



Dr. Eng. Alexandru IOSUP

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Main Goals

1. Design, build, deploy, and evaluate efficient distributed systems with societal and economic impact. Extending the principles of experimental research, design and evaluate a methodology for the design of such systems.
2. Build a top R&D program to explore the challenges of building system support for massively social games. Improve the life of millions. Create a great R&D team. Achieve high international impact. Valorize the results.
3. Educate a new generation of top-quality, socially responsible professionals in distributed computer systems.

Objectives and Key Results (2009—2014)

1. Publish scientific results for, yearly, at least 5 DBLP entries, and have impact grow yearly by 2 units for the h-index and by 4 units for the g-index. (100% achieved)
2. Hire yearly 1 good person excited to join our team. (100%)
3. Acquire for R&D 1,500,000 Euros directly (65%) and 5,000,000 Euros total (65%).
4. Teach yearly at an excellent level 1 general course and 1 topical course, and 1 new course every 3 years; supervise 2/3/2 BSc-/MSc-/PhD-level local and international students. (100%)
5. Demonstrate national and international leadership via organizing yearly at least 5 professional meetings of excellent standing, giving 5 invited lectures, and improving the research/teaching aspects at TU Delft. (100%)

Current Position	<p>Tenured Assistant Professor, Parallel and Distributed Systems Group, Software and Computer Technology Dept. Delft University of Technology (TU Delft), Delft, the Netherlands</p> <ul style="list-style-type: none"> • Investigating infrastructure and platform approaches based on clouds, grids, large clusters, and p2p systems with application to e-Science and large-scale applications. Experimental and engineering approaches. • Extending group research portfolio with <i>cloud computing</i>, a new computing paradigm under which IT resources and services are obtained on-demand for pre-agreed cost and Service Level Agreements; <i>big data</i>, the processing and preservation of data sets not complying with traditional databases due to volume, velocity, variety, and veracity; <i>massively social games</i>, an interactive, Internet-scale application with over 250,000,000 active users; and <i>research in education</i>, e.g., using gamification to improve higher education for undergraduate and graduate students. • High-impact publications in top journals and conferences. • Coordinating 15 people. Supervised and -ing 40+ Ph.D., M.Sc., and B.Sc. students on Honors Track, research internships, and other projects. • Project acquisition leading to over 750,000 € (earning power). 	<p><i>Sep 2009—ongoing</i></p> <p><i>Early tenure</i></p> <p><i>Awards</i></p> <p><i>Research in Scalable Computing</i></p> <p><i>International visibility</i></p> <p><i>High-impact publications</i></p> <p><i>Management</i></p> <p><i>Earning power</i></p>
Education	<p>Ph.D. in Computer Science TU Delft, Delft, the Netherlands</p> <ul style="list-style-type: none"> • Thesis: A Framework for the Study of Grid Inter-Operation Mechanisms. Advisors: Assoc.Prof. Dick Epema and Prof. Henk Sips. • Involved in the Dutch BSIK VL-e and the EU FP6 CoreGRID projects. • Graduation Committee: Prof. H.E. Bal (Vrije Universiteit Amsterdam), Prof. T. Fahringer (Universitat Innsbruck, Austria), Prof. A.J.C. van Gemund (TU Delft), Prof. M. Livny (University of Wisconsin-Madison, USA), Prof. N. Tapus (Politehnica University of Bucharest, Romania), Prof. A. van Deursen (TU Delft, reserve member). • Top-ranked computer science programme in the country. <p>M.Sc. in Computer Science Politehnica University of Bucharest (UPB), Bucharest, Romania (diploma) Ecole Supérieure d'Electricité (Supelec), Metz, France (co-tutor, scholarship)</p> <ul style="list-style-type: none"> • Thesis: Monitoring methods and performance analysis criteria for grid applications. Advisors: Prof. S. Vialle (Supelec) and Prof. N. Tapus (UPB). • Best-ranked computer science programme in the country. • Graduated with highest grade in my series (#1 of 75 M.Sc. students). • Thesis project: 100%. <p>B.Sc./Engineer in Computer Science Politehnica University of Bucharest (UPB), Bucharest, Romania (diploma) Ecole Supérieure d'Electricité (Supelec), Metz, France (co-tutor, scholarship)</p> <ul style="list-style-type: none"> • Thesis: Parallelization and Grid Integration of a Mobile Robotics Application. Advisors: Prof. S. Vialle (Supelec) and Prof. N. Tapus (UPB). • Best-ranked computer science programme in the country. • Member of top-5% students by admission exam scores. • Five years curriculum with strong experimental and engineering focus. • GPA: 93%. Thesis project: 100%. 	<p><i>Oct 2004—Jan 2009</i></p> <p><i>Awards</i></p> <p><i>International experience</i></p> <p><i>Top graduation committee</i></p> <p><i>2003—2004</i></p> <p><i>Awards</i></p> <p><i>Scholarships</i></p> <p><i>1998—2003</i></p> <p><i>Top 1,5,10%</i></p> <p><i>Scholarships</i></p>

National and International impact: Honors, Awards, and Recognition

Research, Education, Data and Tools, and Service

- (E) Teacher of the Year, Dept. CS and Faculty EEMCS, TU Delft
- (S) General Chair for ACM/SPEC ICPE 2016.
- (R) Invited: Dagstuhl seminar Model-driven Algorithms and Architectures for Self-Aware Computing Systems, 2015.
- (R) Winner of IEEE TCSC Scale Challenge 2014.
- (R) Keynote at Workshop on Big Data Benchmarking (WBDB) 2014.
- (S) SPEctacular award for Outstanding Service, SPEC, 2014.
- (S) Track Chair IEEE Cluster 2014.
- (S) Scientific Committee in Dutch ICT with Industry meeting, 2014.
- (R) CCGRID Best Poster award, 2013.
- (R) Panel at MTAGS 2013 (workshop with SC|13).
- (R) Keynote at HotTopiCS Workshop at ACM/SPEC ICPE'13.
- (E) 3rd-best Teacher of the Year award, EWI, TU Delft, 2013.
- (S) SPEctacular award for Outstanding Service, SPEC, 2013.
- (S) Elected Chair of the Cloud Working Group of SPEC, 2013.
- (S) SCALE Challenge Chair, Finance and Registration Chair for CCGRID 2013.
- (R) Impact award, MTAGS 2012.
- (R) Best paper award, ASCI 2012.
- (R) Invited Speaker: MTAGS 2012.
- (R) Invited Speaker: annual symposium for Automation and Computer Science Faculty, Politehnica University of Bucharest, Bucharest, Romania, 2012. (*alma mater speech*)
- (R) Invited: Dagstuhl seminar Is the Future of Preservation Cloudy?, 2012.
- (R) Invited: Dagstuhl seminar Information Management in the Cloud, 2012.
- (S) Elected Vice-Chair of the Cloud Working Group of SPEC, 2012.
- (S) Elected in the Steering Committee of the Research Group of SPEC, 2012.
- (S) Program Co-Chair and Track Chair: ICT.Open 2012.
- (S) Workshops Chair for HPDC 2012.
- (R) NWO/STW Veni award, 2011. Personal grant.
- (R) Best poster award from SYSTOR, 2011.
- (R) Invited Speaker: ICT.Open 2011.
- (S) Publicity Chair for HPDC 2011.
- (S) Publicity Chair for MMVE 2011.
- (R/D) Best paper award, IEEE CCGrid 2010.
- (R) Plenary Speaker: Annual Symposium AMOLF, Amsterdam, 2010.
- (R) Distinguished paper award from the EuroPar Conference 2009.
- (R) TU Delft ICT Talent Fellowship, Sep 2008. Personal grant.
- (R) Shortlist for distinguished paper award, EuroPar Conference 2008.
- (R) Best Paper and Best Student Paper nomination at ACM SC|07.
- (R/T) 3rd-Place award ACM SRC at ACM SuperComputing 2007.
- (R) Best paper award from the IEEE P2P 2006 Conference 2006.
- (R) Werner von Siemens Excellence award for MSc work, 2004.
- Politehnica University of Bucharest Honors (top-5%) Scholarship, 2004.
- Politehnica University of Bucharest Honors/Merit (top-5/10%) B.Sc. Scholarships, 1998—2003.

