


PERSONAL INFORMATION **Mihnea Alexandru Dulea**

 Horia Hulubei National Institute for R&D in Physics and Nuclear Engineering

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Sex M | Date of birth | Nationality Romanian

POSITION **Senior Researcher, grade 1**

WORK EXPERIENCE

- Since 2005 **Senior researcher (SR1, since 2013; SR2, 2005-2013)**
Head of department, since 2005
Horia Hulubei National Institute for R&D in Physics and Nuclear Engineering, Magurele
- Head of the Department for Computational Physics and Information Technologies (DFCTI) (since 2012)
 - Head of the Department for Particle Physics and Information Technologies (DPETI) (2009-2011)
 - Head of the Department for Information Technology and Communications (CTIC) (2005-2009)
 - Management of R&D and e-infrastructure projects.
 - Development of the infrastructure for advanced computing.
 - Coordination of the RO-LCG Federation (since 2006) and of the National Grid Infrastructure (since 2014)
- Business or sector** Scientific research
- 2001-2005 **IT Manager**
Personal Development Systems International srl, Bucharest
- ITC management; development and implementation of software solutions for small businesses
- Business or sector** Business and other management consultancy activities
- 2000-2001 **ITC Coordinator, European division**
Network TwentyOne Romania, Bucharest
- Implementation and management of the central information system for 10 European offices of Network TwentyOne International (Atlanta, USA); coordination of their centralized reporting activities.
- Business or sector** Consultancy for business and management
- 1993-1995 **Postdoctoral researcher**
Inst. för Fysik och Mätteknik, Linköping University, Linköping, Sweden
- Computational modeling of resonant tunneling devices and of multilayer structures
- Business or sector** Scientific research
- 1984-2000 **Scientific Researcher (SR 3, then SR 2)**
Institute of Physics and Technology of Materials, Magurele
- Research in theoretical condensed matter physics

Business or sector Scientific research

EDUCATION AND TRAINING

- 1990-1992 **Doctor of Philosophy (PhD)**
 Linköping University, Linköping, Sweden
 - Theoretical condensed matter physics

- 1982-1984 **Specialization diploma**
 Physics Faculty, University of Bucharest
 - Polymer physics

- 1978-1982 **Bachelor of science**
 Physics Faculty, University of Bucharest
 - Solid-state physics

PERSONAL SKILLS

Mother tongue(s) Romanian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
French	B1	B1	B1	B1	B1

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
[Common European Framework of Reference for Languages](#)

 Communication skills

- good communication skills gained through presentations, courses, outreach activities

Organisational / managerial skills

- leadership (manager of CTIC, DPETI, DFCTI)
- Member in the Organizing Committee of the annual RO-LCG conferences 2012-2017, and in the International Advisory Committees of the RO-LCG conferences and of the JINR GRID conferences, 2010-2016.
- President (2011-2015) and co-founder of the Romanian Association for the Promotion of Advanced Computing Methods in Scientific Research - ARCAS.
- Representative of Romania in:
 - WLCG Collaboration Board and Grid Deployment Board, CERN;
 - the Council of the European Grid Infrastructure (EGI);

Digital competence

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving

Proficient	Proficient	Proficient	Proficient	Proficient
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Levels: Basic user - Independent user - Proficient user
[Digital competences - Self-assessment grid](#)

Relational databases design and development, web development, HPC and grid computing, numerical modeling, data center infrastructure and management

ADDITIONAL INFORMATION

Publications Presentations Conferences

368 citations indexed in Web of Science (ISI)

Optimization of the job management in a multi-queue environment

Mihai Ciubăncan, Mihnea Dulea

RO-LCG 2018 "Grid, Cloud, and High-Performance Computing in Science", Cluj-Napoca, 17-19 October 2018, IEEE Conferences, to appear

Advanced computing support for non-HEP research communities at IFIN-HH

Ionuț Vasile, Dragoș Ciobanu-Zabet, Mihnea Dulea

RO-LCG 2018 "Grid, Cloud, and High-Performance Computing in Science", Cluj-Napoca, 17-19 October 2018, IEEE Conferences, to appear

Implementing advanced data flow and storage management solutions within a multi-VO grid site

