

Curriculum vitae and Publication List

Marc Eduard Frîncu

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Personal data

Surname:	Frîncu
Forename:	Marc-Eduard
Date and place of birth:	April 26th 1983 Timisoara Romania
Civil status:	Not married
Nationality:	Romanian
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Education

Bachelor Degree	Faculty of Math. and CS	West University of Timisoara	2002 - 2006
Internship	LORIA	INRIA Nancy France	Oct 2007 - Jan 2008
Masters Degree	Faculty of Math. and CS	West University of Timisoara	2006 - 2008
Ph.D. Degree	Faculty of Math. and CS	West University of Timisoara	2008 - 2011

Professional experience

Junior Researcher	Institute e-Austria Timisoara Romania	Sep 2006 - present
Teaching Instructor	West University of Timisoara Romania	Mar 2007 - present
Substitute Teaching Assistant	West University of Timisoara Romania	Oct 2010 - Sept 2011
Visiting Researcher	INRIA Lille France	June 2010
Programmer	Extenseo SRL	Feb 2006 - Aug 2006
Technical Support Officer	FiberNet SRL	Sep 2005 - Jan 2006

Languages spoken

- **Romanian** - native language
- **English** - writing (fluent), reading (fluent), understanding (fluent), speaking (fluent)
- **French** - writing (beginner), reading(average), understanding (average), speaking (average)
- **German** - writing (average), reading(average), understanding (average), speaking (average)

Research interest

- Parallel, Distributed and Grid Computing
- Computer Graphics
- Computational Astronomy

Programming experience

- **Programming languages:** Java, C, C#, Visual Basic
- **Linux Scripting:** Bash, Perl
- **Databases:** MySQL, PostgreSQL
- **Web Programming:** PHP, DHTML, CSS, HTML, JavaScript, DOM, XML, AJAX, XSLT
- **Graphics:** OpenGL, DirectX
- **Mathematical Software:** Maple, GAP
- **Other:** Globus, MPI, RMI

Teaching experience

- **Laboratories:** Web Technologies (3rd year undergraduate) - 2006–2011, Computer Graphics (3rd year undergraduate) - 2007–2011, Operating Systems (2nd year undergraduate) - 2006–2007, Team Projects (3rd year undergraduate) - 2010 – 2011, Individual Project (2nd year undergraduate) - 2010 – 2011.

International Research Grants

Member

- FP7-ICT mOSAIC grant no. 256910, 2010-2013
- FP6-2005-Infrastructure-5 SCIENCE, 2006-2010 (RII3-CT-2005-026133)
- GiSHEO: On-demand Grid services for training and high education in Earth Observation, 2008-2010, European Space Agency PECS Programme

Others

- Member of ALPO (Association of Lunar and Planetary Observers) USA, since 2007
- Technical Editor of Scalable Computing: Practice and Experience, since 2011
- Program Committee Member: SYNASC'11

Published papers

Papers in ISI classified journals and series

Elsevier

1. D. Petcu, S. Panica, M. E. Frîncu, M. Neagul, G. Macariu, D. Gorgan, T. Stefanut, *Experiences in building a Grid-based platform to serve Earth observation training activities*, Computer Standards & Interfaces, DOI: 10.1016/j.csi.2011.10.010, ISSN: 0920-5489, 2011 (Impact factor 0.825).

LNCS (ISI proceedings)

1. F. Micota, M. Frîncu, D. Zaharie, *Population-based Metaheuristics for Tasks Scheduling in Heterogeneous Distributed Systems*, Procs. Seventh International Conference on Numerical Methods and Applications (NMA'10), Aug 20–24, Borovets, Bulgaria, LNCS 6046, 2010, Springer, pp. 321–328.
2. M. E. Frîncu, *Dynamic Scheduling Algorithm for Heterogeneous Environments with Regular Task Input from Multiple Requests*, Grid and Pervasive Computing, LNCS 5529, 2009, Springer, pp. 199–210.
3. A. Cârstea, M. Frîncu, A. Konovalov, G. Macariu, D. Petcu, *On Service-oriented Symbolic Computing, Parallel Processing and Applied Mathematics*, LNCS 4967, ISBN-13 978-3-540-68105-2, 2008, Springer, pp. 843–851.

