Duc-Hoan Nguyen

CONTACT INFORMATION

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RESEARCH INTERESTS

Machine Learning, Learning Theory, Inverse Problems, Domain Adaptation.

EMPLOYMENT

Reseacher in Artificial Intelligence Laboratory, Thang Long University 2019 - 2020
Lecturer in Department of Mathematics and Informatics, Thang Long University 2018 - 2020

EDUCATION

- Doctor in Mathematics, Johannes Kepler University, Linz, Austria Sep 2020 - Nov 2023
  - Supervisors: Prof. Sergei Pereverzyev, Prof. Bernhard A. Moser and Dr. Werner Zellinger.
  - Thesis: Regularization in Reproducing Kernel Hilbert Spaces for Covariate Shift Domain Adaptation
- Master 2 University of Limoges, Limoges, France 2016 - 2017

  Master ACSYON: Algorithmics, Symbolic Computation and Numerical Optimization.
- Master 1 in Hanoi Institute of Mathematics, Vietnam 2015 - 2016

  International Master Program in Mathematics
- Bachelor of Science in Vietnam National University 2010 - 2014
  - Senior Advisor: Professor Ho Dang Phuc
  - Senior Thesis: Statistical Methods in Quality Control.

PUBLICATIONS

- M.-C. Dinu, M. Holzleitner, M. Beck, **D. H. Nguyen**, A. Huber, H. Eghbal-zadeh, B. Moser, S. V. Pereverzyev, S. Hochreiter, and W. Zellinger. *Addressing parameter choice issues in unsupervised domain adaptation by aggregation*. In: International Conference on Learning Representations (ICLR), selected as **notable-top-5% paper**, 2023.
- E. R. Gizewski, L. Mayer, B. A. Moser, **D. H. Nguyen**, S. Pereverzyev Jr, S. V. Pereverzyev, N. Shepeleva, and W. Zellinger. *On a regularization of unsupervised domain adaptation in RKHS*. Applied and Computational Harmonic Analysis, 57:201–227, 2022.
- W. Zellinger, N. Shepeleva, M. Dinu, H. Eghbal zadeh, **D. H. Nguyen**, B. Nessler, S. Pereverzyev, and B. A. Moser. *The balancing principle for parameter choice in distance-regularized domain adaptation*. Advances in Neural Information Processing Systems, 2021.

PREPRINTS

- **D. H. Nguyen**, W. Zellinger, and S. Pereverzyev. *On regularized Radon-Nikodym differentiation*. Submitted, 2023. Available at https://arxiv.org/abs/2308.07887
- **D. H. Nguyen**, S. Pereverzyev, and W. Zellinger. *General regularization in covariate shift adaptation*. Submitted, 2023. Available at https://arxiv.org/abs/2307.11503

RESEARCH EXPERIENCES

- Work on the Skin fungal diseases detection 2019 - 2020
  - Project leader: Prof. Nguyen Tien Dung
  - Associated between the Torus Company, Toulouse, France and Artificial Intelligence Laboratory, Thang Long University.
- Work on the Hanoi Formal Abstract project 2018 - 2020
  - Project leader: Prof. Thomas Hales.
  - Associated between the University of Pittsburgh and Thang Long University.
- Internship in Hanoi Institute of Mathematics, Vietnam Oct, 2017 - Dec, 2018
  - Advisor: Prof. Dinh Nho Hao.
  - Subject: Inverse source problem.
- Internship in INSA, Rouen, France Mar - Aug, 2017
  - Advisor: Prof. Jean-Guy Caputo and Prof. Arnaud Knippel.
  - Subject: Inverse source problem in a forced wave graph.

TEACHING EXPERIENCES

- Exercise session: Mathematics for AI, Summer and Winter semesters in 2022, 2023.
- Exercise session: Discrete Mathematics , Spring and Fall semesters in 2019.

AWARDS AND FELLOWSHIPS

- Master scholarship, LabEX Sigma Lim, University of Limoges, France. 2016 - 2017
- Annual Scholarship for excellent students, Vietnam National University, 2012 - 2014

COMPUTER SKILLS

- Software: MATLAB, AMPL, SeDuMi.
- Programming: C/C++, Python, LEAN.

REFERENCES

⋆ Prof. Sergei Pereverzyev
Johann Radon Institute for Computational and Applied Mathematics
Email: sergei.pereverzyev@oeaw.ac.at

⋆ Prof. Dinh Nho Hao
Hanoi Institute of Mathematics
Vietnam Academy of Science and Technology
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⋆ Prof. Jean-Guy Caputo
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