

# 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.



Group picture taken at our retreat in Obergurgl

## **Working With Us**

Check our thesis topics for [Bachelor and Master students](#).

## **News**

- 2018-07-03 Simon Haller teaches a tutorial *Wie kann ein Roboter lernen, die Welt zu verstehen?*, Campustag BORG Schwaz, Universität Innsbruck.
- 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.
- 2018-04-10 Philipp Zech, Justus Piater, and Cornelia Vidovic appear in the media: [Roboter bauen? Ist ja kinderleicht](#) .
- 2018-03-23 Simon Haller teaches a tutorial *Was sind Roboter? Wie verstehen Roboter? Wie baut man einen einfachen Roboter?*, Campustag BG/BRG Sillgasse, Universität Innsbruck.
- 2018-02-09 Simon Haller and Nicolas Stolz teach a tutorial *Digitale Selbstverteidigung: Security und Privacy im Internet*, Safer Internet Tag, Jugendzentrum Tivoli.
- 2017-12-13 Simon Haller teaches a tutorial *Build your own Mini Robot*, AK Informatiklehrer, Universität Innsbruck.
- 2017-12-01 Justus Piater appears in the media: [Frage der Tradition. Interview about Open Access publishing by Zukunft Forschung](#), the science and research magazine of the University of Innsbruck.

[Older News](#)

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