Cristian Mihai Munteanu

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INTERESTS & RESEARCH

My main interests lie in mathematical research in geometrical settings and mathematical modeling in uncertainty influenced settings to predict future outcomes in social and financial enviroments.

Fraunhofer MeVis, Bremen, Germany
Researcher & C++ Software Developer
- modeled cancerous tumor removal via electrophoresis
- implemented C++ simulator and visualizer of the mathematical model in Visual Studio

ICERM @ Brown University, Providence, RI, USA
Visiting summer scholar
- researched open problems in billiard dynamics
- published a paper which extends an existing theorem to all sets of tilings

Jacobs University Bremen, Germany
Student researcher
- researched a 70 year old open problem by Colatz
- extended a theorem to a bigger class of functions

Private research project
- created geometric and stochastic models for the movement of DNA during replication
- implemented 2D and 3D models in Wolfram Mathematica that confirmed uncoiling of DNA

EDUCATION & AWARDS

UC Berkeley, California, USA
Integrated PhD in Mathematics
Current GPA 4.0 (anticipated 2019)
Thesis advisor: Prof. Michael Hutchings
UC Berkeley Full 5 year support (~$200 000)

Jacobs University Bremen, Germany
Bachelor of Science in Mathematics
Final GPA 4.0 (graduated 2014)
President's list 3 years in a row
Studienstiftung des deutschen Volkes (€7 200)
Jacobs Merit Scholarship (€45 000)
Sparkasse Bremen Scholarship (€21 600)

Colegiul National Unirea Focsani, Romania
Mathematics & Computer Science
Final GPA 98% (graduated 2011)
Valedictorian
Silver medal China Western Mathematical Olympiad
Gold medal National Mathematical Olympiad

TEACHING

UC Berkeley, California, USA
Teacher for classes:
Multivariable Calculus (x2, ~35 students)
Precalculus (~75 students)
Section instructor for single variable and multivariable calculus (x4, ~30 students)

Jacobs University Bremen, Germany
Teaching assistant for advanced mathematics classes:
Foundations of Mathematics, General Mathematics, Perspectives of Mathematics, Analysis, Stochastic Processes

SKILLS

Languages
Romanian & English (fluent)
German & French (intermediate)

Computer skills
C++, Mathematica, Matlab, GeoGebra, LaTeX, Qt.

Transdisciplinary skills
Stochastic modeling, data analysis, applying mathematics in physics, biochemistry.

Teamwork skills
Colaboration, leadership & fast decision making (aquired as a member in tennis/ basketball/volleyball/ultimate frisbee teams and mathematics/physics competitions)

PUBLICATIONS & CONFERENCES

Outer billiard and tilings of the hyperbolic plane - together with F. Dogru and E. Fischer. Involve. Vol. 8 (2015), No. 4, 637–651, DOI: 10.2140/involve.2015.8.637

- Heidelberg Laureate Forum, Heidelberg 2013
- Geometry in Mirror Symmetry, Miami 2016
- Analysis in the Large, Zürich 2016
- Symplectic field theory VIII, Berlin 2016