

NIKOLA HRISTOV KONSTANTINOV

IST Austria, Am Campus 1, 3400 Klosterneuburg, Austria
Website: <https://nkonstan.pages.ist.ac.at/>, Email: nkonstan@ist.ac.at

EDUCATION

- 2017 – Present **IST Austria: PhD Student**
- Supervisor: Prof. Christoph H. Lampert
- Main research interest: *Trustworthy Machine Learning*
- Part of the **ELLIS PhD Program**; Exchange host: Prof. Nicolò Cesa-Bianchi
- 2013 – 2017 **University of Oxford: Master in Mathematics and Statistics, Grade: 1.1**
- Master Thesis: “*Kernel Dependence Measures for Unsupervised Learning*”
with supervisor Prof. Dino Sejdinovic
- Focus on Probability Theory, Stochastic Analysis, Statistics
- 2005 – 2013 **Sofia High School of Mathematics**
- Bulgarian High School Diploma, grade 5.99 out of 6
- Extracurricular classes in Mathematics, Informatics and English

WORK EXPERIENCE

- Summer of 2019 **Amazon.com, Berlin, Germany: Applied Research Internship (3 months)**
- Group: Intelligent Cloud Control; Mentor: Paul Vazquez
- Evaluation and model comparison of predictive models for cloud computing
- Summer of 2016 **ATASS Sports, Exeter, UK: Research Internship (7 weeks)**
- Statistical modelling for sports prediction
- Experience in statistical programming with R and manipulating large datasets
- Summer of 2015 **IST Austria: Research Internship (11 weeks)**
- Supervisor: Prof. Nick Barton
- Mathematical models of evolution: quantifying the effects of various genetic phenomena on spatially extended populations

PUBLICATIONS

- 2021 **N. K.**, Christoph H. Lampert: Fairness-Aware Learning from Corrupted Data
Preprint: <https://arxiv.org/abs/2102.06004>
- 2021 **N. K.**, Christoph H. Lampert: Fairness Through Regularization for LTR
Preprint: <https://arxiv.org/abs/2102.05996>
- 2020 **N. K.**, Elias Frantar, Dan Alistarh, Christoph H. Lampert: On the Sample Complexity of Adversarial Multi-Source PAC Learning
In: *International Conference on Machine Learning (ICML)*, 2020
- 2019 **N. K.**, Christoph H. Lampert: Robust Learning from Untrusted Sources
In: *International Conference on Machine Learning (ICML)*, **Long Talk**, 2019
- 2018 Dan Alistarh, Torsten Hoefler, Mikael Johansson, **N. K.***, Sarit Khirirat, Cedric Renggli: The Convergence of Sparsified Gradient Methods
In: *Conference on Neural Information Processing Systems (NeurIPS)*, 2018
- 2018 Dan Alistarh, Chris De Sa, **N. K.***: The Convergence of Stochastic Gradient Descent in Asynchronous Shared Memory
In: *ACM Symposium of Principles of Distributed Computing (PODC)*, 2018
* **Alphabetic order**

AWARDS AND SCHOLARSHIPS

- Academic
- *PODC student travel award*, SIGOPS, 2018
 - *Davies Prize for MMath Part C*, Jesus College, Oxford, 2017
 - *Department of Statistics Prize for MMath Part A*, Oxford, 2015
 - *Open Scholarship*, Jesus College, Oxford – 3 awards (2014-2016)
 - *Bulgarian National Scholarship* for gifted students – 4 awards (2008 – 2011)
- Olympiads
- 20th international “DUEL” competition 2012 (Czech Republic): *First place*
 - Princeton University Mathematical Competition 2011, Power Round (Team Project): *Third Place*
 - Junior Balkan Mathematical Olympiad 2008: *Bronze medal*

SKILLS

- IT skills
- Experienced with:** Python, Tensorflow, NumPy, R, LaTeX, Ubuntu
Have worked with: C++, Matlab, HTML, Mathematica
- Languages
- Fluent:** English, Bulgarian
Conversational: German, Russian

MISCELLANEOUS

- Reviewing
- NeurIPS 2021, ICML 2021, ICLR 2020, FOCS 2020, PODC 2020
- Teaching
- IST Austria: Teaching Assistant**
- 02.2020 – 04.2020: *Formal Methods for Learned Systems*
 - 11.2018 – 01.2019: *Deep Learning with Tensorflow*
 - 10.2018 – 11.2018: *Statistical Machine Learning*
- Responsibilities
- IST Austria: ML meetup organizer**
- 2020 – 2021: Organizing a reading group for the ML students at IST Austria
- IST Austria: Student representative in Data Science**
- 2018 – 2020: Representing Data Science students at IST; providing feedback about related postgraduate courses; welcoming first-year Data Science students
- Oxford University Bulgarian Society**
- 2015 – 2016: *President* – organising weekly talks, film nights, joint meetings with other university societies; maintaining the society's website
 - 2014 – 2015: *Secretary* – communicating with members and applicants
- Summer Schools
- Machine Learning Summer School (MLSS), Madrid 2018**
- Two weeks of talks about various areas of machine learning, taught by world-leading experts in the respective fields
- Hobbies
- Sports:** running, bouldering, yoga, (table) tennis; **Others:** reading fiction