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HEIDELBERG  
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SEIT 1386

# Predict to control

Talk by Dr. Patrick van der Smagt (Machine Learning Research Lab at VW Group)

## ABSTRACT

Mutual predictability is the key to interaction. Or in simpler terms: "experience makes teamwork". Of course, prediction isn't all that simple. We'll look at "generative AI", but without the hype, and see how we use that to learn the dynamics of complex stochastic systems, use that to predict -- and control. And give some examples, in robotics and beyond, of where this can be used.

## BIOGRAPHY

Patrick van der Smagt is director of AI research at Volkswagen Group, and leads its Machine Learning Research Lab in Munich (<https://argmax.ai>), which focuses on fundamental research on machine learning for time series modelling and optimal control. He is faculty member of the LMU Graduate School of Systemic Neurosciences and research professor at Eötvös Loránd University Budapest, and previously professor at TUM. He is the founding head of a European industry initiative on trust in AI (<https://etami.org>) and member of the AI Council of the State of Bavaria. Besides publishing some CC papers on machine learning, robotics, and motor control, he has won a number of awards, including the 2013 Helmholtz-Association Erwin Schrödinger Award for his work on controlling robots by tetraplegic patients with permanent brain implants, the 2014 King-Sun Fu Memorial Award, the 2013 Harvard Medical School/MGH Martin Research Prize, and best-paper awards at machine learning and robotics conferences and journals. Patrick is or was area chair for the large ML conferences and reviews for funding agencies around the globe.



**23rd November**  
**14.30 – 16:30**



**Im Neuenheimer Feld 205**  
**69120 Heidelberg, Germany**  
**Room: 5/104 Mathematikon**



**The seminar is**  
**moderated by**  
**Prof. Lorenzo Masia**

lorenzo.masia@ziti.uni-heidelberg.de