PhD Position in Randomized and Geometric Algorithms for Data Processing

There is an opening for two Ph.D. positions starting in October 2025, under the NCN OPUS grant "High-Dimensional Data Processing using Sample Compression and Dimensionality Reduction", which aims to develop efficient algorithms for reducing the complexity of high-volume and high-dimensional data, using geometric, probabilistic and topological ideas. Typical areas involve developing algorithms for geometric problems with reduced dependence on ambient dimension, dimensionality reduction of datasets, sample compression for systems of bounded VC dimension, etc. The principal investigator is dr. Kunal Dutta `https://www.mimuw.edu.pl/~kdutta/`.
Candidates 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 candidates who

- Have a Masters degree in Computer Science, Mathematics or related areas,
- Are strongly motivated to pursue research problems involving several areas, such as algorithms (randomized / geometric), probabilistic combinatorics, computational geometry and topology,
- Have 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,
- Are proficient in English.
- Moreover, candidates should have the status of a doctoral student from the beginning of the scholarship.

We offer

- Exciting and challenging research problems.
- Collaboration with researchers within and outside MIM UW.
- Travel funding for conferences and research visits.
- Salary: 5000 PLN per month gross (Project salary).

- Duration of the scholarship: October 2025 to June 2028 (could be extended in case of project extension).

Contact: K.dutta@mimuw.edu.pl.
To apply for the position, please send a CV and a brief description of your research interests.

Application deadline: May 28, 2025.
Application deadline for the Doctoral School: May 29, 2025.
Expected date of decision: By September 28, 2025.