

CURRICULUM:

I graduated Mathematics, *Alexandru Ioan Cuza University*, Iassy in 1969, and Control Engineering, *University "Politehnica" of Bucharest* in 1973.

I took the Ph.D. degree in Control Engineering at the University "Politehnica" - Bucharest with a thesis on Contributions to the Digraph Approach of Large-Scale Linear Systems Theory (in Romanian) in 1984.

Committee:

Prof. Sergiu Calin; Prof. Vlad Ionescu; Prof. Mihai Tertisco, Prof. Emil Ceanga; Prof. Florea Simion.

Position:

- **Deputy Director** The Research Institute for Informatics (ICI)
- **First Degree Senior Research Worker** at The Research Institute for Informatics (ICI)
- Head of **Advances Modeling and Optimization Laboratory**, since 1990
- **Member of the Scientific Board** of ICI
- **Member of the Scientific Board** of **The National Centre of Information Technology** - Politehnica University Bucharest
- **President of the Scientific Council** of ICI
- **Full Member of The Academy of Romanian Scientists**, Bucharest, Romania



[Realizari Relevante \(Rezumat\)](#)

[Dr.Ing. Neculai Andrei - Autobiografia AOSR \(2018\)](#)

Area of Interest:

- Mathematical modeling
- Linear Programming
- Nonlinear Optimization

- High performance computing. Sparse matrices
 - Numerical methods in Mathematical Programming.
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Main Achievements:

Author or co-author of several software packages, papers, technical reports, books in the field of languages for linear programming, linear programming, nonlinear programming, optimal control, applications.

- [CAMO](#) - Center for Advanced Modeling and Optimization
 - [Software Packages](#)
 - [Books](#)
 - [ISI Thomson Papers](#)
 - [Papers](#) (all)
 - [Technical Reports](#)
 - [Manuscripts](#)
 - [Talks](#)
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Projects:

- [ALLO - Algebraic Language for Linear Optimization.](#)
 - [Advanced System for Modeling and Optimization.](#)
 - [Optimization of Power Energy Plants.](#)
 - [National Energy Modeling System.](#)
 - [Cloud infrastructure for Romanian public institutions.](#)
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Ph.D. Subjects (for interested students) [[Lista conducatorilor de Doctorat - UPB](#)] [[Doctorat - Facultatea de Automatica si Calculatoare](#)]

- Gradient flow methods for constrained optimization
 - Advanced high performance computing methods for unconstrained optimization
 - Advanced sparse high performance computing methods for constrained optimization
 - Natural inspired optimization
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Grants (Romanian Academy):

1. Fundamental Researches on Path Following Interior Point Algorithms for Large Scale Linear Constrained Optimization.
Romanian Academy Grant no.3003/B1/1997.

2. Fundamental Researches on Development of Path Following Interior Point Algorithms for Large Scale Nonlinear Optimization.
Romanian Academy Grant no. 11/1998.
 3. A new mathematical perspective on interior point methods for convex optimization.
Romanian Academy Grant no. 30/2000.
 4. Convergence and complexity of optimization algorithms based on Newton's method.
Romanian Academy Grant no. 168/2003.
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Recent Technical Visits:

- CERFACS - Centre Europeen de Recherche et de Formation Avancee en Calcul Scientifique.
42, Avenue Gaspard Coriolis, F-31057 Toulouse, France.
Parallel Algorithms Project,
Project Leader: Prof. Dr. Iain Duff, (RAL) UK.
September 10-16, 2001. / February 9-13, 2009.
- Technische Universität Berlin,
Berlin Mathematical School (BMS)
August 24 - September 15, 2012,

Awards:

- "Grigore Moisil Award" of the Romanian Academy, (2001)
- "The Best Book in Informatics" given by AER (Asociatia Editorilor din Romania), (2003)
- "Stefan Odobleja Award" of the Academy of Romanian Scientists, (2014)
- "Henri Coanda Award" of the Marea Loja Nationala din Romania (MLNR), (2018)

Editorial Affiliations:

- [Computational Optimization and Applications](#) (Editorial Board) (ISI)
 - [Studies in Informatics and Control](#) (Editorial Board) (ISI)
 - [Advanced Modeling and Optimization](#) (Editor-in-Chief)
 - [Annals, Series on Science and Technology of Information, Academy of Romanian Scientists](#) (Editorial Board)
 - [Annals of Pure and Applied Mathematics](#) (Editorial Board)
 - [Revista Romana de Informatica si Automatica](#) (Redactor Sef)
 - [British Journal of Mathematics & Computer Science](#) (Editorial Board)
 - [Revue d'Analyse numerique et de Theorie de l'Approximation](#) (Editorial Board)
 - [Numerical Algorithms](#) (Editorial Board) (ISI)
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[Special issue of SIC in honour of Dr. N. Andrei](#)

[Presentation: ICI - 40-th anniversary. Photos. S](#)