

# NIKOLA HRISTOV KONSTANTINOV

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## EDUCATION

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- 2017 – Present      **Institute of Science and Technology Austria: PhD Candidate**
- Supervisor: Prof. Christoph Lampert
  - Main research interest: Robust Machine Learning
  - First-year rotations in:
    - Transfer Learning (with Prof. Christoph Lampert)
    - Distributed Optimization (with Prof. Dan Alistarh)
    - Game Theory (with Prof. Krishnendu Chatterjee)
- 2013 – 2017      **University of Oxford: Master in Mathematics and Statistics, with First-class**
- Master Thesis: “Kernel Dependence Measures for Unsupervised Learning” with supervisor Prof. Dino Sejdinovic
  - First-class score in all four years completed
  - Jesus College Davies Prize for performance in Final Examinations 2017
  - Department of Statistics Prize for FHS Mathematics and Statistics Part A 2015
  - Open Scholarship from Jesus College, Oxford – in 3 consecutive years
- 2005 – 2013      **Sofia High School of Mathematics**
- Bulgarian High School Diploma with a score of 5.99 out of 6
  - Extracurricular classes in Mathematics, Informatics and English

## WORK EXPERIENCE

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- Summer of 2016      **ATASS Sports, Exeter, UK: 7 weeks**
- Statistical Modelling for Sports Prediction: worked on four team projects supervised by members of the company's research team
  - Experience in statistical programming with R and manipulating large datasets
  - Individual project on training a neural network for football prediction
- Summer of 2015      **Institute of Science and Technology Austria: 11 weeks**
- Supervisor: Prof. Nick Barton
  - Research in mathematical models of evolution: quantifying the effects of various genetic phenomena on spatially extended populations

## Publications

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- 2018      Dan Alistarh\*, Torsten Hoefler, Mikael Johansson, **Nikola Konstantinov**, Sarit Khirirat, Cedric Renggli: The Convergence of Sparsified Gradient Methods  
To appear: *Conference on Neural Information Processing Systems (NIPS)*, 2018  
\* Alphabetic order
- 2018      Dan Alistarh\*, Chris De Sa, **Nikola Konstantinov**: The Convergence of Stochastic Gradient Descent in Asynchronous Shared Memory  
In: *ACM Symposium of Principles of Distributed Computing (PODC)*, 2018  
\* Alphabetic order

## EXTRACURRICULAR ACTIVITIES

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- Responsibilities      **IST Austria: Student representative in Data Science**
- 2018 – 2019: Representing Data Science students on meetings with faculty; providing feedback about related postgraduate courses; welcoming first-year students interested in Data Science

### **Oxford University Bulgarian Society**

- 2015 – 2016: President – organising weekly talks, film nights, joint meetings with other university societies; updating the society's website
- 2014 – 2015: Secretary – assisting the president in organisational matters; communicating with members and prospective applicants

### Achievements

#### **Mathematics Competitions**

- 20th international “DUEL” competition (Czech Republic, 2012): First place
- Princeton University Mathematical Competition 2011: part of the school team of eight students, which won Third Place in the Power Round (Team Project)
- Junior Balkan Mathematical Olympiad 2008: Bronze medal
- Bulgarian National Scholarship for Gifted students – in 4 consecutive years (2008 – 2011) due to top-three places on national mathematics competitions

### **SKILLS AND INTERESTS**

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#### IT skills

**Experienced with:** Python, R, LaTeX

**Have worked with:** C++, Matlab, HTML, Mathematica

#### Languages

**Fluent:** Bulgarian (native), English

**Conversational:** German, Russian

#### Interests

**Sports:** bouldering, fencing, football, table tennis

**Hobbies:** mountain hiking, reading fiction