Mihai Ciubăncan, Mihnea Dulea

17th RoEduNet International Conference 'Networking in Education and Research', Targu-Mures, 21-23.09.2017, IEEE Proceedings, <http://ieeexplore.ieee.org/abstract/document/8123736>

Evaluation of Multi-Source Downloads for FTS

Alin Grigorean, Mihai Carabas, Nicolae Tapus, Mihnea Dulea, Maria Arsuaga-Rios

17th RoEduNet International Conference 'Networking in Education and Research', Targu-Mures, 21-23.09.2017, IEEE Proceedings

File caching and purging strategies in the Disk Pool Manager

Paul Dumitriu, Mihai Carabas, Nicolae Tapus, Mihnea Dulea

17th RoEduNet International Conference 'Networking in Education and Research', Targu-Mures, 21-23.09.2017, IEEE Proceedings

Training in Grid Computing for Nuclear Physics Research

Corina Dulea, Gabriel Stanescu, Viorel Serban, Mihnea Dulea

Annual Bulgarian Nuclear Society International Conference, Varna, Bulgaria, 11-14 September, 2017, BgNS Science and Technology Journal (Transactions), 2017

Deployment of new technologies in a complex RO - LCG site

Mihai Ciubăncan, Mihnea Dulea

RO-LCG 2017 International Conference, Sinaia, 26-28 October 2017, BoA p. 43, ISBN 978-973-0-25620-8, <http://rolcg2017.ifin.ro/docs/bookOfAbstracts.pdf>

IFIN-HH contribution to advanced scientific computing infrastructure

M. Dulea, D. Ciobanu-Zabet, M. Ciubancan, and I. Vasile

RO-LCG 2017 International Conference, Sinaia, 26-28 October 2017, BoA p. 15, ISBN 978-973-0-25620-8

Value-added services provided by NGI-RO Operations Centre

I. Vasile, D. Ciobanu-Zabet, M. Dulea

RO-LCG 2017 International Conference, Sinaia, 26-28 October 2017, BoA p. 46, ISBN 978-973-0-25620-8

RoNBio: A molecular modeling system for computational biology

G. Necula, D. Ciobanu-Zabet, D. Simionescu, I. Vasile, M. Mernea, and M. Dulea

RO-LCG 2017 International Conference, Sinaia, 26-28 October 2017, BoA p. 62, ISBN 978-973-0-25620-8

Design of nanomechanical sensors based on graphene nanoribbons in a distributed computing system

C.M. Visan, T.L. Mitran, G.A. Nemnes, I.T. Vasile, M. Dulea

The 7th International Conference "Distributed Computing and Grid-technologies in Science and Education" (GRID 2016), JINR, Dubna, 4-9.07.2016

CLOUDIFIN, the first NGI-RO site participating to the EGI Federated Cloud

Dragoş Ciobanu-Zabet, Ionuţ Vasile, Mihnea Dulea

RO-LCG 2017 International Conference, Sinaia, 26-28 October 2017, BoA p. 62, ISBN 978-973-0-25620-8

One Decade of Computational Support for Advanced Research

M. Dulea

RO-LCG 2016 Conference "Grid, Cloud, and High-Performance Computing in Science", IFIN-HH, Bucharest-Magurele, 26-28.10.2016, ISBN 978-973-0-22868-7

Overview of the national LCG sites

Mihnea Dulea

RO-LCG 2016 International Conference "Grid, Cloud, and High-Performance Computing in Science", IFIN-HH, Bucharest-Magurele, 26-28.10.2016, ISBN 978-973-0-22868-7

Developing the computing environment for new research communities in Romania

Ionut Vasile, Dragos Ciobanu-Zabet, Mihnea Dulea

EGI Community Forum 2015, 10-13 november 2015, Bari, Italy

New developments of the WLCG site at IFIN-HH

Mihai Ciubancan, Teodor Ivanoaica, Mihnea Dulea

8th RO-LCG 2015 International Conference, „Grid, Cloud, and High-Performance Computing in Science”, 28-30.10.2015, Cluj, IEEE Proceedings, ISBN: 978-6-0673-7039-3

The new Operations Centre of the Romanian Grid Infrastructure

Ionut Vasile, Dragos Ciobanu-Zabet, M. Dulea

8th RO-LCG 2015 International Conference, „Grid, Cloud, and High-Performance Computing in Science”, 28-30.10.2015, Cluj, IEEE Proceedings, ISBN: 978-6-0673-7039-3

