – Wird der Mensch ersetzbar?*, [organized by the Faculty of Law and the European Law Students' Association Austria](#) in Innsbruck, Austria.

[Older News](#)

## Postal Address

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