Awards:

*10+ Research,
2 Leadership,
3 Education*

Veni Personal Grant

Teacher of the Year

*IEEE TCSC Scale
Challenge Winner*

Invited Speaker

*General/Track
(Co-)Chair*

*Chair of SPEC
Working Group*

Academic Work Experience	Assistant Professor, Software and Computer Technology Dept. <i>TU Delft, Delft, the Netherlands</i>	<i>Sep 2009—ongoing</i>
	International (Visiting) Researcher <ul style="list-style-type: none"> • Technion—Israel Institute of Technology, Israel (Prof. Assaf Schuster) <i>2013 (1 month)</i> • University of California, Berkeley, USA (Prof. I. Stoica) <i>2010 (3 months)</i> • University of Innsbruck, Austria (Prof. Th. Fahringer) <i>2008 (1 month)</i> • University of Wisconsin-Madison, USA (Prof. M. Livny) <i>2006 (3 months)</i> • University of Dortmund, Germany (Prof. R. Yahyapour) <i>2004 (1 month)</i> 	
	Researcher in Computer Science <i>TU Delft, Delft, the Netherlands</i>	<i>2004—2008</i>
	Teaching Assistant, Computer Science Dept. <i>Politehnica University of Bucharest (UPB), Bucharest, Romania</i>	<i>2002—2004</i>
Industry Work Experience	CEO <i>Suntastic Software SRL</i>, Bucharest, Romania	<i>2004—2005</i>
	Head of IT Dept./Software Engineer <i>NOVA Industrial SA/SONERG IMPEX SRL, Bucharest, Romania</i>	<i>2001—2003</i>
	Computer Games Designer and Developer <i>NBSD</i>, Germany	<i>2001—2003</i>
	Instructor at the <i>CISCO Networking Academy</i>, Bucharest, Romania	<i>2001—2002</i>

RESEARCH PROFILE

Highlights

Bibliometrics (data GS or PoP, July 2014)



- H-index: 23 (23 last 5 years)
- G-index: 55
- i10-index: 43 (41 last 5 years)
- i50-index: 15
- i100-index: 8
- Maximum citations per year: over 700, in 2013
- Average citations per year: over 345 (over 500 last 5 years)
- Total citation count: over 3,000 (over 2,500 last 5 years)
- Entries in DBLP: over 75, of which over 60 conferences and over 10 journals.
More entries pending for recent publications and for publications in print.

Publications

- Complete list of publications available at: <http://www.pds.ewi.tudelft.nl/~iosup/research.html> .
- Selected journals: IEEE Internet Computing (2x), IEEE TOMCCAP (1x), IEEE TPDS (2x), Elsevier CCPE (2x), Elsevier FGCS (1x).
- Selected conferences: ACM SIGMETRICS (15-20%), ACM HPDC (15-20%, 4x), ACM SC (20%, 3x), IEEE Grid (20-30%, 5x), IEEE CCGrid (25-30%, 11x), IEEE IPDPS (25-30%, 2x), IEEE P2P (20-25%, 3x), Euro-Par (30%, 6x), ACM/SPEC ICPE (25-30%, 3x), ACM NOSSDAV (30-35%, 1x), ACM NETGAMES (35%, 5x).

Presentations

- Over 30 invited talks: IBM T.J.Watson, Google, Intel, SPEC, Dagstuhl (4x), ICT Open, etc.
- Talks for best-paper nominations: ACM SC, Euro-Par, etc.

Grants

- Attracted over 750,000 € (directly) and over 5,000,000 € (participant in larger projects) for R&D.

Experimental and engineering aspects in systems research

- Sharing data artifacts with the community: the Grid Workloads Archive (<http://gwa.ewi.tudelft.nl>), the Failure Trace Archive (<http://fta.inria.fr>), the P2P Trace Archive (<http://p2pta.ewi.tudelft.nl>), and the Game Trace Archive (<http://gta.st.ewi.tudelft.nl/>).
- Leading the topic of Massively Social Gaming at TU Delft.
- Co-Leading the topic of large-scale graph processing at TU Delft.
- Conducting experimental research in distributed Big Data analytics.
- Leading the largest measurement of the BitTorrent peer-to-peer file-sharing system.
- Led the performance evaluation of cloud computing services (Amazon EC2) for scientif. computing.
- Led the performance evaluation of graph-processing platforms (GraphLab, Giraph, Hadoop, etc.).
- Led the performance evaluation and testing of grid environments and schedulers, including Koala.
- Led the long-term measurements of over ten popular MMOGs and Massively Social Games.
- Designed the Delegated MatchMaking mechanism, highest-cited in “grid inter-operation”.
- Co-Designed the 2Fast collaborative peer-to-peer file-sharing protocol.

International research impact, based on Google Scholar Metrics

Appendix A includes the full list of over 100 publications.

Highlights

- *1st-highest cited* publication in IEEE Transactions on Parallel and Distributed Systems, 1st ranked journal and 2nd-highest ranked publication venue in Computing Systems category, with “Performance Analysis of Cloud Computing Services for Many-Tasks Scientific Computing”.
- *5th-highest cited* publication in Future Generation Computer Systems, 2nd-highest ranked journal and 11th-highest ranked publication venue in Computing Systems category, with “The Grid Workloads Archive”.
- *1st (highest) cited* publication in Concurrency and Computation: Practice and Experience, 3rd-highest ranked journal and 17th-highest ranked publication venue in Computing Systems category, with “TRIBLER: a social-based peer-to-peer system”.
- *7th-highest cited* publication in IEEE International Symposium on Cluster Computing and the Grid (CCGRID), 19th-highest ranked publication venue in Computing Systems category, with “C-Meter: A Framework for Performance Analysis of Computing Clouds”.
- *8th-highest cited* publication in IEEE International Symposium on Cluster Computing and the Grid (CCGRID), 19th-highest ranked publication venue in Computing Systems category, with “The Failure Trace Archive: Enabling Comparative Analysis of Failures in Diverse Distributed Systems”.
- *11th-highest cited* publication in IEEE International Symposium on Cluster Computing and the Grid (CCGRID), 19th-highest ranked publication venue in Computing Systems category, with “On the Performance Variability of Production Cloud Services”.

Top 20 publications, all-time

Appendix A includes the full list of over 100 publications.

The list also available online: <http://www.pds.ewi.tudelft.nl/~iosup/research.html>**Journal Articles**