IEEE press (ISI proceedings)

4. M. E. Frîncu, C. Craciun, *Multi-objective Meta-heuristics for Scheduling Applications with High Availability Requirements and Cost Constraints in Multi-Cloud Environments*, Procs. UCC'11, 5-7 Dec, IEEE Computer Press, ISBN 978-0-7695-4592-9, pp. 267–274.
5. D. Petcu, M. Frîncu, C. Craciun, S. Panica, M. Neagul, G. Macariu, *Towards Open-Source Cloud-ware*, Procs. UCC'11, 5-7 Dec, IEEE Computer Press, ISBN 978-0-7695-4592-9, pp. 330–331.
6. M. E. Frîncu, *D-OSyRIS: A Self-Healing Distributed Workflow Engine*, Procs. ISPDC'11, IEEE Computer Press, ISBN 978-0-7695-4540-0/11, pp. 215–222.
7. M. E. Frîncu, N. Villegas, D. Petcu, H. Müller, R. Rouvoy, *Self-Healing Distributed Scheduling Platform*, Procs. CCGrid'11, 23-26 May, IEEE Computer Press, ISBN 978-0-7695-4395-6, pp. 225–234.
8. M. E. Frîncu, *A Method for Distributing Scheduling Heuristics Inside Service Oriented Environments Using a Nature-Inspired Approach*, Procs. ISPDC'10, 7-9 Jul, IEEE Computer Press, ISBN 978-0-7695-4120-4, pp. 211–218.
9. A. Cârstea, G. Macariu, M. E. Frîncu, D. Petcu *Description and Execution of Patterns for Symbolic Computations*, Procs. SYNASC'09, 26-29 Sep, IEEE Computer Press, ISBN 978-0-7695-3964-5, pp. 197–205.
10. M. E. Frîncu, *Distributed Scheduling Policy in Service Oriented Environments*, Procs. SYNASC'09, 26-29 Sep, IEEE Computer Press, ISBN 978-0-7695-3964-5, pp. 205–213.
11. A. Cârstea, G. Macariu, M. Frîncu, D. Petcu, *Workflow Management for Symbolic Grid Services*, Procs. SYNASC 2008, September 26-29 2008, Timisoara, IEEE Computer Press, ISBN 978-0-7695-3523-4, 2009, pp. 373–380.
12. G. Macariu, A. Cârstea, M. Frîncu, D. Petcu, *Towards a Grid Oriented Architecture for Symbolic Computing*, Procs. ISPDC 2008, July 1-6 2008, Krakow, IEEE Computer Press, ISBN 978-0-7695-3472-5, 2008, pp. 259–266.
13. A. Cârstea, G. Macariu, M. Frîncu, D. Petcu, *Composing Web-based Mathematical Services*, Procs. SYNASC 2007, Sep 2007, Timisoara, IEEE Computer Press, ISBN 0-7695-3078-8, 2007, pp. 327–334.

14. M. Frîncu, D. Petcu, *Remote Control for Graphic Applications*, Procs. SYNASC 2007, Sep 2007, Timisoara, IEEE Computer Press, ISBN 0-7695-3078-8, 2007, pp. 304–309.
15. G. Macariu, M. Frîncu, A. Cârstea, D. Petcu, A. Eckstein, *Redesigning Parallel Symbolic Computations Packages*, Procs. PACT 2007, 16th International Conference on Parallel Architecture and Compilation Techniques, 15-19 Sep 2007, ISSN 1089-795X, IEEE Computer Press, pp. 417.
16. A. Cârstea, M. Frîncu, G. Macariu, D. Petcu, K. Hammond, *Generic Access to Web an Grid-based Symbolic Computing Services*, Procs. ISPDC 2007, July 5-8 2007, Hagenberg, IEEE Computer Press, Los Alamitos, ISBN 0-7695-2917-8, pp. 143–150.

Papers in other international refereed journals

17. A. Cârstea, M. Frîncu, G. Macariu, and D. Petcu, *Validation of SymGrid-services framework through event based simulation*, International Journal of Grid and Utility Computing, Volume 2, Number 1, ISSN 1741-8488, 2011, pp. 33–44.
18. M. E. Frîncu, D. Petcu, *OSyRIS: a Nature Inspired Workflow Engine for Service Oriented Environments*, Scalable Computing: Practice and Experience, Volume 11, Number 1, ISSN 1895-1767, 2010, pp. 81–97.
19. D. Petcu, S. Panica, M. Neagul, M. Frîncu, D. Zaharie, R. Ciorba, A. Dinis, *Earth Observation Data Processing in Distributed Systems*, Informatica, Volume 34, Number 4, Slovenian Society Informatika, ISSN 0350-5596, 2010, pp. 463–47.
20. M. E. Frîncu, G. Macariu, A. Cârstea, *Dynamic and Adaptive Workflow Execution Platform for Symbolic Computations*, Pollack Periodica, Volume 4, Number 1, Akadémiai Kiadó, HU ISSN 1788-1994, 2009, pp. 145–156.
21. D. Petcu, A. Cârstea, G. Macariu, M. Frîncu, *Service-oriented Symbolic Computing with SymGrid*, Scalable Computing: Practice and Experience, Volume 9, Number 2, ISSN 1895-1767, 2008, pp. 111–124.

