

## KONSTANTIN YAKOVLEV, PhD

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[www.kyakovlev.me](http://www.kyakovlev.me)

### PERSONAL PROFILE



I am a highly motivated, hard-working and open-minded person possessing a sound (10+ years) experience in research, education and software development. I am a PhD in theoretical computer science. 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.

### SOFT SKILLS

- Strong communication skills
- Presentation 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

- Artificial Intelligence
- Automated Planning
- Machine Learning
- Robotics
- Languages and technologies of programming
- Object-oriented design
- Database design
- Theory of algorithms

### EDUCATIONAL BACKGROUND

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

### PROFESSIONAL EXPERIENCE

<b>Federal Research Center "Computer Science and Control"</b> , research center of Russian Academy of Sciences <a href="http://www.frccsc.ru/">http://www.frccsc.ru/</a> <i>Senior Research Fellow</i>	<i>Moscow, Russia</i> <i>2012 - now</i>
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- Conducting and supervising research in the following areas:
  - Artificial Intelligence
  - path planning
  - simultaneous localization and mapping
  - multi-agent systems
- Leading research projects funded by the Russian Science Foundation, Russian Foundation for Basic Research etc.:
  - 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 (HSE)**, top-ranked university in Russia

[www.hse.ru](http://www.hse.ru)

*Senior 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 and MSc students

**Moscow Institute of Physics and Technology (MIPT)**, top-ranked university in Russia

[www.mipt.ru](http://www.mipt.ru)

*Senior Researcher (part-time)*

*Moscow, Russia  
2018 - now*

- Taking part in the research projects on intelligent control systems
- Teaching courses for MSc students
- Supervising BSc and MSc students

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

[www.ntec.ac.nz](http://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](http://www.isa.ru)

*Research assistant*

*Moscow, Russia  
2006-2011*

- Conducting PhD research under the supervision of scientific adviser (President of Russian Association for Artificial Intelligence) on the path-finding for grid-graphs
- 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](http://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

**SPSR Express**, package delivery and logistics services company

[www.spsr.ru](http://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](http://www.raai.org)
- Member of the Scientific Council of the Russian Association of the Artificial Intelligence (2014 – now) // [www.raai.org](http://www.raai.org)
- Head of the Scientific Commission of the Computer Sciences Faculty of Higher School of Economics (2019 – now)
- Member of the Scientific Commission of the Computer Sciences Faculty of Higher School of Economics (2015 – 2019)
- Member of the AERONET workgroup of the National Technology Initiative (2015 – now) // [www.asi.ru/nti/](http://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 foundation, 2016-2018 (extended till 2020), 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)
- Path finding and control of mobile robots in environments with dynamic obstacles. (Russian Foundation for Basic Research, 2018-2020, project leader)
- 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

- Andreychuk A., Yakovlev K., Atzmon D., Stern R. *Multi-Agent Pathfinding with Continuous Time* // In Proceedings of the 28th International Joint Conference on Artificial Intelligence (IJCAI 2019), Macao, China, August 10–16, 2019. pp. 39-45.
- Andreychuk A., Yakovlev K. *Two Techniques That Enhance the Performance of Multi-robot Prioritized Path Planning* // In Proceedings of the 17th International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2018), Stockholm, Sweden, July 10–15, 2018. pp. 2177-2179.
- 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.
- Emel'yanov, S., Makarov, D., Panov, A., Yakovlev, K. *Multilayer cognitive architecture for UAV control* // Cognitive Systems Research, 39, 2016. P. 58-72

- more at <http://kyakovlev.me/publications/>

#### 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)