- Best:
- IEEE IC
3.293 ISI 5yIF10
3.108 ISI IF10
(2x)
- IEEE TPDS
2.203 ISI 5yIF10
1.733 ISI IF10
(2x)
- Elsevier FGCS
1.752 ISI 5yIF10
2.229 ISI IF10
(1x)
- TOMCCAP
2.46 ISI 5yIF11
1.4 ISI IF11
(1x)
- Elsevier CCPE
1.004 ISI 5yIF10
1.322 ISI IF10
(2x)
- JPDC
1.1 ISI 5yIF
0.85 ISI IF
(1x)
- [1] Bahman Javadi, Derrick Kondo, Alexandru Iosup, Dick H. J. Epema: *The Failure Trace Archive: Enabling the comparison of failure measurements and models of distributed systems*. J. Parallel Distrib. Comput. 73(8): 1208-1223 (2013)
DOI: <http://dx.doi.org/10.1016/j.jpdc.2013.04.002>
H-index, 100+ citations, incl. conference article
- [2] M. Hendriks, S. Meijer, J. Van Der Velden, and A. Iosup, *Procedural Content Generation for Games: A Survey*, ACM Trans. Multimedia Comput. Commun. Appl., vol. 9(1), pp.1—22, February 2013.
DOI: <http://doi.acm.org/10.1145/2422956.2422957>
H-index, 25+ citations
- [3] A. Iosup, S. Ostermann, N. Yigitbasi, R. Prodan, T. Fahringer, and D. Epema, *Performance Analysis of Cloud Computing Services for Many-Tasks Scientific Computing*, IEEE Transactions on Parallel and Distributed Systems (TPDS), vol.22(6), pp. 931—45, 2011.
DOI: <http://dx.doi.org/10.1109/TPDS.2011.66>
H-index, 500+ citations, incl. conference article
- [4] A. Iosup and D. Epema. *Grid Computing Workloads: Bags of Tasks, Workflows, Pilots, and Others*. IEEE Internet Computing (IC), Special Issue on Internet Workloads, vol. 15, no. 2, pp. 19-26, Mar./Apr. 2011. DOI: <http://dx.doi.org/10.1109/MIC.2010.130>
H-index, 200+ citations, incl. conference article
- [5] A. Iosup, *POGGI: Generating Puzzle Instances for Online Games on Grid Infrastructures*, Concurrency and Computation: Practice and Experience Special issue with best papers of Euro-Par 2009, Elsevier, 2010.
DOI: <http://dx.doi.org/10.1002/cpe.1638>
10 citations, incl. conference article
- [6] V. Nae, A. Iosup, and R. Prodan, *Dynamic Resource Provisioning in Massively Multiplayer Online Games*, IEEE Transactions on Parallel and Distributed Computing (TPDS), IEEE Press, 2010.
DOI: <http://dx.doi.org/10.1109/TPDS.2010.82>
H-index, 85+ citations, incl. conference article
- [7] A. Iosup, D.H.J. Epema, T. Tannenbaum, M. Farrellee, and M. Livny, *Inter-Operating Grids through Delegated MatchMaking*, In the Journal of Scientific Programming, Special issue with best paper award at ACM SuperComputing 2007, IOS Press, vol. 16(2-3), pp. 233-253, 2008.
DOI: <http://dx.doi.org/10.3233/SPR-2008-0246>
H-index, 85+ citations, incl. conference article
- [8] A. Iosup, H. Li, M. Jan, S. Anoep, C. Dumitrescu, L. Wolters, and D.H.J. Epema, *The Grid Workloads Archive*, Future Gen. Comp. Sys., vol. 24(7), pp. 672-686, Elsevier, 2008.
DOI: <http://dx.doi.org/10.1016/j.future.2008.02.003>
H-index, 180+ citations
- [9] J. Pouwelse, P. Garbacki, J. Wang, A. Bakker, J. Yang, A. Iosup, D. Epema, M. Reinders, M. van Steen, and H.J. Sips, *Tribler: A social-based peer-to-peer system*, Concurrency and Computation: Practice and Experience, vol. 20(2), pp. 127–138, Elsevier, 2008.
DOI: <http://dx.doi.org/10.1002/cpe.1189>
H-index, 435+ citations

Conference Articles	[10] B. Ghit, A. Iosup, N. Yigitbasi, and D. Epema. <i>Balanced Resource Allocations Across Multiple Dynamic MapReduce Clusters</i> , In the ACM SIGMETRICS Conference on Measurement and Modeling of Computer Systems (SIGMETRICS 2014). Austin, TX, USA, 16-20 Jun 2014.	17% acceptance ratio
Best:		
ACM SIGMETRICS (1x)	[11] Kefeng Deng, Junqiang Song, Kaijun Ren, Alexandru Iosup: <i>Exploring portfolio scheduling for long-term execution of scientific workloads in IaaS clouds</i> . SC 2013: 55.	20% acceptance ratio
ACM HPDC (4x)	[12] Tim Hegeman, Bogdan Ghit, Mihai Capota, Jan Hidders, Dick H. J. Epema, Alexandru Iosup: <i>The BTWorld use case for big data analytics: Description, MapReduce logical workflow, and empirical evaluation</i> . IEEE BigData Conference 2013: 622-630.	17% acceptance ratio Honors Programme
ACM/IEEE SC (3x)		
IEEE Big Data (1x)	[13] O. Agmon Ben-Yehuda, A. Schuster, A. Sharov, M. Silberstein, and A. Iosup, <i>ExPERT: Pareto-Efficient Task Replication on Grids and a Cloud</i> , IEEE International Parallel and Distributed Processing Symposium (IPDPS), Shanghai, China, May 21-25, 2012.	21% acceptance ratio
IEEE Grid (5x)		
IEEE IPDPS (2x)	[14] A. Iosup, N. Yigitbasi, D. Epema: <i>On the Performance Variability of Production Cloud Services</i> . IEEE International Symposium on Cluster Computing and the Grid (CCGrid'10), pp. 104—113, 2011.	H-index, 85+ citations 27% acceptance ratio
IEEE CCGrid (11x)	[15] O. Sonmez, N. Yigitbasi, A. Iosup, and D. Epema, <i>Trace-Based Evaluation of Job Runtime and Queue Wait Time Predictions in Grids</i> , In the ACM/IEEE Int'l. Symp. on High Performance Distributed Computing (HPDC'09), 2009.	H-index, 35 citations 21% acceptance ratio
Euro-Par (7x)		
ACM/SPEC ICPE (2x)	[16] A. Iosup, O. Sonmez, S. Anoep, D. Epema (2008). <i>The Performance of Bags-of-Tasks in Large-Scale Distributed Systems</i> . In the ACM/IEEE Int'l. Symp. on High Performance Distributed Computing (HPDC), 2008.	H-index, 115+ citations 17% acceptance ratio
IEEE P2P (2x)		
ACM/IEEE NetGames (7x)	[17] A. Iosup, M. Jan, O. Sonmez, and D. Epema (2007). <i>On the Dynamic Resource Availability in Grids</i> . Proc. of the 8th IEEE/ACM Int'l Conference on Grid Computing (Grid2007), pp. 26-33. 2007.	H-index, 90+ citations 22% acceptance ratio
	[18] A. Iosup, M. Jan, O. Sonmez, and D. Epema (2007). <i>The Characteristics and Performance of Groups of Jobs in Grids</i> . Proc. of Euro-Par 2007 - Parallel Processing, 13th Int'l. Euro-Par Conference. Lecture Notes in Computer Science vol. 4641, pp. 382-393, Springer, 2007.	H-index, 50+ citations 25% acceptance ratio
	[19] A. Iosup and D. Epema (2006). <i>GrenchMark: A Framework for Analyzing, Testing, and Comparing Grids</i> . In Proc. of the 6th IEEE/ACM Intl. Symposium on Cluster Computing and the Grid (CCGrid06), pp. 313-320. IEEE, 2006.	H-index, 65+ citations 25% acceptance ratio
	[20] P. Garbacki, A. Iosup, D. Epema, and M. van Steen (2006). <i>2Fast: Collaborative Downloads in P2P Networks</i> . In Proc. of the 6th IEEE Int'l. Conference on Peer-to-Peer Computing (P2P'06), pp. 23-30. 2006.	Best Paper Award H-index, 70+ citations 21% acceptance ratio

