



University POLITEHNICA of Bucharest  
Faculty of Automatic Control and Computers

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CSI Dr. Math., Dr. Eng. **Neculai Andrei**  
Scientific coordinator in the domain "System Engineering"  
Doctoral school of Automatic Control and Computers  
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**Contact:**

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**Research profile:**

Areas of research of interest: Large-scale linear optimization; large-scale nonlinear optimization; sparse matrix technology; nature inspired optimization

**Ph.D. coordination** since 2010

1 ongoing these

**Scientific publications:** 20 monographs, 1 book chapter, 40 articles ISI indexed, 16 scientific papers, 400 technical reports

**Research projects** (over 1 Mil. lei)

1.	<b>Project Director:</b> <b>Dr. Neculai Andrei</b> <i>Data Center and Cloud Computing</i>	Internal program ICI-Bucharest	2012-2013
2.	<b>Project Director:</b> <b>Dr. Neculai Andrei</b> <i>Cloud-type infrastructure for public institutions in Romania – ICIPRO</i>  Contract no.: 1194/321 / 06.12.2013 SMIS: 48594  <b>EU project</b> Total value: 17, 280 M Euro	POS CCE:  Call no. 5/ Priority axis 3/ Operation 3.2.1	2013-2015

#### **Chair, Membership in scientific organisations and committees:**

- Titular member of the Romanian Scientists Academy, Section “Information Science and Technology”, <http://www.aosr.ro/product/andrei-neculai/>
- Member of the European Research Consortium: „*ERCIM – European Research Consortium for Informatics and Mathematics*”, Working Group “*Applications of Numerical Mathematics in Science*”.
- Founder of the *Romanian Operational Research Society*, since 1990
- Member of SIAM (*Society for Industrial and Applied Mathematics*), USA, Section Optimization
- Member of *MCDM - Multiple Criteria Decision Making Society*, USA
- Member of *IFAC (International Federation of Automatic Control)* Technical Area 2 (Design Methods) on TC 2.4. [http://multimedia.gsem.urfu.ru/optimal\\_control/members.html](http://multimedia.gsem.urfu.ru/optimal_control/members.html)
- Member of *EUROPT - the Continuous Optimization Working Group of EURO*, <http://europt.iam.metu.edu.tr/>
- Member of the *Mathematical Optimization Society (MOS)*, <http://www.mathopt.org/>
- Founder of ROSIM, the *Romanian Society for Simulation*. <http://rosim.ro/>
- Member of the *Working Group on Generalized Convexity (WGGC)* <http://www.genconv.org/>

#### **Membership in editorial boards:**

- Computational Optimization and Applications, member of the editorial board
- Studies in Informatics and Control, member of the editorial board
- Advanced Modeling and Optimization journal, editor-in-chief

- Annals, Series on Science and Technology of Information, Academy of Romanian Scientists member of the editorial board
- Annals of Pure and Applied Mathematics, member of the editorial board
- Revista Romană de Informatică și Automatică, editor-in-chief
- British Journal of Mathematics & Computer Science, member of the editorial board
- Revue d'Analyse numérique et de Théorie de l'Approximation, member of the editorial board

**Themes for doctoral research proposed:**

- Gradient flow methods for constrained optimization
- High performance computing methods for unconstrained optimization. Advanced conjugated gradient methods. Hybrid methods
- High performance computing methods for sparse methods with constrained optimization
- Optimizations inspired from nature