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

- Check our thesis topics for Bachelor and Master students.

Group picture taken at our retreat in Obergurgl

News

2021-11-24	Justus Piater is a panelist at a public discussion on Privacy in the Digital Age, online. (Organized by ELSA Innsbruck)
2021-10-22	Justus Piater gives an invited talk *Robotik und KI in der Medizin – nur Bedarfserweckung?* at Medical Update Hall 2021 – Fit für das neue Jahrzehnt, UMIT, Hall in Tirol.
2021-08-26	Justus Piater contributes a talk *Digital Science at the University of Innsbruck* at Aurora Research Conference Digital Society & Global Citizenship, Vrije Universiteit Amsterdam. [Abstract]
2021-08-24	Justus Piater contributes a lecture *Picking and Placing* at 2021 GMAR Summer School, Villa Blanka, Innsbruck.
2021-07-01	Justus Piater and Matteo Saveriano give an invited talk *Making Robots Learn to Perceive and Act with Understanding* at Workshop and Open Lab on Field Robotics - Interdisciplinary aspects of robotics and its applications in outdoor scenarios, NOI Techpark, Bolzano, Italy.
2021-05-26	Justus Piater contributes a talk *Intelligente und interaktive Systeme* at GMAR Robotics Science Talks, online.
2021-03-24	Justus Piater gives an invited lecture *Machine Learning, Perception, And Abstract Concepts* at Invited lecture at Ontario Tech U, Canada, online. [Abstract]
2021-01-28	Matteo Saveriano gives an invited talk *Making robots to learn from human observation?* at Showcasing Young Austrian Scholars and Scientists, Austrian cultural forum, Ottawa, online.
2021-01-14	Matteo Saveriano gives an invited talk *Hierarchical action decomposition and motion learning for the execution of manipulation tasks* at Hello Tyrol calling! Robotics Talk online, GMAR, Innsbruck, online.
2020-11-19	Justus Piater gives an invited talk *Machine Learning in Robotics* at bAIome PI Talk, Center for Biomedical AI, University Medical Center Hamburg-Eppendorf, online. [Abstract]

Older News

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