Top 30 invited talks, 2009—2014

Invited Talks	[1] Dagstuhl seminar 15041: Model-driven Algorithms and Architectures for Self-Aware Computing Systems, Jan 2015.	Jan 2015
Best:	[2] Fifth Workshop on Big Data Benchmarking (WBDB) 2014, Potsdam (Germany) from August 5-6, 2014.	Keynote
Dagstuhl Seminars (2011, 2012x2, 2015)	[3] Second ISO/IEC JTC 1 (Study Group on Big Data (SGBD), Amsterdam, NL, with work on cloud computing and big data.	May 2014
UC Berkeley, USA (2010 x 2)	[4] Linked Data Benchmark Council's Fourth TUC Meeting 2014, with work on big data.	Apr 2014
Imperial College London, UK (2014)	[5] Lecture at the Imperial College of London, the UK, "Scheduling in IaaS Cloud Computing Environments: Anything New?" with work on cloud computing and big data	Dec 2013
Technion, Israel (2013 x 4)	[6] Panel at MTAGS 2013 (workshop with SC 13), "Many-Task Computing meets Big Data". Nov 2013	Panelist
ISO (2014)	[7] <i>Lecture at the Umeå University, Sweden, "Scheduling in IaaS Cloud Computing Environments: Anything New?"</i> with work on cloud computing and big data	Jun 2013
SPEC (2011, 2012)	[8] <i>IaaS Cloud Benchmarking: Approach, Challenges, and Experience</i> . Intel Haifa, Israel.	Jun 2013
IBM TJ Watson (2007, 2013 x 3)	[9] <i>IaaS Cloud Benchmarking: Approach, Challenges, and Experience</i> . IBM Haifa, Israel.	Jun 2013
Google Mountain View (2010)	[10] Three talks: <i>A TU Delft View on Big Data Processing and Preservation</i> ; <i>Massivizing Social Games: Distributed Computing Challenges and High Quality Time</i> ; <i>IaaS Cloud Benchmarking: Approach, Challenges, and Experience</i> . IBM TJ Watson, NY, USA.	May 2013
Microsoft Redmond (2010)	[11] Four talks: <i>A TU Delft View on Big Data Processing and Preservation</i> ; <i>Gamification: Playful Teaching for Generation-X/-Y/-Z/...</i> ; <i>Massivizing Social Games: Distributed Computing Challenges and High Quality Time</i> ; <i>IaaS Cloud Benchmarking: Approach, Challenges, and Experience</i> . Technion, Haifa, Israel.	May—Jun 2013
IBM Haifa (2013)	[12] <i>IaaS Cloud Benchmarking: Approaches, Challenges, and Experience</i> . HotTopiCS Workshop at ACM/SPEC ICPE'13, Prague, Czech Republic.	Apr 2013 Keynote
Intel Haifa (2013)	[13] <i>Cloud Computing Support for Massive Data Preservation</i> . Cloud computing talk at Dagstuhl Seminar on Is the Future of Preservation Cloudy?. Invited by: Organizers.	Nov 2012
LBNL, USA (2010)	[14] <i>Resource Management for Cloud Computing at TU Delft (since 2008)</i> . Cloud computing talk at Computer Science Faculty, Politehnica University of Bucharest, Romania. Invited by: Prof. Dr. Nicolae Tapus.	Apr 2012
	[15] <i>Massivizing Online Games: High Performance Computing and High Quality Time</i> . Massively Social Gaming talk at HPDC Trends Workshop 2012, Amsterdam, the Netherlands. Invited by: Thilo Kielmann.	Mar 2012
	[16] <i>Research on Cloud Performance Evaluation at TU Delft (2008—)</i> Cloud computing talk at SPEC Cloud Work Group. Invited by: Kai Sachs.	Dec 2011
	[17] <i>Research on Performance Modeling and Evaluation at TU Delft (2004—)</i> Performance evaluation talk at SPEC Research Group. Invited by:	Dec 2011

**Invited Talks
(Cont'd.)**

- Samuel Kounev.
- [18] *Internet-Based Distributed Systems*. Massively Social Gaming and Peer-to-Peer talk at Bachelor Seminarium 2012, University of Amsterdam, the Netherlands. Invited by: Andy Piementel. *Nov 2011*
- [19] *Cloud Computing: Open Research Questions for the Next Decade*, Cloud Computing talk at ICT.Open 2011, Veldhoven, the Netherlands. Invited by: Marc van Kreveld. *Nov 2011*
Keynote
- [20] *Cloud Computing Support for Massively Social Gaming*. Massively Social Gaming and Cloud computing talk at Dagstuhl Seminar on Information Management in the Cloud. Invited by: Organizers. *Aug 2011*
- [21] *A Grid and Cloud Research Toolbox*. Cloud computing and Grid computing talk at Complex HPC Summer School, Amsterdam, the Netherlands. Invited by: Henri Bal. *May 2011*
- [22] *Cloudifying Games: Rain for the Thirsty*, Cloud computing and Massively Social Gaming talk at Google-TU Delft Research Symposium, Delft, the Netherlands. Invited by: Arie van Deursen. *Apr 2011*
- [23] *Massivizing Social Games: Yesterday, Today, and The Next Five Years*. Massively Social Gaming talk at GNARP 2011. Keynote. Invited by: GNARP organizers. *Apr 2011*
- [24] *Massivizing Social Games: Yesterday, Today, and The Next Five Years*. Massively Social Gaming talk at Year-End Symposium AMOLF, Amsterdam, the Netherlands. Keynote. Invited by: Symposium organizers. *Dec 2010*
- [25] *Massivizing Social Games: Today and The Next Five Years*. Massively Social Gaming talk at Bachelor Seminarium, University of Utrecht, the Netherlands. Keynote. Invited by: Marc van Kreveld. *Dec 2010*
- [26] Cloud computing talk at Google Inc., Mountain View, CA, USA. Invited by: Pawel Garbacki. *Aug 2010*
- [27] Cloud computing talk at LBNL, Berkeley, CA, USA. Invited by: Keith Jackson. *Aug 2010*
- [28] Cloud computing talk at RADLab, U. California-Berkeley, CA, USA. Invited by: Ion Stoica. *Aug 2010*
- [29] *Cloud Computing Support for Massively Social Gaming*. Massively Social Gaming and Cloud computing talk at Microsoft Cloud Futures 2010. Invited by: Cloud Futures Program Committee. *Apr 2010*
- [30] *POGGI: generating puzzle instances for online games on grid infrastructures*, Distinguished Paper Lecture, EuroPar. *Aug 2009*

Research Grants and Fellowships**Ongoing**

- Personal Grant, NWO/STW Veni grant @larGe (2011—2014). Amount: 250,000€.
- PI, Oracle ERO GRAPHALYTICS (2014—2015). Amount: 100,000\$.
- Project Coordinator and WP Lead, EU FP EYE (2013—2015). Amount: 210,000€ of 1,300,000€.
- WP Lead, EU FP PEDCA (2013—2014). Amount: 130,000€ of 1,900,000€.
- PI, COMMIT COMMIssioner (2014—2015). Amount: 25,000€ of 45,000€.
- PI, KIEM KIESA (2014—2015). Amount: 18,500€.
- PI, 2 x CSC grants, 1Ph.D. student each.

10+ *Awarded Grants*
 >750,000 *EUR*
directly
 >5,000,000 *EUR*
total

Pending

- Co-PI, NWO Top-1 grant (2014—2018), 3 Ph.D. students.
- Co-PI, NWO Indo-Dutch grant (2014—2017), 3 Ph.D. students.

Past

- WP Lead, EIT grant EUROPA (2012, expected also 2013). Amount: 60,000€ of 600,000€.
- Personal Grant, *Delft ICT Talent Grant* (2008—2009). Amount: 30,000€.
- Co-wrote *ALFAE* (2008—2010). Amount: 45,000€.
- Co-wrote *EUNCIT* (2004—2006), EU FP6 SSA. Amount: 1,000,000€.
- PI, *Gaming4Knowledge* (2003—2005), Microsoft Research Grant.
- Three CoreGRID Research Exchange Programme grants, 2007—2009. Three Amazon EC2 grants for students. Other travel grants (IEEE, ACM, AAAI, SPEC, etc.). Amount: approx. 25,000€.

