

E K A T E R I N A M A C H A V A R I A N I - T S V E T K O V A

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EDUCATION

New York University – Courant Institute of Mathematical Sciences, New York, NY, USA

Master of Science in Mathematics GPA: 3.97/4.0 2013

- **Coursework:** Algebra I, Intro. to Mathematical Analysis I, II, Complex Variables I, II, Linear Algebra, Elementary Number Theory I, Topology I, Partial Differential Equations I, Methods of Applied Mathematics.

American University in Bulgaria, Blagoevgrad, Bulgaria

Bachelor of Arts in Mathematics, Economics – Cum Laude 2006-2010

- **Coursework:** Calculus I, II, III, Linear Algebra, Abstract Algebra, Real Analysis, Complex Analysis, Numerical Analysis, Differential Equations, Math. Statistics, Math. Logic, Stochastic Models, Statistics, Econometrics, Time Series, Financial Calculus, Quant. Methods in Economics, Microeconomics, Macroeconomics, Money and Banking, Financial and Managerial Accounting

WORK EXPERIENCE

Private Tutor, New York, NY, USA

Mathematics Tutor – AMC, Undergraduate, Grades 5-12 2013-present

- Tutoring private students in the following subjects: American Mathematics Competitions (AMC) problems; undergraduate level Calculus I and II; high school level Algebra I, II, Trigonometry and Physics; middle school level Mathematics and Geometry.

Courant Institute of Mathematical Sciences – New York University, New York, NY, USA

Grader at Mathematics Department – Algebra I Spring 2013

- Graded homeworks and exams in a course by Prof. Greenleaf.

Adjunct Instructor at Mathematics Department – Calculus I, Math for Economics I, Quant Reasoning Math in Nature 2011- 2012

- Taught recitation classes in courses by Prof. Kalaycioglu. Graded and developed exams and quizzes.

Credit Suisse, New York, NY, USA

Business Analysis & Engineering Intern – Information Technology Chief Operating Office Team Summer 2012

- Worked as part of a team that provides business and IT managers with tools, processes and solutions to achieve world-class efficiency.

American University in Bulgaria – Mathematics Department, Blagoevgrad, Bulgaria

Teaching Assistant – Linear Algebra Spring 2010, Spring 2008

- In 2010 graded exams and homeworks in assistance to Prof. T. Ivanova. In 2008 taught students of Prof. B. Kotzev.

Teaching Assistant – Calculus III, Calculus I Fall 2009

- Assisted Prof. A. Ganchev with grading exams and homeworks, as well as taught through help sessions.

ACADEMIC ACHIEVEMENTS

Master's Thesis in Mathematics 2013

- “A Model Equation of Transonic Plasma Flow” – Used asymptotic approximations to confirm validity of the numerical solution to the model partial differential equation for an equilibrium state with transonic plasma flow. Advised by Prof. E. Hameiri.

Senior Project in Mathematics 2009–2010

- “Symmetries of 3D-space and Platonic Solids” – Utilized abstract algebra notions to find symmetries of 3D figures, mainly platonic solids. Advised by Prof. V. Iliev.

Gold Medal - International Mathematics Project Competition IMPC-2005, Almaty, Kazakhstan 2005

- “Diophantine Geometrical Figures” – Received Gold Medal after presenting the project and taking 2nd place among 50 mathematics projects from 20 countries. Classified the properties of geometric figures with natural number side lengths.

Competitions: Was trained for the Georgian National Team in Mathematics and participated in numerous competitions achieving 2nd place on National Mathematics Olympiad. Played chess professionally for 3 years achieving 1st place on Chess Team Tournament.

Scholarships: *Open Society Institute Scholarship* – Received full scholarship for undergraduate studies at American University in Bulgaria awarded on the basis of academic achievement and scholarship test performance. 2006

Georgian Foundation to Support Education and Solidarity Scholarship – Awarded for living expenses during undergraduate studies on the basis of superior performance in mathematics olympiads and competitions during high school. 2006

Honors: Dean's List at American University in Bulgaria – two times

ACTIVITIES

Chess Club President 2009 –2010

- Arranged regular meetings for club members to play chess. Personally taught club members famous chess openings. Hired professional chess coach providing formal instruction to members. Organized on-campus Chess Tournament.

Student Representative of the Mathematics Department 2009- 2010

- Represented student interests by participating in meetings of the Mathematics Department and making specific proposals.