

# Andrii Zadaianchuk

zadaianchuk.github.io  
andrii.zadaianchuk@tuebingen.mpg.de  
+49 (1525)9404706

## Education

<b>ETH Zürich, Switzerland</b> Ph.D. Student, Max Planck ETH Center for Learning Systems	<b>04.2019 - 10.2022</b>
<b>Universität Tübingen, Germany</b> M.Sc., Graduate Training Centre of Neural Information Processing GPA: 1.1/1.0	<b>10.2016 - 09.2018</b>
<b>Moscow Institute of Physics and Technology, Russia</b> B.Sc., Applied Mathematics and Physics GPA: 4.89/5.0	<b>09.2012 - 08.2016</b>

## Experience

<b>Self-supervised Visual RL with Object-centric Representations</b> Developed autonomous RL agent that learns SotA policies in visual multi-object rearrangement and pushing tasks without a reward signal by incorporating object-centric representations and attention based goal-conditioned policies	<b>06.2020 - 10.2020</b>
<b>Independently Controllable Dynamic Components</b> Developed an active representation learning algorithm that improves representation disentanglement by 200% by learning independently controllable components in dynamic environments	<b>11.2019 - 05.2020</b>
<b>Transferable Dynamics Learning</b> Compared the out-of-distribution generalization and transfer properties of 4 SotA dynamics learning models on the real-world robotics dataset	<b>04.2019 - 07.2019</b>
<b>Online Step Size Adaptation for Stochastic Optimization</b> Developed quadratic step-size adaptation method with 10 times less sensitive hyperparameters by using quadratic approximation and proximal point methods	<b>01.2018 - 08.2018</b>

## Awards and Leadership

Awarded <b>DAAD scholarship</b> (25/600 applicants) due to clear objectives and academic achievements	<b>08.2016 - 09.2018</b>
Obtained <b>Academic scholarship for excellence studying and scientific accomplishment</b> 7 terms by being in top 8% student during each term	<b>01.2013 - 07.2016</b>
Awarded <b>Gold medal</b> in Mathematics and Physics Regional Olympiads	<b>04.2011 - 04.2012</b>
Tutored <b>Deep Learning course</b> (with up to 400 students) ETH Zürich, Switzerland	<b>10.2020 - 01.2021</b>
Tutored <b>Machine Learning course</b> (with up to 50 students) Universität Tübingen, Germany	<b>10.2017 - 07.2018</b>

## Publications

### **Self-supervised Visual Reinforcement Learning with Object-centric Representations**

International Conference on Learning Representations, 2021 (spotlight presentation)

**Andrii Zadaianchuk**, Maximilian Seitzer, Georg Martius

### **Unsupervised Learning of Independently Controllable Dynamic Components**

ICML Object-Oriented Learning (OOL): Perception, Representation, and Reasoning Workshop, 2020

**Andrii Zadaianchuk**, Georg Martius

### **A New Robotic Dataset for Transferable Dynamics Learning**

International Conference on Robotics and Automation, 2020

Diego Alejandro Agudelo-España, **Andrii Zadaianchuk**, Philippe Wenk, Aditya Garg, Joel Akpo, Felix Grimmering, Julian Viereck, Maximilien Naveau, Ludovic Righetti, Georg Martius, Andreas Krause, Bernhard Schölkopf, Stefan Bauer, Manuel Wüthrich

### **Selection of optimal physical activity classification model using measurements of accelerometer**

Information Technologies, 2016, 22(4) : 313-328.

**Andrii Zadaianchuk**, Mariia Popova, Vadim Strijov