

# Innokentiy V. Semushin

DSc, CSc, DEng  
DOB 25/02/1942

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## Objective

A position of professor in mathematical cybernetics and systems research with a success-driven department providing innovative, challenging employment that will utilize my qualifications and professional skills.

## Personal Profile

- Highly self-motivated and results driven researcher and teacher
- A committed team player and strong leader, able to motivate others to deliver results
- Author of many publications known in the identification and adaptive stochastic control community
- High level of qualifications and university intramural life awareness complemented by good administrative skills
- Long term teaching experience resulted in formulating the effective approaches to teaching mathematics
- Strong adherent to and active user of modern computer technology in various aspects
- First class communication skills with the ability to liaise with people at all levels
- Broad outlook and versatile interests exceeding the bounds of particular specialty

## Research Degrees

- 1983 – 87      **DSc in Control Theory**, State University of Aerospace Instrumentation, St Petersburg. Russia.  
1968 – 70      **CSc in Control Systems**, Electrotechnical University "LETI", St Petersburg. Russia.  
1983 – 87      **DEng in Mathematical Computing** (hon), Electrotechnical University "LETI", St Petersburg. Russia.

## Academic & Honorary Titles

- 2009      **Honored Professor of Ulyanovsk State University**, Ulyanovsk, Russian Federation  
2008      **Honored Science Worker of the Ulyanovsk Region**, Ulyanovsk, Russian Federation  
1999      **Honored Higher Education Worker of the Russian Federation**, Moscow, the Kremlin. Russia.  
1990      **Professor of Mathematical Cybernetics & Informatics**, Lomonossov University, Moscow, Russia.  
1975      **Docent of Computina**. State Polytechnic Institute. Ulyanovsk. Russia.

## Work Experience

- 2006 – date      **Professor** Department of Information Technology, Ulyanovsk State University, Ulyanovsk, Russia. Teaching a number of courses: Modeling Essentials, Computational Mathematics, Numerical Methods, Computation Methods, and Stochastic Models, Estimation & Control. Advising graduate and post graduate students, and conducting adaptive systems research.
- 1989 – 2006      **Department Head & Professor**, Mathematical Cybernetics & Informatics, Ulyanovsk State University, Ulyanovsk, Russia. Led the Department and the major of Mathematical Cybernetics, developed the major curricula and determined courses to be offered, conducted and supervised academic research, directed PhD dissertations, and taught a broad range of graduate and undergraduate courses.
- 1990 – 91      **Dean**, School of Mathematics and Mechanics, Lomonossov University Branch, Ulyanovsk, Russia. Led the fast-growing School of Mathematics, developed the graduate program in Applied Mathematics, coordinated the courses offered within the program, oversaw the program resources, maintained the research agenda, conducted faculty search and recruitment.
- 1989 – 90      **Dean**, Mathematics and Mechanics & Physics and Technology, Lomonossov University Branch, Ulyanovsk, Russia. Fostered a stimulating atmosphere for the two newly organized and growing Schools.
- 1988 – 89      **Professor**, Higher Mathematics and Informatics, Lomonossov University Branch, Ulyanovsk, Russia. Contributed to the research environment of the department and taught applied mathematics courses.
- 1985 – 88      **Professor** (since 1988) and **Associate Professor (Docent)**, Computer Systems, Polytechnic Institute, Ulyanovsk, Russia. Conducted academic research, supervised graduate students, and taught computer science courses.
- 1983 – 85      **Senior Research Fellow**, Computer Systems, Ulyanovsk Polytechnic Institute, Ulyanovsk, Russia. Directed research projects and pursued research under the topic of my doctoral dissertation.
- 1971 – 83      **Associate Professor** (since 1975) and **Assistant Professor**, Computer Systems, Polytechnic Institute, Ulyanovsk, Russia. Conducted scholarly research, supervised graduate students, and taught computer science courses.

## Research Achievements

- **Diagnostics** Proposed and developed numerically stable methods to test Kalman filters optimality
- **Filtering** Proposed and developed Auxiliary Performance Index (API) approach for adaptive filtering
- **Control** Proposed and developed an unbiased method to identify the optimal closed loop control

## Research Supervision

- **Graduates** more than 100 MS theses defended under my supervision in two universities
- **Post Graduates** 12 PhD dissertations defended under my supervision in two universities
- **Committees** Chairperson of 1 and Member of 7 Dissertation Committees in two universities

## Publications

- 2 books, 11 textbooks and 14 manuals, 68 journal papers (53 in the reviewed journals), 58 conference proceedings papers, 5 patents, 35 short abstracts, and 8 technical reports - totaling 201 items. List of Publications is available upon request OR at <http://staff.ulsu.ru/semoushin/>

## Teaching Experience

- Developed Frontal Competitive and Project-Based Learning approaches for teaching Computational Mathematics
- Taught 26 courses in Applied Statistics, Computational Mathematics, Control, Numerical Methods, Optimization, and Computers. List of courses taught is available at <http://staff.ulsu.ru/semoushin/>

## Developed Soft Products

- ASPID (Adaptive System Parameter Identifier), an integrated toolbox for Inertial Navigation System error budget evaluation to get better designs of INS, used in Aeronautical Equipment Engineering.
- MAFIA (Main and Alternative Filter Alliance), an integrated suite of programs for adaptive vehicle tracking with the quickest maneuver detection to prevent collisions, used in Shipbuilding Industry.

## Soft Skills

- Fortran, Pascal, MATLAB, DHTML, JavaScript
- LaTeX 2.09/2e (including Beamer and Prosper)
- Word, Excel, Power Point, Macromedia Homesite

## References

- **Gennady Yu. Kulikov, D.Sc.** (Doctor of Sciences in Physics and Mathematics), [Senior Research Fellow, CEMAT \(Centro de Matemática e Aplicações\), Instituto Superior Técnico](#), Av. Rovisco Pais 1, 1049-001 LISBOA. Tel: (+351) 218417050 E-mail: [gkulikov@math.ist.utl.pt](mailto:gkulikov@math.ist.utl.pt)
- **Alexandru Murgu, Ph.D.** (Applied Maths), [Senior Lecturer, Department of Electrical Engineering, University of Cape Town](#), Room No 614, 6th Level, Menzies Building, Library Road, Upper Campus, Private Bag, Rondebosch 7701, SOUTH AFRICA. Tel: +27-21-650-4775. Fax: +27-21-650-3465. Email: [Alexandru.Murgu@uct.ac.za](mailto:Alexandru.Murgu@uct.ac.za)
- **Michael W. Sobolewski, Ph.D.** Professor of CS, [Polish-Japanese Institute of Information Technology](#) in Warsaw ul. Koszykowa 86, 02-008 Warszawa Poland. Email: Sobolewski Michael <[mwsobol@gmail.com](mailto:mwsobol@gmail.com)>

Signature:



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