

KONSTANTIN YAKOVLEV, PhD

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PERSONAL PROFILE

I am a highly motivated, hard-working and open-minded person possessing a sound (10+ years) experience in research, software development and education. I am a PhD in theoretical computer sciences. I used to work at the frontier research centers, top-ranked universities, well-established software development companies and dynamic startups both at my home country and abroad.

I am always enthusiastic and happy to be part of a vibrant dynamic team involved in solving complex technical problems and ensuring The Next Big Things happen day by day, every day.

KEY SKILLS AND QUALITIES

- Strong communication skills
- Administrative skills
- Team work skills
- Planning and time management skills
- High-level of computer and technological competence
- Focused professional
- Flexible and adaptive
- Patient and tolerant

AREAS OF EXPERTISE

- Languages and technologies of programming
- Object-oriented design
- Database design
- Theory of algorithms
- Methods of Artificial Intelligence
- Heuristic search
- Automated Planning and Scheduling
- Robotics
- Multi-agent systems
- Data Mining and Knowledge Discovery

EDUCATIONAL BACKGROUND

Institute for Systems Analysis , research center of Russian Academy of Sciences <i>Doctor of Philosophy in Theoretical Computer Sciences</i>	<i>Moscow, Russia 2006-2010</i>
Peoples' Friendship University of Russia , top-ranked university in Russia <i>Master of Applied Mathematics and Informatics (Honors)</i>	<i>Moscow, Russia 2004-2006</i>
Peoples' Friendship University of Russia , top-ranked university in Russia <i>Bachelor of Applied Mathematics and Informatics (Honors)</i>	<i>Moscow, Russia 2000-2004</i>

PROFESSIONAL EXPERIENCE

Federal Research Center “Computer Science and Control” , research center of Russian Academy of Sciences www.web.frccsc.ru <i>Senior Research Fellow</i>	<i>Moscow, Russia 2012 - now</i>
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- Conducting research in the following areas:
 - Artificial Intelligence
 - mobile robotics
 - unmanned aerial vehicles
 - intelligent control system
 - multi-agent systems
 - path planning
- Leading research projects funded by Russian Science Fund, Russian Fund for Basic Research, Ministry of Science and Education of Russian Federation:
 - applying for grants
 - forming a team
 - managing the research process (and taking part in it)

- representing research results at various conferences, workshops, symposiums etc.
- Organizing scientific conferences and workshops
- Supervising BSc and MSc, assisting in supervising PhD students
- Recruiting and supervising interns

National Research University “Higher School of Economics”, top-ranked university in Russia

www.hse.ru

Lecturer (part-time)

*Moscow, Russia
2014 - now*

- Teaching courses:
 - Introduction to Artificial Intelligence
 - Cognitive Architectures
 - Automated Planning
 - Intelligent Robotics
- Supervising 1-3 years student's project work
- Supervising BSc students
- Taking part in HSE Colloquiums, PhD seminars, Winter Schools etc.

Technologies for Systems Analysis, spin-off company of the Institute for Systems Analysis

www.tesyan.ru

Project manager (part-time)

*Moscow, Russia
2013 - 2015*

- Creating and shaping innovative software products based on the academic results achieved by Institute for Systems Analysis (research center of Russian academy of sciences):
 - TSA Filtratus – smart web monitoring for corporate clients
 - NetPolice Info (in cooperation with “Center of Internet Resources, LLC”) – smart analyzer of potential threats in children’s mobile traffic
 - TextApp – smart text appliance tool (intelligent search, text clustering, annotating, plagiarism detection etc.)
- Carrying out product related R&D
 - Raising funds for R&D (Skolkovo Foundation, FASIE etc.)
 - Managing ongoing R&D activities
- Presenting and promoting company products at industry specific exhibitions and fairs (CeBIT, WorldMobileCongress, StartUp Village, Slush etc.)
- Liaising with business partners interested in cooperation (joint product development with revenue sharing)

National Technology Institute (part of National Tertiary Education Consortium group of schools), private tertiary education provider

www.ntec.ac.nz

Programme Co-ordinator, acting Head of IT department

*Auckland, New-Zealand
2011 - 2012*

- Ensuring efficient, effective and a quality delivery of the IT programmes
- Coordinating and administering day-to-day academic activities of the department
- Planning the resources for the department (including staff planning)
- Managing and developing academic and administrative staff, e.g. participation in and/or organization of: induction; mentoring; performance review; and promotions; in accordance with School policy
- Teaching and developing IT courses (mostly in the area of software analysis and design, development and programming)

Institute for Systems Analysis, research center of Russian Academy of Sciences

www.isa.ru

Research assistant

*Moscow, Russia
2006-2011*

- Conducting PhD research under the supervision of scientific adviser (President of Russian Association of Artificial Intelligence, Fellow of European Coordinating Committee for Artificial Intelligence) in the field of Artificial Intelligence, e.g. in the heuristic path-finding methods for large grids

- Participating in scientific projects granted by both commercial organizations and government funds:
 - Performing literature searches; interpreting and presenting the findings of the literature searches
 - Collecting data and undertaking the appropriate analysis of data
 - Preparing reports of the research results for public presentation through conferences
 - Monitoring research findings with a view to commercial exploitation
 - Attending regular meetings with the research team and investigators
- Managing, supervising and taking part in the development of complex know-how software (C++, qt, boost, XML, CVS, JIRA, qtCreator, MS Visual Studio)

Peoples' Friendship University of Russia, top-ranked university in Russia

www.rudn.ru

Assistant lecturer (part-time)