Professional Service**Co-Organizing Professional Meetings**

- General Chair for ACM/SPEC ICPE 2016.
- Track Chair IEEE Cluster 2014.
- Scientific Committee in Dutch ICT with Industry meeting, 2014.
- SCALE Challenge Chair, Finance and Registration Chair for CCGRID 2013.
- Track Chair for ICT.Open 2012.
- Workshops Chair for HPDC 2012. Publicity Chair for HPDC 2011.
- Publicity Chair for MMVE 2011.
- Local Chair for Euro-Par 2009, Performance Prediction and Evaluation.
- Co-Chair GNARP Workshop 2006 and 2007.
- Started and Co-Chaired the Annual Summer School in Systems at Politehnica U. Bucharest.
- Technical Program Committee (TPC) member for over 30 top conferences and workshops.

Reviewer

- Reviewed over 200 scientific articles for good journals and conferences. Journals: IEEE TPDS, IEEE Comm.Lett., Elsevier CCPE, Elsevier FGCS, Elsevier J. of Grid Computing. Conferences: ACM HPDC, IEEE P2P, IEEE IPDPS, IEEE CCGrid, Euro-Par, IEEE MASCOTS, etc.
- External reviewer for dissertations and Ph.D. proposals at UPB, Romania, and Technion, Israel.

Membership

- ACM, IEEE, SPEC

EDUCATION PROFILE

Highlights

High passing ratio, even for 1st-year students

Awards

Professional accreditation since 2012

New techniques

Activating Courses

- Gamification: using social gaming elements to activate students. Among others, used point systems, ranking, grouping, interactive sessions, and unlocking access to courses.
- Gamified TI1400, a first-year course on Computer Organization, IN4392, an M.Sc.-level course on Cloud Computing, and IN4391, an M.Sc.-level course on Distributed Computing Systems.

Supervising and Mentoring Individual Students

- Over 40 Ph.D./M.Sc./B.Sc. students supervised and mentored.
- Internships and other research projects.
- Talented (Honors Track) undergraduate students starting their research career.

Supervising and Mentoring International Students

- Supervised and mentored students from the Austria, Israel, Hungary, Netherlands, and Romania.

Project-Based Learning

- Supervised groups of students working on literature surveys, over a period of 5 years.

Results, Awards, and Recognition

- High passing ratios (over 65% at first try).
- Nominated for University Teacher of the Year, TU Delft, 2014.
- Teacher of the Year, Faculty of Electrical Engineering, Mathematics, and Computer Science, TU Delft, 2014.
- Teacher of the Year, Department of Computer Science, TU Delft, 2014.
- 3rd-best Teacher of the Year award, Department of Computer Science, TU Delft, 2013.
- Consistently high student evaluations.
- A student testimonial: “I want to thank you for showing that even though I'm not that good at written exams, I still can excel at other points in my study. I'd love to have a copy of my badge, as physical reminder of a course that made me eager to learn about things. Even when some of those things will never really have my interest. This course, and the way it was given, learned me a few things about what motivates me, and only for that reason it was totally worth getting up for every lecture.”

Diplomas

- Completed the Dutch University Teaching Qualification (Basis Kwalificatie Onderwijs). Details about this qualification and the assessment of my teaching portfolio are available online: http://www.pds.ewi.tudelft.nl/~iosup/teaching_bko.html
- Certified Cisco CCNA Instructor, 2002—2003

For more details, see the summary at <http://www.pds.ewi.tudelft.nl/~iosup/teaching.html>

COORDINATING / MENTORING (SELECTED ACTIVITIES SINCE 2008)

Ph.D. Theses*2009—ongoing*

- Coordinating Yong Guo, Ph.D. student at TU Delft, since Sep 2011.
- Coordinating Siqi Shen, Ph.D. student at TU Delft, since Sep 2010.
- Co-coordinating Boxun Zhang, Ph.D. student at TU Delft with J. Pouwelse and D. Epema. First employment at Spotify, Sweden. Co-authored 4 of 5 main chapters.
- Co-coordinating Nezhir Yigitbasi, Ph.D. student at TU Delft with D. Epema. First employment at Intel, Portland, OR, USA. Co-authored 6 of 8 main chapters.
- Co-coordinating Ozan Sonmez, Ph.D. student at TU Delft with Dick Epema; graduated Jan 2010. First employment at Huawei, Turkey. Co-authored 5 of 7 main chapters.

Ph.D. Level Internships*2007—2014*

- Coordinated for 6 months Yunhua Deng, Ph.D. City University of Hong Kong, HK
Topic: cloud-based architectures for distributed virtual environments.
- Coordinated for 6 month Alexandru Olteanu, Ph.D. student at Politehnica University of Bucharest, Romania. First employment at SAP, Romania.
Topic: Online user-level scheduling in cloud computing environments for Massively Social Gaming
- Coordinated for 1 year Kefeng Deng, Ph.D. student at NUDT, China
Topic: Online system-level scheduling in cloud computing environments for scientific computing
- Coordinated for 3 months David Villegas, Ph.D. student at FIU, FL, USA. First employment at IBM Almaden, USA.
Topic: Online user-level scheduling in cloud computing environments for scientific computing
- Coordinated 3 chapters in the thesis of Vlad Posea, Ph.D. student at Politehnica University of Bucharest, Romania. First employment at Politehnica University of Bucharest, Romania.
Topic: Social network discovery and mining
- Coordinated 1 chapter in the thesis of Orna Agmon Ben-Yehuda, Ph.D. student at Technion. With Assaf Schuster; graduated 2013. First employment at Technion, Israel.
- Coordinated for 3 months Tudor Ionescu, Ph.D. student at U. Stuttgart, Germany (year 2/4)
Title: System for Nuclear Plant Disaster Prevention on Grids and Clouds. Graduated 2012.
- Coordinated for 3 months Attila Kertesz, Ph.D. student SZTAKI, Hungary. First employment at SZTAKI, Hungary.
Topic: brokering in multi-site computing systems
- Coordinated for 3 months Mugurel Ionut Andreica, Ph.D. student at Politehnica University of Bucharest, Romania. First employment at Politehnica University of Bucharest, Romania.
Topic: Benchmarking large-scale distributed systems
- Coordinated for 3 months Corina Stratan, Ph.D. student at Politehnica University of Bucharest, Romania. First employment at Vrije Universiteit Amsterdam, the Netherlands.
Topic: Benchmarking workflow engines for scientific computing

TU Delft Honors Track*2012—2014**Top undergrad students
beginning their research careers*

- Coordinated Jesse Donkervliet. Topic: Cloud-Based Procedural Content Generation for Puzzle Games.
 - Coordinated Stefan Hugtenburg. Topic: Cloud Scheduling for Online Gaming.
 - Coordinated Tim Hegeman. Topic: Cloud-Based Big Data Processing.
 - Coordinated Anand Sawant. Topic: Co-scalability of game design and platform
 - Coordinated Ruben Verboon. Topic: User-level scheduling in IaaS cloud computing
-

