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Date of Birth: September 17, 1982; Russia

Citizenship: Russia Nationality: Tatar Marital Status: Single

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EDUCATION

April-June 2010: Courses on parallel systems and computer modeling at Tupolev Kazan State Technical University (Kazan, Russia).

November-December 2008: Courses on information technologies in education at Ural State University of Polytechnics (Yekaterinburg, Russia).

June 2008: Ph.D. in mathematical modelling, numerical methods, program complexes (speciality code 05.13.18) at Ulyanovsk State University¹ (Ulyanovsk, Russia)

Title: "Mathematical model of superthermal ultrarelativistic particles cosmological evolution under scaling in Fokker-Planck approximation".

Advisor: Prof. Ignatyev Yu.G.

Official opponent: Prof. Galtsov D.V. (Moscow State University)

Heading organization: Department of Relativity Theory & Gravitation, Kazan State University.

2005-2008: Post graduate student at Tatar State University of Humanities & Education² (Kazan, Russia).

Faculty of Mathematics, Department of Geometry & Mathematical Modelling.

¹Until 2000 - Moscow State University in Ulyanovsk

²Until 2005 - Kazan State Pedagogical University.

Main subjects: mathematical physics, computer algebra systems, physical kinetics, mathematical modelling, numerical methods, information technologies in education, information technologies in mathematics.

2000-2005: Master in mathematical methods in economics, Kama State Institute of Polytechnics (Naberezhniye Chelny, Russia).

Department of Mathematical Modelling and Information Technologies in Economics.

Main subjects: calculus, mathematical statistics, statistics, operations research, linear programming, higher mathematics, econometrics, mathematical and economical modelling.

1998-2000: Correspondence mathematical school of sciences at Kazan State University.

Advisor: Accosiate Professor Dr. Sochneva V.A.

WORK EXPERIENCE

02.06.2010 - 31.05.2011: Postdoctoral researcher at Computer aided Design and Information Technologies Laboratory, Department of Naval Architecture and Ocean Engineering of Seoul National University³, South Korea.

Research area: computational geometry, computer aided geometric design, splines, isogeometric analysis of curves and surfaces, geometric modeling, applied geometry.

09.2009 - 05.2010: Assistant Professor at Tupolev Kazan State Technical University (Kazan University of Aircraft)

Faculty of Physics & Mathematics, Department of Special Mathematics.

Courses delivered: calculus, probability theory and statistics.

09.2007 - 05.2010: Assistant Professor at Tatar State University of Humanities & Education (Kazan, Russia), Faculty of Mathematics, Geometry & Mathematical Modelling Department. Courses delivered: information technologies in mathematical education, information technologies in geometry, information technologies in higher education, analytic geometry, differential geometry, projective geometry, higher mathematics, informatics.

09.2006 - 07.2008: Assistant Professor at Tatar State University of Humanities & Education, Faculty of Physics, Mathematics and Informatics Department.

Courses delivered: computer modelling, operations research, mathematical programming in CAS.

AWARDS AND DISTINCTIONS

- The scientific secretary of international scientific conference "The information technologies in education and fundamental sciences", Tatar State University of Humanities & Education, Kazan, 2007.
- Diploma for the best talk given at international scientific conference "The information technologies in education and fundamental sciences", Tatar State University of

³Seoul National University is a national research university in Seoul, Korea, ranked 24th in the world in publications in an analysis of data from the Science Citation Index and 47th in the world and 7th in Asia by The Times Higher Education World University Rankings 2009 as well as 81-83rd worldwide by the Global University Ranking 2009.

Humanities & Education, Kazan, 2007.

- Diploma for the best talk given at Russian summer school-seminar Modern theoretical problems of gravitation and cosmology, August 9-16, 2009, Tatar State University of Humanities & Education, Kazan-Yalchik, Russia.
- Scientific Committee member of the 3rd International Conference on innovations in Learning for the Future 2010: e-Learning (First Eurasia Meeting of GeoGebra), May 11-13, 2010, Istanbul, Turkey.
- Scientific Committee member of the II. North American GeoGebra Conference (The Ontario Institute for Studies in Education at University of Toronto, Canada, June 17-18, 2011).

COMPUTER SKILLS

Advanced knowledge in computer algebra systems (Maple, Mathematica, MatLab, Math-Cad) and it's applications in calculus, geometry, informational technologies in education, dynamic geometry environments (GeoGebra, CAR, Cabri, Geometria, Cinderella, Geonext, OpenEuclide, ArchimedesGeo3D), computer mathematical modeling, informational technologies in mathematics, e-book constructing.

LANGUAGES

Russian (native), Tatar (native), English (advanced level), Turkish (advanced level), Arabic (beginning);

INTERESTS

Playing chess, football, history of mathematics, information technologies, sayings and proverbs, open problems in mathematics.

PUBLICATIONS

Cosmology, mathematical modeling

- 1. Yu.G.Ignatyev, R.A.Ziatdinov. *Diffusion model of evolution of superthermal high-energy particles under scaling in the early Universe.*//Proceedings of the International Conference on Gravitation, Cosmology and Astrophysics dedicated to 90th anniversary of K.P. Staniukovich March 2-6, 2006, Moscow, Russia, P. 26 (in Russian).
- 2. Yu.G.Ignatyev, R.A.Ziatdinov. *Mathematical model of relic particles spectrum evolution in the range of ultrahigh energies. Maple research.*//Proceedings of the third All-Russia conference "Mathematical modelling and boundary problems", SamGTU, Samara, 2006, P. 42-45 (in Russian).