Contributions to the advanced computing for scientific research in Romania

Mihnea Dulea

7th RO-LCG Conference - Grid, Cloud and High-Performance Computing in Physics Research, IEEE, 3-4.11.2014, IFIN-HH

Participation of DFCTI in the LHC Computing Grid

Mihai Ciubancan, Teodor Ivanoaica, Mihnea Dulea

7th RO-LCG Conference - Grid, Cloud and High-Performance Computing in Physics Research, IEEE, 3-4.11.2014, IFIN-HH

Recent developments in the contribution of DFCTI/IFIN-HH to the WLCG collaboration

Mihai Ciubancan, Teodor Ivanoaica, Mihnea Dulea

The 6th International Conference "Distributed Computing and Grid-technologies in Science and Education", 30.06-5.07.2014, LIT-JINR, Dubna

Software system for inventory and assessment of the wear of computing machines from a network of grid data centres

M. Marinescu, M. Ciubancan, M. Dulea, R.O. Grigoriu, I. Halcu, G. Neculoiu, V.C. Sandulescu, O.C. Niculescu Faida, A.V. Marinescu

Networking in Education and Research, Joint Event 13th RoEduNet & 8th RENAM

Conference, 11-13.09.2014, Technical Univ. of Moldova, Chisinau, IEEE Proceedings, p. 1-4, <http://ieeexplore.ieee.org/xpl/mostRecentIssue.jsp?punumber=6945947>

Data transfer optimization for the DFCTI Grid site

M. Ciubancan, S. Constantinescu, M. Dulea

Networking in Education and Research, RoEduNet International Conference IEEE, 12th Edition, Sep. 26-28, 2013, doi: 10.1109 / RoEduNet. 2013 . 6714200, p. 1-4

Grid and HPC support for national participation in large-scale collaborations

M. Dulea, S. Constantinescu, M. Ciubancan, T. Ivanoaica, C. Placinta, I.T. Vasile, D. Ciobanu-Zabet

Proc. GRID'2012 Conference, JINR, 15-21.07.2012

National and regional organization of collaborations in advanced computing

M. Dulea

Proc. RO-LCG 2012 IEEE Int'l Conference, IEEE CFP1232T-PRT, ISBN 978-973-662-710-1, pp. 63-66

Support for multiple virtual organizations in the Romanian LCG Federation

M. Dulea, S. Constantinescu, M. Ciubancan

Proc. RO-LCG 2012 IEEE Int'l Conference, IEEE CFP1232T-PRT, ISBN 978-973-662-710-1, pp. 59-62

Quantum Encrypted Data Transfers in GRID, cap. 5 in Advances in GRID Computing,

M. Dima, M. Dulea, A. Dima, M. Stoica, M. Udrea

ISBN- 978-953-307-301-9, InTech, p.73-94, 2011

GridNFIC - Romanian Computing Grid for Physics and Related Areas

T. Ivanoaica, M. Ciubancan, S. Constantinescu, M. Dulea

Nuclear Electronics & Computing NEC'2011, Proceedings of the XXIII International Symposium, E 10,11-2011-133, JINR, Dubna, 2011, p. 163-168

Classical and quantum communications in GRID computing

M. Dima, M. Dulea, D. Aranghel, B. Mitrica, M. Petre, M. Stoica, M. Udrea, R. Sterian, P. Sterian
Optoelectronics and Advanced Materials - Rapid Communications, 4 (11), 1840-1843, 2010

Grid and High Performance Computing infrastructure at the National Institute for Physics and Nuclear Engineering 'Horia Hulubei'

M. Ciubancan, S. Constantinescu, I. Vasile, M. Dulea

GRID2010 International Conference „Distributed Computing and Grid technologies in Science and Education”, JINR, Dubna, Russia, 28 june – 03 july 2010

Grid system for real-time management of distributed databases, with application to the coordination of complex projects

C. Placinta, I. Vasile, M. Dulea

GRID2010 International Conference „Distributed Computing and Grid technologies in Science and Education”, JINR, Dubna, Russia, 28 june – 03 july 2010, pp. 183-190, ISBN 978-5-9530-0269-1

THE QUANTGRID PROJECT (RO) - QUANTUM SECURITY IN GRID COMPUTING APPLICATIONS

Dima M, Dulea M, Pauna E, et al.