M.Sc. Projects*2008—ongoing*

- Coordinating Sietse Au, M.Sc. student at TU Delft.
- Coordinating Wing Lung Ngai, M.Sc. student at TU Delft.
- Co-coordinating Stefan van Wouw, M.Sc. student at TU Delft; with: company.
- Co-coordinating Vincent van Beek, M.Sc. student at TU Delft; With: company.
- Co-coordinated Emanuel Dias, M.Sc. student at TU Delft; With: Fernando Kuipers.
- Co-coordinated Konstantinos Bessas, M.Sc. student at TU Delft; With: Fernando Kuipers.
- Co-coordinated Lipu Fei, M.Sc. student at TU Delft; With: Dick Epema
Topic: Scheduling in multi-cloud systems
- Coordinated Martin Biczak, M.Sc. student at TU Delft
Topic: Design and evaluation of a scalable, cloud-based game analytics platform
Publications: IPDPS.
- Secondary coordinator Ate Penders; M.Sc. student at TU Delft; With: Ana Lucia Varbanescu.
- Secondary coordinator Nefeli Lampraki; M.Sc. student at TU Delft; With: Ana Lucia Varbanescu.
- Coordinated Johannes Bertens, M.Sc. student at TU Delft, currently at Deltares. With Pim Witlox, Deltares.
- Co-coordinated Willem Bult, M.Sc. student at TU Delft. With Eelco Visser, TU Delft, Monica Lam, Stanford U.
- Coordinated Thomas de Ruiter, M.Sc. student at TU Delft
Topic: Analysis and modeling of workloads from cloud computing environments
- Coordinated Athanasios Antoniou, M.Sc. student at TU Delft
Topic: Performance evaluation of cloud computing services for scientific computing
Cum Laude. Publications: CCGrid.
- Coordinated Arnoud Bakker, M.Sc. student at TU Delft
Topic: Design and evaluation of a scalable, Facebook-integrated online game
- Co-coordinated Egbert Bouman, M.Sc. student at TU Delft; With: Dick Epema
Topic: Design and evaluation of a P2P-based online chess platform
- Co-coordinated Bianca Neagu, M.Sc. student at Politehnica University of Bucharest, Romania; With: Vlad Posea, Mihaela Balint Topic: In-depth Bridge skill analysis
- Co-coordinating George Pasatoiu, M.Sc. student at Politehnica University of Bucharest, Romania; With: Vlad Posea, Mihaela Balint Topic: Pair recommendation system for bridge.
- Coordinating Shanny Anoep, M.Sc. student at TU Delft
Topic: Trace-based Performance Analysis of Scheduling Bags of Tasks in Grids
Publications: HPDC, FGCS.

B.Sc. Projects*2010—2014*

- Coordinating a group of 3 B.Sc. students, Tim Hegeman et al., at Bitbrains and TU Delft—IN3405, Bachelorproject, Spring 2014.
 - Coordinated a group of 4 B.Sc. students, Anand Sawant et al., at external company and TU Delft—IN3405, Bachelorproject, Spring 2013.
 - Co-coordinated Alexandra Safta, B.Sc. student at Politehnica University of Bucharest, Romania; With: Vlad Posea, Mihaela Balint Topic: Application of Machine Learning techniques to localization of bridge players, Spring 2011.
 - Co-coordinated Sergiu Gaman, B.Sc. student at Politehnica University of Bucharest, Romania; With: Vlad Posea, Mihaela Balint Topic: Design and evaluation of a ranking system for bridge players, Spring 2011.
 - Co-coordinated Larisa Stavarache, B.Sc. student at Politehnica University of Bucharest, Romania; With: Vlad Posea, Mihaela Balint Topic: Web-based application for a bridge community, Spring 2011.
 - Coordinated a group of 2 B.Sc. students, Fedor Jutte and Jerry de Swaart, at TU Delft—IN3405, Bachelorproject
 - Co-ordinated Alexandru Dimitriu (next: MSc track), B.Sc. student at Politehnica University of Bucharest, Romania
-

B.Sc. Projects 2010—2014	With: Vlad Posea and Mihaela Baline (Politehnica University of Bucharest). Honors (mark 10/10), Awards (Best Student Research) Publications: RoEduNet 2010 (ISI-indexed conference), CSCS 2010 (int'l. conference)
	<ul style="list-style-type: none"> • Co-Coordinated Adrian Lascateu, B.Sc. student at Politehnica University of Bucharest, Romania With: Nicolae Tapus (Politehnica University of Bucharest, Romania). Honors (mark 10/10), Awards (Best Student Research) Publications: book chapter (Wiley), ACM/IEEE NetGames 2010

TEACHING ACTIVITIES (Courses / Laboratories)

Lecturer <i>Fall 2013—ongoing</i> <i>New course</i> <i>Gamified course</i>	<ul style="list-style-type: none"> • IN4391 Distributed Computing Systems, Delft University of Technology, the Netherlands (M.Sc. curriculum) • Format: weekly lectures, reviews, presentations, lab exercises; 7 weeks. • Duties: Lectures, gamified course, new course material, lab work, grading.
Lecturer <i>Fall 2012—ongoing</i> <i>New course</i> <i>Gamified course</i>	<ul style="list-style-type: none"> • IN4392 Cloud Computing, Delft University of Technology, the Netherlands (M.Sc. curriculum) • With: Dick Epema (50%-50%). • Format: weekly lectures, reviews, presentations, lab exercises; 7 weeks. • Duties: Lectures, gamified course, new course material, lab work, grading.
Lecturer <i>Spring 2011—ongoing</i> <i>Gamified course</i>	<ul style="list-style-type: none"> • TI1400 Computersystemen (Computer Organization), Delft University of Technology, the Netherlands (year 1/3, B.Sc. curriculum) • Format: weekly lectures, exams; 14 weeks. • Duties: Lectures, gamified course, revised course material, grading.
Lecturer/ Group Coordinator <i>Spring 2010—2013</i>	<ul style="list-style-type: none"> • IN3305 Bachelor Seminarium, Delft University of Technology, the Netherlands (year 3/3) • With: Pieter van Nieuwenhuizen, several other lecturers. • Main topic: Literature Survey. • Format: lecture, weekly meetings, discussion; 2 months. • Duties: Lectures, revised course material, Coordinated 7 groups of 4 students each, prepared assignments, grader (75% grade)
Lecturer <i>Spring 2011, 2012</i>	<ul style="list-style-type: none"> • TI1100-A, Delft University of Technology, the Netherlands (year 1/3) • With: Charl Botha, several other lecturers. • Main topic: Various Subjects in Computer Science, incl. Internet Computing. • Format: lectures, laboratory work; 1 week. • Duties: 1 Lecture, new course material
Lecturer <i>Summer 2009, 2011</i>	<ul style="list-style-type: none"> • ASCI Graduate School Course A14: Advanced Grid Programming Models, The Netherlands (Graduate School Course) • With: Dick Epema (TU Delft), Henri Bal (Vrije Universiteit Amsterdam). • Main topic: grid computing • Format: lecture, laboratory work; 1 week. • Duties: Lectures, Prepared assignments. Taught 1 lecture.
Lecturer <i>Fall 2009</i>	<ul style="list-style-type: none"> • IN3540 Gedistributeerde Systemen, Delft University of Technology, The Netherlands (year 3/3) • With: Dick Epema. • Main topic: Distributed Systems. • Format: 2h/wk lectures, 2h/wk practical work; 7 weeks. • Duties: Lectures, Prepared assignments. Taught last 3 lectures.
Lecturer <i>Spring 2009</i>	<ul style="list-style-type: none"> • IN1105-I, Delft University of Technology, the Netherlands (year 1/4) • With: several other lecturers. • Main topic: Various Subjects in Computer Science, incl. Internet Computing. • Format: lectures, laboratory work; 1 week. • Duties: 1 Lecture, revised course material

VALORIZATION PROFILE

Highlights**Public Data and Software Artifacts**

- The Grid Workloads, the Peer-to-Peer Trace, the Failure Trace Archives, and the Game Trace Archive, which provide open access to workload and resource operation traces from large-scale distributed computing environments.
- @large open-source software, developed for OpenTTD.
- GrenchMark, ServMark, and SkyMark: a suite of performance evaluation tools for large-scale distributed systems: grid computing, service-oriented architectures, and cloud computing.

Acquiring Research Grants

- Grants from scientific funding agencies (NWO, STW, EU), professional communities (IEEE, ACM, SPEC), and industry (Google).

Joint Projects with the Industry

- Collaboration with local industry (Deltares, TNO) and with the international industry (Oracle, Google, SAP, etc.).

