Mike Yan Michelis

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EDUCATION

Jun 2022 - Present	**Eidgenössische Technische Hochschule Zürich — PhD at ETH AI Center**
Mar 2021 - Nov 2021	**Eidgenössische Technische Hochschule Zürich — Master's Thesis at SRL**
Sep 2020 - Mar 2021	**École Polytechnique Fédérale de Lausanne — Exchange**
Oct 2019 - Nov 2021	**Technical University of Munich — Master Robotics, Cognition, Intelligence**
Sep 2017 - Mar 2018	**Tsinghua University, Beijing — Exchange**
Oct 2015 - Sep 2019	**Technical University of Munich — Bachelor of Science in Engineering Science** Specialization in Computer Science, **Thesis**: *Unsupervised Deep Learning for Liquids*

EXPERIENCE

Apr 2019 - Sep 2019	**Technical University of Munich** — *Tutor for "Discrete Probability Theory"*
Sep 2018 - Nov 2018	**Kratzer Automation AG** — *Software Developer*
Apr 2018 - Jun 2018	**Technical University of Munich** — *Research Intern in Reservoir Computing*
Nov 2016 - Jul 2017	**Neutron Source Heinz Maier-Leibnitz FRM2** — *Student Job Data Analysis*

PUBLICATIONS

Journals

[1] (2022) Yasa, O., Toshimitsu, Y., **Michelis, M.Y.**, Jones, L.S., Filippi, M., Buchner, T. and Katzschmann, R.K., *An Overview of Soft Robotics.* Annual Review of Control, Robotics, and Autonomous Systems, 6.

[2] (2022) Dubied, **M., Michelis, M.Y.**, Spielberg, A. and Katzschmann, R.K., *Sim-to-real for soft robots using differentiable fem: Recipes for meshing, damping, and actuation.* IEEE Robotics and Automation Letters, 7(2), pp.5015-5022.

Conferences

[1] (2024) Lingsch, L., **Michelis, M.Y.**, de Bezenac, E., Perera, S.M., Katzschmann, R., and Mishra, S., *Beyond Regular Grids: Fourier-Based Neural Operators on Arbitrary Domains.* In 2024 in International Conference on Machine Learning (ICML).

[2] (2023) Lee, J.H., **Michelis, M.Y.**, Katzschmann, R. and Manchester, Z., *Aquarium: A Fully Differentiable Fluid-Structure Interaction Solver for Robotics Applications.* In 2023 IEEE International Conference on Robotics and Automation (ICRA). IEEE.

[3] (2022) Gravert, S.D.*, **Michelis, M.Y.***, Rogler, S., Tscholl, D., Buchner, T. and Katzschmann, R.K., *Planar Modeling and Sim-to-Real of a Tethered Multimaterial Soft Swimmer Driven by Peano-HASELs.* In 2022 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) (pp. 9417-9423). IEEE.

[4] (2022) Nava, E., Zhang, J.Z., **Michelis, M.Y.**, Du, T., Ma, P., Grewe, B.F., Matusik, W. and Katzschmann, R.K., *Fast aquatic swimmer optimization with differentiable projective dynamics and neural network hydrodynamic models.* In International Conference on Machine Learning (pp. 16413-16427). PMLR.

[5] (2021) **Michelis, M.Y.** and Becker, Q., *On linear interpolation in the latent space of deep generative models.* Spotlight Presentation in Geometrical and Topological Representation Learning Workshop at International Conference on Learning Representations (ICLR).

SKILLS

Programming	Python / Java / C / C++	**English**	Very Fluent, C2
Deep Learning	PyTorch / TensorFlow	**German**	Native Speaker
Research Areas	Representation Learning / Differentiable Simulation / Physics-Informed Learning	**Chinese**	Very Fluent
		Dutch	Very Fluent
		French	Good

ACHIEVEMENTS

- (2022) Best Presentation Award at Soft Robots for Humanity Workshop at IROS 2022

- (2022) Top 10% of reviewers at ICML 2022

- (2021) Spotlight Presentation in Geometrical and Topological Representation Learning Workshop at International Conference on Learning Representations (ICLR) 2021

- (2015) Won 3rd Prize in Finals of the Flemish Mathematics Olympiad + 3 years finalist in a row

- (2015) Entered Second Round of the Flemish Physics and Chemistry Olympiads

- (2014) Won 2nd Prize in Finals of Flemish Mathematics Olympiad + Best Participant of 11th grade

- (2014) Finalist of the Piano Concours de Liège

- (2013) Finalist of the Junior Mathematics Olympiad

August 7, 2024, ZURICH