ROMANIAN JOURNAL OF PHYSICS, 54 (5-6) (2009) 441-448

Classical and Quantum Security in Grid Computing

M. Dima, M. Petre, C. Petre, M. Dulea, B. Mitrica

7th General Conference of the Balkan Physical Union, 9-13.09.2009, Alexandroupolis, Greece

Consistent Performance Assessment of Multicore Computer Systems

Gh. Adam, S. Adam, A. Ayriyan, V. Korenkov, V. Mitsyn, M. Dulea and I. Vasile

Romanian Journal of Physics, Volume 53, Issue 9-10, pp.985-991 (December 2008)

Performance assessment of the SIMFAP parallel cluster at IFIN-HH Bucharest

Gh. Adam, S. Adam, A. Ayriyan, E. Dushanov, E. Hayryan, V. Korenkov, A. Lutsenko, V. Mitsyn, T.

Sapozhnikova, A. Sapozhnikov, O. Streltsova, F. Buzatu, M. Dulea, I. Vasile, A. Sima, C. Visan, J. Busa and I. Pokorny
Romanian Journal of Physics, Volume 53, Issue 5-6, pp. 665-677 (2008)

X-ray diffraction from amorphous Ge/Si Cantor superlattices
J arrrendahl, K.; Dulea, M.; Birch, J.; Sundgren, J.-E.
Physical Review B (Condensed Matter), Volume 51, Issue 12, March 15, 1995, pp.7621-7631

An X-ray Study of Generalized Cantor Superlattices
Jarrendahl K, Birch J, Dulea M, et al.
Thin Solid Films Volume: 246 Issue: 1-2 (1994) 120-125

Unusual scaling of the spectrum in a deterministic aperiodic tight-binding model
Dulea, Mihnea; Johansson, Magnus; Riklund, Rolf
Physical Review B (Condensed Matter), Volume 47, Issue 14, April 1, 1993, pp.8547-8551

Hopping Conductivity of the Fibonacci-Chain Quasi-Crystal - Comment
Dulea M, Aldea A
Physical Review B Volume: 46 Issue: 13 (1992) 8642-8643

Localization of electrons and electromagnetic waves in a deterministic aperiodic system
Dulea, Mihnea; Johansson, Magnus; Riklund, Rolf
Physical Review B (Condensed Matter), Volume 45, Issue 1, January 1, 1992, pp.105-114

Trace-map invariant and zero-energy states of the tight-binding Rudin-Shapiro model
Dulea, Mihnea; Johansson, Magnus; Riklund, Rolf
Physical Review B (Condensed Matter), Volume 46, Issue 6, August 1, 1992, pp.3296-3304

Transmission of light through deterministic aperiodic non-Fibonacci multilayers
Dulea, Mihnea; Severin, Mattias; Riklund, Rolf
Physical Review B, Volume 42, Issue 6, August 15, 1990, pp.3680-3689

Periodic and quasiperiodic wavefunctions in a class of one-dimensional quasicrystals: an analytical treatment
Severin, M.; Dulea, M.; Riklund, R.
Journal of Physics: Condensed Matter, Volume 1, Issue 45, pp. 8851-8858 (1989).

Hopping conduction on aperiodic chains
Aldea, A.; Dulea, M.
Physical Review Letters, Volume 60, Issue 16, April 18, 1988, pp.1672-1675

Long-time asymptotics in the one-dimensional trapping problem with large bias
Aldea, A; Dulea, M; Gartner, P
Journal of Statistical Physics, 1988

Photoluminescence of the Hopping Disordered Systems with Electrical Bias
Dulea M., Aldea A.
Journal of Non-Crystalline Solids 90 (1-3) (1987) 461-464

AC conductivity of a disordered chain: real-space renormalisation group approach
Aldea, A.; Dulea, M.
Journal of Physics C: Solid State Physics,