NETWORKING WITH EXTERNAL RESEARCH CONSUMERS

- Actively collaborated with over 25 scientists in 8 international institutions: U. California-Berkeley (USA), Politehnica University of Bucharest (Romania), Google-Mountain View (USA), INRIA Grenoble (France), U. Innsbruck (Austria), U. Stuttgart (Germany), VU Amsterdam, U. Utrecht; for scientific results see Section A.3;
- Actively pursued the possibility of establishing connections with national and international companies and research groups. Results include writing of proposals for EU FP7 and ARC grants (see Section A.6);

RESEARCH PROJECTS WITH VALORIZATION POTENTIAL

POGGI	<ul style="list-style-type: none"> • Automating the generation of game content for Massively Multiplayer Online Games (MMOGs) using large resource pools and clouds. Designed, implemented, and deployed POGGI to enable massive, player-customized generation of puzzle instances. Scaled to thousands of interesting instances generated per hour. Role: PI / Main contact.
CAMEO	<ul style="list-style-type: none"> • Gaming analytics, that is, the collection and analysis of state evolution for massively multiplayer online games and massively social games. Designed, implemented, and deployed CAMEO to enable the largest game analytics process, to-date (over 5M unique players from the commercial MMOG Runescape). Role: PI / Main contact.
BRIDGEHELPER	<ul style="list-style-type: none"> • Creating a Massive Online Gaming environment for communities of the traditional card game of bridge. Key topics: large-scale data collection; large-scale graph analysis; community analysis; social networking; user behavior; ranking; recommendations; pairing; automatic tutor; bridge robot. Role: PI / Main contact. With M. Balint, V. Posea, etc.
THE FAILURE TRACE ARCHIVE	<ul style="list-style-type: none"> • The Failure Trace Archive provides resource availability traces from large-scale distributed systems (http://fta.inria.fr). Designed a unified grid workload format, and co-engineered a software package for automatic trace collection, analysis, and conversion to the unified format. Role: Co-PI / Main contact. With D. Epema, D. Kondo, etc.
THE PEER-TO-PEER TRACE ARCHIVE	<ul style="list-style-type: none"> • The Peer-to-Peer Trace Archive provides operational traces from peer-to-peer systems (http://p2pta.ewi.tudelft.nl/). Designed a unified grid workload format, and co-engineered a software package for automatic trace collection, analysis, and conversion to the unified format. Role: Co-PI / Main contact. With D. Epema, J. Pouwelse, etc.
THE GAME TRACE ARCHIVE	<ul style="list-style-type: none"> • The Game Trace Archive provides operational traces from online gaming systems (http://gta.st.ewi.tudelft.nl/). Role: PI/Main contact. With Guo Yong.
BTWORLD	<ul style="list-style-type: none"> • Designed, developed, and deployed a tool for large-scale measurement and observation of the BitTorrent file-sharing. One year of data collected from thousands of open and closed trackers. Role: PI / Main contact. With J. Pouwelse, D. Epema, etc.

LEADERSHIP AND INTERNATIONAL PROFILE

Highlights**Professional Organizations**

- SPEC, an international organization with partners such as HP, IBM, Intel, Oracle, SAP, etc.

Helping PDS and EEMCS Progress

- Various committees.

Helping TU Delft Make Better National and International Links

- Networking visits at Politehnica (#1 technical university in Romania)
- Contact with several industrial partners

MAIN DETAILS

- Elected Chair of the SPEC Cloud Working Group;
- Member of the Steering Committee of the SPEC Research Group;
- Reviewer of top journals in the area of Parallel and Distributed Systems. See detailed list in Appendix B.
- PC Member of top conferences in the area of Parallel and Distributed Systems. Appointed Track and General Chair. See detailed list in Appendix B.
- Reviewed over 400 articles for the parallel and distributed systems community, of which over 350 articles reviewed in the past 5 years.
- Member of the OCI education committee at faculty level;
- Member of the “Examencommissie CE&ES” education committee at M.Sc.-programme level;
- Member of working groups on improving the quality of education at TU Delft: WG Studielast and Horizontale WG;
- Member in the evaluation committees for several M.Sc. theses, including an honors (10/10) thesis;
- Member in the preparation group for VENI applicants—personal grants in the Netherlands, equivalent of the NSF Career grants.

WORK ACROSS GROUP AND UNIVERSITY BOUNDARIES

- Published work indexed by DBLP with over 85 scientists, see <http://www.informatik.uni-trier.de/~ley/pers/hd/i/Iosup:Alexandru> .
- Research visits to 5 groups (described in Academic Work Experience, page 4).

INVOLVEMENT WITH PILOT PROJECTS IN EDUCATION

Educator of Educators*Fall 2013*

- Held workshop on gamification at EEMCS Education Day 2013

Mentor*Fall 2013—ongoing*

- Pilot TI1115 Mentoraat (B.Sc. curriculum)
- Format: periodic meetings with 10+ starting students.
- Duties: new material, reporting, grading.

Supervisor/Mentor*2012—ongoing*

- Pilot Honors Programme (B.Sc. curriculum)
 - 5 successes so far.
 - Format: periodic meetings with talented students (top 10%) starting their research career.
 - Duties: creating new material, setting direction of research, reporting, grading.
-

OTHER INFORMATION

Personal Interests

Computer Game Design

- Three award-winning strategy games: Smugglers 2, TV Tycoon, Leaderz.

Active Sports

- Basketball referee, national level. Since 2006. Promoted yearly; current rank D-1 (ladder includes A to C, D-1 to 6, E, and F.) Over 100 games in total, over 30 in the juniors national league (*eredivisie*).
- Basketball player. 2004—2013: player in Dutch lower divisions.
- Volleyball player. 2011—2012: player in Dutch lower divisions.

Reading

- One book a week for the past twenty-plus years.
- Reviewed over 300 books on GoodReads. Rated over 1,250 books on GoodReads.

Traveling

- Visited over 30 countries/250 locations in the last decade.
- Farthest distance traveled: 16,684km from Delft, the Netherlands to Sydney, Australia.



 274,934 total miles traveled

 23% of the world traveled

TripAdvisor travel map.

SEVEN REFERENCES

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Additional references are available upon request.

APPENDIX A. FULL LIST OF PUBLICATIONS

Peer-Reviewed Journal Articles

2014

Best:

IEEE IC

3.293 ISI 5yIF10

3.108 ISI IF10

(2011, 2014)

ACM TOMCCAP

2.475 ISI 5yIF10

1.425 ISI IF10

(2012)

- [1] A. Iosup, R. van de Bovenkamp, S. Shen, A. L. Jia, and F. A. Kuipers. *An Analysis of Implicit Social Networks in Multiplayer Online Games*, In the IEEE Internet Computing, special issue on Internet-Scale Games. Vol.18(3), May/June 2014. Extends COMSNETS'13 article.
- [2] V. Nae, R. Prodan, and A. Iosup. *SLA-based operations of massively multiplayer online games in clouds*, In the Springer Multimedia Systems Journal (MMSJ), Jan 2014.

2013

IEEE TPDS

2.203 ISI 5yIF10

1.733 ISI IF10

(2010 x 2)

Elsevier FGCS

1.752 ISI 5yIF10

2.229 ISI IF10

(2008)

Elsevier CCPE

1.004 ISI 5yIF10

1.322 ISI IF10

(2008, 2010)

- [3] B. Javadi, D. Kondo, A. Iosup, D. H. J. Epema: *The Failure Trace Archive: Enabling the comparison of failure measurements and models of distributed systems*. J. Parallel Distrib. Comput. 73(8): 1208-1223 (2013). Extends CCGRID 2010 article.
DOI: <http://dx.doi.org/10.1016/j.jpdc.2013.04.002>
- [4] M. Hendricks, S. Meijer, J. v.d.Velden, and A. Iosup, *Procedural Content Generation for Games: A Survey*, In ACM Transactions on Multimedia Computing, Communications and Applications (ACM TOMCCAP), vol.9(1), Feb 2013.
DOI: <http://doi.acm.org/10.1145/2422956.2422957>