Papers in refereed international proceedings

22. F. Zamfirache, M. Frîncu, *Automatic selection of scheduling algorithms based on classification models*, Studia Universitatis Babeş-Bolyai Series Informatica, Vol. LVI, Nr. 2, ISSN 2065-9601, 2011, pp. 95–100.
23. D. Petcu, S. Panica, M. Neagul, M. Frîncu, D. Zaharie, D. Gorgan, T. Stefanut, V. Bacu, *GiSHEO: On-line Platform for Training in Earth Observation*, Procs. ICVL 2010: 5th International Conf. on Virtual Learning, Târgu Mures, M. Vlada, G. Albeanu, D.M. Popovici (eds.), Bucharest University Press, ISSN 1844-8933, 2010, pp. 290–297.
24. D. Petcu, D. Zaharie, S. Panica, M. Frîncu, M. Neagul, D. Gorgan, T. Stefanut, *Grid-based Platform for Training in Earth Observation*, Geophysical Research Abstracts, Vol. 12, EGU2010-6713-1, 2010.
25. D. Petcu, D. Zaharie, D. Gorgan, S. Panica, M. Neagul, M. Frîncu, V. Bacu, T. Stefanut, *On demand Grid Services for Training in Earth Observation*, 5th EGEE User Forum / Contributions book, 2010, pp. 68–69.
26. M. Frîncu, S. Panica, M. Neagul, D. Petcu, *GiSHEO: On Demand Grid Service-based Platform for Earth Observation Data Processing*, Procs. HiperGRID'09, 26-28 May, Politehnica Press, ISSN 2066-4451, 2009, pp. 415–422.
27. M. E. Frîncu, D. Petcu, *On Designing an Asynchronous and Dynamic Platform for Solving Single Task Requests of Remote Applications*, Procs. ICCGI'08. The Third International Multi-Conference on Computing in the Global Information Technology, 2008, pp. 12–18.

28. A. Cârstea, G. Macariu, M. Frîncu, D. Petcu, *Secure Orchestration of Symbolic Grid Services*, Procs. HiperGRID'08, High Performance Grid Middleware 2nd Ed., November 21st, Politehnica Press, ISSN 2065-0701, 2008, pp. 25–32.

Papers in national proceedings with international referees

29. D. Petcu, D. Zaharie, H. Popa, M. Frîncu, A. Eckstein, *Grid Services Based on Heuristic Methods for Multi-Objective Optimization Problems*, Procs. CSCS-16, 16th Intern. Conference on Control Systems and Computer Science, 22-25 May, 2007, Printech, vol. 2, ISBN 978-973-718-743-7, pp. 136–141.

Papers in other international journals

30. M. Frîncu, *Bringing the sky to every stargazer: The Telescope Grid Project*, Journal of the Association of Lunar and Planetary Observers: The Strolling Astronomer, Volume 50, Number 4, ISSN-0039-2502, pp. 30–33.
31. M. Frîncu, *Solar Activity Report Carrington Rotations 2040-2050 (2006-01-2.05 to 2006-06-14.7)*, Journal of the Association of Lunar and Planetary Observers: The Strolling Astronomer, Volume 50, Number 1, ISSN-0039-2502, pp. 24–25.
32. M. Frîncu, *Solar Activity Report Carrington Rotations 2031-2035 (2005-06-14.8 to 2005- 10-29)*, Journal of the Association of Lunar and Planetary Observers: The Strolling Astronomer, Volume 49, Number 2, ISSN-0039-2502, pp. 21–24.
33. M. Frîncu, *Solar activity report Carrington Rotations 2025-2030 (2005-01-2.05 to 2005-06- 14.7)*, Journal of the Association of Lunar and Planetary Observers: The Strolling Astronomer, Volume 48, Number 1, ISSN-0039-2502, pp. 25–27.

