

Djangir Babayev Biographical Sketch

Djangir Babayev is a Senior Research Scientist at Cox Associates, a Denver-based applied research and consulting company. Mr. Babayev is a specialist on Computational Mathematics and Mathematical Methods of Optimization with diversified extensive research and application experience. He has been working on the development and implementation of mathematical models for various decision-support tools. His development of solution methods and algorithms has included linear, nonlinear, including global, and combinatorial-discrete programming.

Mr. Babayev's resume is provided below:

Education:

Bachelor of Engineering, Moscow (USSR) Institute of Physics and Technology,

Ph.D. in Physics and Mathematical Sciences - Institute of Problems of Mechanics, Academy of Sciences of the USSR, Moscow, granted by the USSR High Attestation Board. Title of dissertation "Nonlinear theory of delta wing in supersonic flow".

Doctor of Sciences in Technology - Institute of Cybernetics, Academy of Sciences of the USSR, Kiev, granted by the USSR High Attestation Board. Title of dissertation "Mathematical Methods and Operation Research applications in problems of developing oil and gas fields"

Academic Titles:

Professor - Computerized Management and Control Systems, granted by the USSR High Attestation Board.

Mathematical Programming Expertise:

- Management Science
- Annals of Operations Research
- Discrete Applied Mathematics
- INFORMS Journal on Computing
- Journal of Heuristics
- Computational Optimization and Applications
- Discrete Mathematics (Russia)
- Journal of Computational Mathematics and Mathematical Physics (Russia)
- Cybernetics (Ukraine)

Previous Positions Held:

I. Prior to 1992, worked in Moscow, Russia and Baku, Azerbaijan:

- Central Institute of AeroHydroDynamics, Moscow, USSR. Researcher on mathematical methods of high speed aerodynamics.
- Institute of Cybernetics of the Academy of Sciences, Baku, USSR
- Deputy Director of the Institute and
- Head of the Departments of Operations Research and Mathematical Methods of Economics.
- Awarded State Prize in Science and Technology.

II. After 1992, has been working in the USA. In 1992-2000 worked in telecommunication companies US West and Qwest.

- Design of Long Distance Telecommunications Network for Russia;
- Development of Appointment Scheduler: Awarded USA Patent #5,615,121, 1997.
- Development of Tour Creator for generating technicians work schedules: implemented in 14 states of The USA.
- Optimal workload sizing; accepted for USA Patent application.
- Network Capital Allocation.
- SONET Network Planning Tool: implemented with confirmed Inter Office SONET Network cost reduction about \$7-8M per year.
- OPTICAL Network Planning Tool: implemented with confirmed Inter Office Optical Network cost reduction about \$4-5M per year.
- Office Equipment Planning tool.

Patents and Awards:

- USA Patent #5,615, 121, 1997.
- USA Patent #6,232, 915, 2001.
- ORSA (Operations Research Society of America) Prize - For outstanding Applications of Operations Research in Managing Business.

Publications:

Mr. Babayev has more than hundred publications (115) in academic and professional editions in USA, UK, Canada, Germany, Russia, Ukraine, Hungary, and Azerbaijan in English, Russian and Azerbaijani including journals:

Professional Journals and Conferences:

- Member of INFORMS - Institute For Operations Research and Management Science,
- Former ORSA - Operations Research Society of America,
- Member of Mathematical Programming Society.

Mr. Babayev has been serving as a referee for a number of professional journals in his area of research, chairing sessions in international and national conferences.

Books:

- "Nonlinear Programming. A unified approach", Willard I. Zangwill, Prentice-Hall, Inc., Englewood Cliffs, N. J., 1969, pp 356.
- "Geometric Programming. Theory and application", R. J. Duffin, E. L. Peterson, C. Zener, John Wiley and Sons, Inc., New York, 1967, PP 308.
- "Engineering Design by Geometric Programming", C. Zener, Wiley-Interscience, New York, 1971, PP 98.