- 3. Yu.G.Ignatyev, R.A.Ziatdinov. *Diffusion model of evolution of superthermal high-energy particles under scaling in the early universe.*//Grav. Cosmol. 2006. V. 12 No. 4, P. 289-298.
- 4. Yu.G.Ignatyev, R.A.Ziatdinov. *Mathematical model of cosmic rays cosmological evolution*//Papers of the mathematical centre of N.I.Lobachevsky. Volume 34, Kazan State University, Kazan, 2006. P.109-110 (in Russian).
- R.A.Ziatdinov. Research of equilibrium recovery kinetics in the early universe by means of Maple system.//Proceedings of VIII International conference "Systems of computer mathematics and their applications" (SKMP-2007), Smolensk state university, Smolensk, 2007. P.31-33 (in Russian).
- 6. R.A.Ziatdinov. Research of processes kinetics with elementary particles in the early universe by means of Maple system.//Proceedings of the international scientific-practical conference "The information technologies in education and fundamental sciences", Tatar State University of Humanities & Education, Kazan, 2007. P.421-425 (in Russian).
- Yu.G.Ignatyev, R.A.Ziatdinov. The cosmological evolution of superthermal particles spectrum under scaling.//Proceedings of Russian summer school-seminar - Modern theoretical problems of gravitation and cosmology, September 9-16, 2007, Tatar State University of Humanities & Education, Kazan-Yalchik, Russia, P.63-68 (in Russian).
- 8. R.A.Ziatdinov. *Mathematical model of cosmic rays cosmological evolution: small times approximation.*//Papers of the mathematical centre of N.I.Lobachevsky. Volume 36, Kazan state university, Kazan, 2007. P.84-85 (in Russian).
- 9. Yu.G.Ignatyev, R.A.Ziatdinov. *Research of spectra evolution of superthermal nonequilibrium particles under scaling in early universe.*//Proceedings of 13 Russian Gravitational Conference International Conference on Gravitation, Cosmology and Astrophysics June 23-28, 2008, PFUR, Moscow, Russia (in Russian).
- 10. Yu.G.Ignatyev, R.A.Ziatdinov. *Diffusion model of evolution of superthermal high-energy particles under scaling in the early Universe. II. Early stages.*//Grav. Cosmol. 2008. V. 14 No. 4, P. 301-308.
- 11. Yu.G.Ignatyev, R.A.Ziatdinov. Asymptotic approximation of Fokker-Plank model of superthermal ultrarelativistic particles cosmological evolution under scaling in interactions.//Russian Physics Journal, V. 52 No. 2, P. 87-91.
- 12. R.A.Ziatdinov. *Mathematical model of superthermal ultrarelativistic particles cosmological evolution under scaling in Fokker-Planck approximation.*//Ph. D. Thesis in mathematical modeling, numeric methods, program complexes, Kazan, 2008 (in Russian).
- 13. R.A.Ziatdinov. *Mathematical model of superthermal ultrarelativistic particles cosmological evolution under scaling in Fokker-Planck approximation (short overview)* .//Ph. D. Thesis in mathematical modeling, numeric methods, program complexes, Ulyanovsk, 2008 (in Russian).

 Yu.G.Ignatyev, R.A.Ziatdinov. Asymptotic behavior of high-energy sector of superthermal particles in expanding universe.//Proceedings of Russian summer school-seminar - Modern theoretical problems of gravitation and cosmology, August 9-16, 2009, Tatar State University of Humanities & Education, Kazan-Yalchik, Russia, P. 57-58 (in Russian).

Geometric modeling, computational geometry

- 1. R.A.Ziatdinov. *Use of interactive geometrical system Geogebra in educational process.*//Proceedings of 10th International conference "Systems of computer mathematics and their applications" (SKMP-2009), Smolensk state university, Smolensk, 2009, P. 39-40 (in Russian).
- 2. R.A.Ziatdinov. *Geometric modelling and projective geometry problems with Geogebra.*//Proceedings of international conference on Information Technologies, March 3-5, 2010, Tomsk State Polytechnic University, Tomsk, Russia).
- 3. Rushan Ziatdinov, Tae-wan Kim. *Construction of a family of conic sections from five points taken from a cubic Bézier curve: a degenerate conic.* (submitted).
- 4. Rushan Ziatdinov. *Constrained Bézier curves*, Papers of the mathematical centre of N.I.Lobachevsky. Volume 40, Kazan State University, Kazan, 2010.
- 5. Rushan Ziatdinov. *A degenerate conics construction from control points of a planar cubic Bézier curve*, Papers of the mathematical centre of N.I.Lobachevsky. Volume 40, Kazan State University, Kazan, 2010.
- 6. Rushan Ziatdinov, Tae-wan Kim. *Piecewise Bézier curves with consecutive points constraint* (in preparation).
- 7. Rushan Ziatdinov, Tae-wan Kim. *Reparametrized Bernstein polynomial as a basis function of Bézier curve* (in preparation).

REFEREES

Professor D.Sci. Zaharov A.Yu.

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