Book Chapters

34. M. E. Frîncu, *Scheduling Service Oriented Workflows Inside Clouds Using an Adaptive Agent Based Approach*, in B. Furht, A. J. Escalante (Eds.): Handbook of Cloud Computing, ISBN 978-1-4419-6523-3, Springer, pp. 159–182, 2010.
35. M. E. Frîncu, C. Crăciun, *Dynamic and Adaptive Rule-Based Workflow Engine for Scientific Problems in Distributed Environments*, in S. Ahson, M. Ilyas (Eds.): Cloud Computing and Software Services: Theory and Techniques, ISBN 978-1-43980-315-8, Taylor & Francis, pp. 227–252, 2010.
36. D. Petcu, G. Macariu, A. Cârstea, M. Frîncu, *Service-Oriented Symbolic Computations*, in N. Antonopoulos, G. Exarchakos, M. Li, A. Liotta (Eds.): Handbook of Research on P2p and Grid Systems for Service-oriented Computing: Models, Methodologies and Applications, vol. 2, ISBN 978-1-61520-686-5, Information Science Publishing, pp. 1053–1075, 2010.
37. D. Petcu, D. Zaharie, M. Neagul, S. Panica, M. Frîncu, D. Gorgan, T. Ștefănuț, and V. Bacu, *Remote Sensed Image Processing on Grids for Training in Earth Observation*, in Yung-Sheng Chen (Ed.): Image Processing, ISBN 978-953-307-026-1, InTeh, pp. 115–140, 2009.

Technical Reports

38. M. Frîncu, M. Quinson, and F. Suter, *Handling Very Large Platforms with the New SimGrid Platform Description Formalism*, Technical Report 0348, INRIA, February, 2008.
39. A. Cârstea, G. Macariu, M. Frîncu, D. Petcu, *Secure Orchestration of Symbolic Grid Services*, Technical Report 08-08, IeAT, 2008.

Miscellaneous

Posters (not published)

- M. Frîncu, *Adaptive Scheduling for Distributed Systems*, CCGrid 2011, May 23-26, Newport Beach CA.
- M. Frîncu, M. Quinson, F. Suter, *A Formalism for the Description of Large Scale Computing Platforms*, CCGrid 2008, May 19-22, Lyon, 2 page poster.

Presentations

- M. Frîncu, Adaptive Task Scheduling in Heterogeneous Distributed Environments, ADAM team (INRIA) seminar, Lille, France Jun 14th 2010.
- A. Cârstea, G. Macariu and M. Frîncu, Expressing Workflows Using Grid Enabled Computer Algebra Systems, 2nd SCIENCE Project Meeting, Palaiseau, France, Jan 19-21, 2009.
- M. Frîncu, Complex Image Processing Using Scientific Workflows, Grid Training Days 3rd edition, Timisoara, Romania, Dec 18-19, 2008.
- M. Frîncu, Introduction in Computational Astronomy: Building a Space Simulator, Astronomy Summer School organized by the Board of European Students of Technology, Timisoara, Romania, Jul 27th - Aug 3rd, 2008.
- M. Frîncu, Saturn Observation Campaign, Open Astronomy Days, Astronomical Observatory of Timisoara, Timisoara, Romania, Feb 29th, 2008.
- D. Petcu, A. Cârstea, G. Macariu and M. Frîncu, Grid Services deployment and usage, Grid Training Days 1st edition, Timisoara, Romania, Dec 7-8, 2006.
- M. Frîncu, Astronomical Software-Project Copernicus, Romanian Academy Days, Timisoara, Romania, May 25-26, 2005.

