



## PhD Position in Randomization in Computational Geometry and Topology

There is an opening for a fully funded Ph.D. position starting in October 2021, under the NCN SONATA grant “Probabilistic tools for high-dimensional geometric inference, topological data analysis and large-scale networks”, which aims to develop efficient algorithms for geometric and topological analysis of high-volume and high-dimensional data, using probabilistic ideas. Typical areas involve developing algorithms for geometric problems with reduced dependence on ambient dimension, dimensionality reduction for topological data analysis, sample compression for systems of bounded VC dimension, analysis of random simplicial complexes, etc.

The principal investigator is dr. Kunal Dutta <https://www.mimuw.edu.pl/~kdutta/>.

The candidate will be required to enroll in the Doctoral School of the Faculty of Mathematics, Informatics and Mechanics, University of Warsaw <https://www.mimuw.edu.pl/wdsmcs>.

We are looking for a student who

- Has a Masters in Computer Science, Mathematics or related areas.
- Is strongly motivated to pursue research problems involving several areas, such as algorithms (randomized / geometric), probabilistic combinatorics, computational geometry and topology.
- Has a strong background in discrete mathematics, probabilistic combinatorics and algorithms. Some familiarity with computational geometry, real analysis and topology would be a plus, but is not essential.
- Is proficient in English.

We offer

- Exciting and challenging research problems.
- Collaboration with researchers within and outside MIM UW.
- Decent travel funding for conferences and research visits.
- Salary: 5000 PLN per month (brutto) [Project salary + salary from the UW Doctoral School].

**Contact:** [K.dutta@mimuw.edu.pl](mailto:K.dutta@mimuw.edu.pl).

To apply for the position, please send a CV and a brief description of your research interests.

**Application deadline:** June 21, 2021.

**Application deadline for the Doctoral School:** June 28, 2021.

**Expected date of decision:** By September 28, 2021.