Projects

Program/Project	Position	Period: from-to
Hulubei-Meshcheryakov / <i>Development of strategic computer infrastructures in LIT-JINR and IFIN-HH</i> (124 / theme nr.: 05-6-1118-2014/2019)	Coordinator for IFIN-HH	2018
Hulubei-Meshcheryakov / <i>New investigation tools in computational physics</i> (126 / theme nr.: 05-6-1119-2014/2019)	Coordinator for IFIN-HH	2018
Nucleu Programme, PN18090205/2018: <i>Applying technology and methods of advanced computing for investigations in the physics of complex systems</i>	Director	2018
MCI Sectorial Plan, PS 2.1.8, <i>Techniques for storing and capitalizing on the results of advanced scientific research (SoVaReX)</i> , ctr. 10PS / 2017	Director	2017-2018
PN-III-CERN-RO 6/2016 CONDEGRID: <i>National contribution to the development of the LCG computing grid for elementary particle physics</i> (ctr. 6/2016)	Director	2016-2018
Nucleu Programme, PN16420202/2016: <i>Development and implementation of the technologies and methods of advanced computing for applications in the physics of complex systems</i>	Director	2016-2017
PN-II-PT-PCCA-2013-4-2087 - <i>Integrated system for biomolecular modeling, with aplicability to the study of Gram negative bacteria (SIMBAGRAN)</i>	Director	2014 - 2016
Hulubei-Meshcheryakov / <i>Development of methods, algorithms and software computationally adapted to existing system hardware at LIT-JINR and Magurele Campus</i> (32, 05-6-1119-2014/2016)	Coordinator for IFIN-HH	2014 - 2016
Hulubei-Meshcheryakov / <i>Definition and implementation of new functional features (monitoring, cloud services, etc.) of the distributed and parallel computing facilities at LIT-JINR and Magurele Campus</i> (33, 05-6-1048-2014/2016)	Coordinator for IFIN-HH	2014 - 2016
PN-II-PT-PCCA-2011-3.1-1350 – <i>Activity modeling and simulation of bacterial efflux pump inhibitors based on advanced laser methods (AMPLE)</i>	Project Responsible	2012 - 2016
PN2-Capacitati-M3 CERN CONDEGRID: <i>National contribution to the development of the LCG computing grid for elementary particle physics</i> (8EU/2012)	Director	2012 - 2015
Parteneriatul IFA-CEA CD C1-06 HaPPSDaG: <i>Efficient Handling and Processing of PetaByte-Scale Data for the Grid Centers within the French Cloud</i>	Director	2010-2012
FP7-261499 HP-SEE: <i>High-Performance Computing Infrastructure for South East Europe's Research Communities</i>	Team Leader Romania	2010 - 2013
Programul Hulubei-Meshcheriakov, <i>Modeling and Developing Parallel Algorithms for the Study of complex Physical Systems at LIT-JINR and Magurele Campus</i> , 05-6-1060-2005/2010	Coordinator for IFIN-HH	2010-2013
Programul Hulubei-Meshcheriakov, <i>Optimization Investigations of the Grid and Parallel Computing Facilities at LIT-JINR and Magurele Campus</i> , 05-6-1048-2003/2010	Coordinator for IFIN-HH	2010-2013
PN2-Capacitati-M3 CERN CONDEGRID: <i>National contribution to the development of the LCG computing grid for elementary particle physics</i> (12EU/2009)	Director	2009 - 2011
NUCLEU - PN09370104: <i>Development of the Grid and HPC infrastructure for the physics of complex systems</i>	Director	2009 - 2013
POSCCE-A2-O2.2.3-2008-3 (structural funds) 209 / GRICEFCO: <i>Grid system for the physics research and related areas</i>	Director	2009 - 2011
POSCCE-A2 IMPACT (structural funds) 1146 / CECSPAD: <i>Centru pentru calcul stiintific paralel si distribuit</i>	Director	2007
PN2-Parteneriate / SIMPROC: <i>Integrated information system for real-time management of research projects</i> (D11-043 / 2007)	Director	2007 - 2010

CORINT NUCINT / SINDEGRID: <i>Sistem national de dezvoltare si exploatare a gridului de calcul LCG pentru fizica particulelor elementare (11/2006)</i>	Director	2006 - 2008
CORINT NUCINT / SIMFAP: <i>Sistem informatic performant pentru investigarea modelelor fizice tratabile prin algoritmi de paralelizare (7/2006)</i>	Director	2006 – 2008
NUCLEU - PN06350102: <i>Upgrading the data communication infrastructure and implementing Grid technologies</i>	Director	2006 - 2008

12.12.2018