Citation List

- Jing, D., Yong, X., Ziqiang, C., Hui, X., Yingjie, L., Analysis of remote sensing quantitative inversion in cloud computing, Procs. 2011 IEEE International Geoscience and Remote Sensing Symposium, pp. 4348–4351, **2011**, citation of M. E. Frîncu, Scheduling Service Oriented Workflows Inside Clouds Using an Adaptive Agent Based Approach (2010)
- Villegas, N., Muller, H., Tamura, G., Optimizing Run-Time SOA Governance through Context-driven SLAs and Dynamic Monitoring, Procs. 2011 IEEE International Workshop on the Maintenance and Evolution of Service-Oriented and Cloud-Based Systems, **2011**, citation of M. E. Frîncu, N. Villegas, D. Petcu, H. Müller, R. Rouvoy, Self-Healing Distributed Scheduling Platform (2011)
- Villegas, N., Muller, H., Tamura, G., On Designing Self-Adaptive Software Systems, *Sistemas y Telemática*, Vol. 9(18), pp. 29–51, **2011**, citation of M. E. Frîncu, N. Villegas, D. Petcu, H. Müller, R. Rouvoy, Self-Healing Distributed Scheduling Platform (2011)
- Balaz, A., Prnjat, O., Vudragovic, D., Slavnic, V., Liabotis, I., Atanassov, E., Jakimovski, B., Savic, M., Development of Grid e-Infrastructure in South-Eastern Europe, *Journal of Grid Computing*, Vol. 9(2), June **2011**, pp. 135–154, citation of D. Petcu, D. Zaharie, M. Neagul, S. Panica, M. Frîncu, D. Gorgan, T. Stefanut and V. Bacu, Remote Sensed Image Processing on Grids for Training in Earth Observation (2009)
- Badica, C., Braubach, L., Paschke, A., Rule-Based Distributed and Agent Systems in N. Bassiliades et al. (Eds.): *RuleML 2011 - Europe*, LNCS 6826, pp. 328, **2011**, citation of M. E. Frîncu, D. Petcu, OSyRIS: a Nature Inspired Workflow Engine for Service Oriented Environments (2010)
- Resteanu, C., Trandafir, R. Programming problems with a large number of objective functions Procs. 7th International Conference on Numerical Methods and Applications, NMA 2010, *Lecture Notes in Computer Science*, Vol. 6046, **2011**, pp. 207–214, citation of D. Petcu, G. Macariu, A. Carstea, M.E. Frîncu, Service-Oriented Symbolic Computing (2010)
- Quintella, F., Soares, L.P., Raposo, A.B., DWeb3D: A toolkit for developing X3D applications in a simplified environment, *Web3D Symposium Proceedings*, ACM New York USA, pp. 45–54, **2010**, citation of Frîncu, M. E., Petcu, D., Remote control for graphic applications (2007)
- Maheshwari, K., Montagnat, J., Scientific Workflow Development Using Both Visual and Script-Based Representation, *IEEE Congress on Services*, IEEE Computer Society, pp. 328–335, **2010**, citation of M. Frîncu and D. Petcu: OSyRIS: a nature inspired workflow engine for service oriented environments (2010)
- Gallet, M., Marchal, L., Vivien, F., Allocating Series of Workflows on Computing Grids, *Research Raport INRIA*, Nr. 6603, **2008**, citation of M. Frîncu, M. Quinson, and F. Suter: Handling Very Large Platforms with the New SimGrid Platform Description Formalism (2008)
- Giesbrecht, M. W., Kotsireas, I., Lobo, A., ISSAC 2007 poster abstracts, *ACM Communications in Computer Algebra*, vol. 41 nr. 1–2, pp. 38–72, **2007**, citation of: A. Carstea, M. Frîncu, G. Macariu, D. Petcu, K. Hammond, Generic Access to Web an Grid-based Symbolic Computing Services (2008)
- Hammond, K., Kononov, A., Linton, L., Symbolic computations as Grid and Web services, *ACM Communications in Computer Algebra*, vol. 41 nr. 1–2, pp. 159–160, **2008**, citation of A. Carstea, M. Frîncu, G. Macariu, D. Petcu, K. Hammond, Generic Access to Web an Grid-based Symbolic Computing Services (2008)
- Kasem, A., Ida, T., Computational origami environment on the web, *Frontiers of Computer Science in China*, vol. 2, nr 1, pp. 39–54, **2008**, citation of A. Carstea, M. Frîncu, G. Macariu, D. Petcu, K. Hammond, Generic Access to Web an Grid-based Symbolic Computing Services (2008)
- Petcu, D., Eckstein, A., Giurgiu, C., Adapting a legacy code for ordinary differential equations to novel software and hardware architectures, *WSEAS Transactions on Computers*, vol. 7 nr. 5, pp. 463–472, **2008**, citation of A. Carstea, M. Frîncu, G. Macariu, D. Petcu, K. Hammond, Generic Access to Web an Grid-based Symbolic Computing Services (2010)
- Petcu, D., Eckstein, A., Giurgiu, C., Reengineering a software system implementing parallel methods for differential equations, *Proceedings of the 7th WSEAS International Conference on Software Engineering, Parallel and Distributed Systems*, pp. 95–100, **2008**, citation of A. Carstea, M. Frîncu, G. Macariu, D. Petcu, K. Hammond, Generic Access to Web an Grid-based Symbolic Computing Services (2008)