Moscow, Russia
2006-2011

- Assisting senior lecturers in teaching broad range of subjects, e.g. programming technologies and languages (C, C++, DevCpp, MS Visual Studio, Java, NetBeans), object oriented design, databases design (SQL, MS SQL), methods of artificial intelligence
- Assisting in carrying out assessment events (tests, exams, reports, presentations)
- Providing assistance to students in their research for BSc degree (meeting with students for the consultations, providing guidance on methods and standards of research)
- Co-developing courses liaising extensively with academic and administrative staff
- Preparing and maintaining reports, statistics and presentations for internal and external use
- Coordinating the development of inter-disciplinary eLearning system
- Designing interactive educational content with the help of modern computer technologies

Ritech LTD, IT company specializing in web-systems and eLearning technologies

www.rosinternet.ru

Project manager (contractor)

Moscow, Russia
2009-2011

- Ensuring meeting project goals and deadlines
- Liaising with company clients assessing clients' needs and collecting requirements
- Analyzing clients' existing business processes and identifying options for potential IT solutions; preparing proposals and presenting them to clients
- Taking part in designing specified briefs and software specifications
- Working closely with developers and end users to ensure technical compatibility and user satisfaction

SPSR Express, package delivery and logistics services company

www.spsr.ru

Software developer

Moscow, Russia
2004-2006

- Participating in development and implementation of business applications (ERP system modules) i.e. performed coding to written specifications (Delphi, MS SQL, Starteam, PowerDesigner)
- Performing maintenance programming and correction of identified defects
- Participating in meetings with software end-users to identify requirements and recommendations
- Creating and maintaining technical documentation in accordance with corporate standards

COMMITTEES AND COUNCILS

- Regular Fellow of the Russian Association of the Artificial Intelligence (since 2014) // www.raai.org
- Member of the Scientific Council of the Russian Association of the Artificial Intelligence (2014 – now) // www.raai.org
- Organizer, Co-chair of the Programme Committee, Chair of the Organizing Committee of the National Workshop on Artificial Intelligence and Unmanned Vehicles // www.ai-uv.ru
- Member of the Scientific Commission of the Computer Sciences Faculty of Higher School of Economics (2015 – now)
- Member of the AERONET workgroup of the National Technology Initiative (2015 – now) // www.asi.ru/nti/

- Chair of the expert committee of the FASIE young entrepreneur contest UMNİK RAS, IT strand (2013 – now) // <http://umnik.fasie.ru/RAS/>
- Deputy Head of the Council of the Young Scientist of the Institute for Systems Analysis (2013-2015)

RECENT PROJECTS

- Theory, methods and models of the decentralized control of the robotics systems coalitions functioning in non-deterministic environment (Russian Science Fund, 2016-2018, participant)
- Artificial Intelligence and Dynamics Systems Theory in development of multi-layered control systems for complex technical objects operating in dynamic environments (Russian Science Fund, 2014-2016, participant)
- Intelligent control for the coalitions of complex technical objects (RFBR, 2017-2019, participant)
- Localization, mapping and trajectory planning for complex technical objects with multiple degrees of freedom (Russian Foundation for Basic Research, 2015-2017, project leader)
- Cooperative path planning for squads of interactive agents (Russian Foundation for Basic Research, 2015-2016, project leader)

RECENT PUBLICATIONS

- Bokovoy A., Yakovlev K. *Original Loop-closure Detection Algorithm for Monocular vSLAM*. In Proceedings of the 6th International Conference on Analysis of Images, Social Networks, and Texts (AIST-2017), Moscow, Russia, July 27-29. pp 210-220.
- Yakovlev, K., Andreychuk, A. *Any-Angle Pathfinding for Multiple Agents Based on SIPP Algorithm*. In Proceedings of the 27th International Conference on Automated Planning and Scheduling (ICAPS 2017), Pittsburgh, PA, USA, June 18-23, 2017. pp. 586-593.
- Vokhmintsev A., Yakovlev K. *A Real-Time Algorithm for Mobile Robot Mapping Based on Rotation-Invariant Descriptors and Iterative Close Point Algorithm* // In proceedings of 5th International Conference on Analysis of Images, Social Networks and Texts (AIST 2016), Yekaterinburg, Russia, April 7-9, 2016. pp. 357-369.
- Panov A.I., Yakovlev K. *Psychologically Inspired Planning Method for Smart Relocation Task* // In Proceedings of 7th Annual International Conference on Biologically Inspired Cognitive Architectures, BICA 2016, held July 16 to July 19, 2016 in New York City, NY, USA. pp. 115-124. Elsevier.
- Emel'yanov, S., Makarov, D., Panov, A., Yakovlev, K. *Multilayer cognitive architecture for UAV control* // Cognitive Systems Research, 39, 2016. P. 58-72

PHD THESIS TITLE

Methods and Algorithms for Automated 2D Path Planning

TECHNICAL SKILLS

- Advanced user of MS-DOS, MS Windows (2000, XP, 7, 8), MS Office (Word, Excel, PowerPoint), OpenOffice (Writer, Calc, Math, Impress), MikTEX, MS Visio, MS Project
- Programming languages and technologies: C, C++ (as well as boost, Qt libraries), C# (.NET), Java (Java framework), Pascal, Delphi, VBA, HTML, XML, UML, SQL
- Database management systems: MS SQL, MySQL, PostgreSQL
- Integrated development environments and tools: MS Visual Studio, DevCPP, NetBeans, QtCreator, CVS, SVN, GIT, StarTeam, PowerDesigner

LANGUAGES

- Native Russian
- Fluent English
- Basic German, French

HOBBIES

- Sports (cycling, swimming, badminton)
- Travelling
- Surfing
- Music (guitar)