*H-index,
100+ citations, incl.
conference article*

H-index, 25+ citations

2011

- [5] A. Iosup and D. Epema, *Grid Computing Workloads*, IEEE Internet Computing(IC), Special Issue on Internet Workloads, vol.15(2), pp.19-26, Mar/Apr 2011. Extends Grid 2006 article.
DOI: <http://dx.doi.org/10.1109/MIC.2010.130>
- [6] A. Iosup, S. Ostermann, N. Yigitbasi, R. Prodan, T. Fahringer, and D. Epema, *Performance Analysis of Cloud Computing Services for Many-Tasks Scientific Computing*, IEEE Transactions on Parallel and Distributed Systems (TPDS), vol.22(6), pp.931-945, June 2011. Extends CloudComp 2010 article.
DOI: <http://dx.doi.org/10.1109/TPDS.2011.66>
- [7] A. Iosup, *POGGI: Generating Puzzle Instances for Online Games on Grid Infrastructures*, Concurrency and Computation: Practice and Experience Special issue with best papers of Euro-Par 2009, vol.23(2), pp.158—171, Elsevier, 2011. Extends Euro-Par 2009.
DOI: <http://dx.doi.org/10.1002/cpe.1638>
- [8] A. Iosup, V. Nae, and R. Prodan, *The Impact of Virtualization on the Performance and Operational Costs of Massively Multiplayer Online Games*, In Int. J. Adv. Media and Comput. (IJAMC), vol.4(4), pp.364—386, 2010. Extends NETGAMES 2009 article.
- [9] V. Nae, A. Iosup, and R. Prodan, *Dynamic Resource Provisioning in Massively Multiplayer Online Games*, IEEE Transactions on Parallel and Distributed Computing (TPDS), vol.22(3), pp.380—395, IEEE Press, Mar 2011. Extends SC'08 article. .

*H-index,
200+ citations, incl.
conference article*

*H-index,
500+ citations, incl.
conference article
Impact Award*

*10 citations, incl.
conference article*

*H-index,
85+ citations, incl.
conference article*

DOI: <http://dx.doi.org/10.1109/TPDS.2010.82>

2008

- [10] A. Iosup, D.H.J. Epema, T. Tannenbaum, M. Farrellee, and M. Livny, *Inter-Operating Grids through Delegated MatchMaking*, In the Journal of Scientific Programming, Special issue with best paper award at ACM SuperComputing 2007, IOS Press, vol. 16(2-3), pp. 233-253, 2008. Extends SC'07 article.
DOI: <http://dx.doi.org/10.3233/SPR-2008-0246> *H-index, 85+ citations, incl. conference article*
- [11] A. Iosup, H. Li, M. Jan, S. Anoep, C. Dumitrescu, L. Wolters, and D.H.J. Epema, *The Grid Workloads Archive*, Future Gen. Comp. Sys., vol. 24(7), pp. 672-686, Elsevier, 2008.
DOI: <http://dx.doi.org/10.1016/j.future.2008.02.003> *H-index, 180+ citations*
- [12] J. Pouwelse, P. Garbacki, J. Wang, A. Bakker, J. Yang, A. Iosup, D. Epema, M. Reinders, M. van Steen, and H.J. Sips, *Tribler: A social-based peer-to-peer system*, Concurrency and Computation: Practice and Experience, vol. 20(2), pp. 127–138, Elsevier, 2008. Extends IPTPS 2005 article.
DOI: <http://dx.doi.org/10.1002/cpe.1189> *H-index, 435+ citations*

Peer-Reviewed Conference Articles

2014

- Best: [13] L. Fei, B. Ghit, A. Iosup, and D. Epema. *KOALA-C: A Task Allocator for Integrated Multicloud and Multicloud Environments*. IEEE International Conference on Cluster Computing (Cluster 2014). Madrid, ES, Oct 2014. *24% acceptance ratio*
- ACM SIGMETRICS (2014)
- ACM HPDC (2008—2010) [14] A. Iosup, S. Shen, Y. Guo, S. Hugtenburg, J. Donkervliet, and R. Prodan (U. Innsbruck, Austria). *Massivizing Online Games Using Cloud Computing: A Vision*, In the First International Workshop on Cloud Gaming Systems and Networks (C-Game 2014), held in conjunction with the IEEE International Conference on Multimedia and Expo (ICME 2014), Chengdu, China, Jul 2014. *Invited paper*
- ACM SC (2007, 2008)
- IEEE IPDPS (2012)
- IEEE Grid (2006—2008, 2010, 2011) [15] B. Ghit, A. Iosup, N. Yigitbasi, and D. Epema. *Balanced Resource Allocations Across Multiple Dynamic MapReduce Clusters*, In the ACM SIGMETRICS Conference on Measurement and Modeling of Computer Systems (SIGMETRICS 2014). Austin, TX, USA, 16-20 Jun 2014. *17% acceptance ratio*
- IEEE CCGrid (2006, 2007, 2009—2012)
- IEEE P2P (2006, 2011) [16] Y. Guo, M. Biczak, A. L. Varbanescu, A. Iosup, C. Martella, and T. L. Willke, *How Well do Graph-Processing Platforms Perform? An Empirical Performance Evaluation and Analysis*, IEEE International Parallel and Distributed Computing Symposium (IPDPS), Phoenix, AZ, USA, May 2014. *21% acceptance ratio*
- Euro-Par (2007—2010) [17] Y. Guo, A. L. Varbanescu, A. Iosup, C. Martella, and T. L. Willke. *Benchmarking Graph-Processing Platforms: A Vision*, In the ACM/SPEC International Conference on Performance Engineering (ICPE 2014), Work-in-Progress Track. Dublin, Ireland, 22-26 Mar 2014. *31% acceptance ratio*
- [18] S. Shen, N. Brouwers, and A. Iosup. *Characterization of Human Mobility in Networked Virtual Environments*, In the ACM Workshop on Network

and Operating Systems Support for Digital Audio and Video (NOSSDAV 2014). Singapore, 19-20 Mar 2014.

- [19] A. Iosup and D. Epema. *An Experience Report on Using Gamification in Technical Higher Education*, ACM Technical Symposium on Computer Science Education SIGCSE 2014, March 5.8, 2014, Atlanta, GA, USA.

2013

**Peer-Reviewed
Conference
Articles**

- [20] K. Deng, J. Song, K. Ren, A. Iosup: *Exploring portfolio scheduling for long-term execution of scientific workloads in IaaS clouds*. ACM/IEEE Conference on High Performance Networking and Computing, (SC), Denver, CO, USA, 2013: article 55 20% acceptance ratio
- [21] A. L. Varbanescu and A. Iosup, *On Many-Task Big Data Processing: from GPUs to Clouds*, In the 6th Workshop on Many-Task Computing on Grids and Supercomputers (MTAGS), in conjunction with the ACM/IEEE Conference on High Performance Networking and Computing, (SC|13), Denver, CO, USA, Nov 2013. Invited paper
- [22] T. Hegeman, B. Ghit, M. Capotã, J. Hidders, D. Epema, and A. Iosup *The BTWorld Use Case for Big Data Analytics: Description, MapReduce Logical Workflow, and Empirical Evaluation*, In the IEEE International Conference on Big Data (Big Data 2013). Santa Clara, CA, USA, 6-9 Oct 2013. 17% acceptance ratio
- [23] S. Shen, K. Deng, A. Iosup, and D. H. J. Epema: *Scheduling Jobs in the Cloud Using On-Demand and Reserved Instances*. Euro-Par Conference 2013: 242-254. 27% acceptance ratio
- [24] Vlad Nae, Lukas Köpfle, Radu Prodan, Alexandru Iosup: *Autonomous massively multiplayer online game operation on unreliable resources*. ACM International C* Conference on Computer Science & Software Engineering (C3S2E) 2013: 95-103.
- [25] Vlad Nae, Radu Prodan, Alexandru Iosup: *SLA-based operation of massively multiplayer online games in competition-based environments*. ACM International C* Conference on Computer Science & Software Engineering (C3S2E) 2013: 104-112. Elaborates on ICPE'11 article.
- [26] V. Nae, R. Prodan, and A. Iosup, *Autonomic Cloud-based Operation of Massively Multiplayer Online Games*, In the ACM Cloud and Autonomic Computing Conference (CAC 2013).
- [27] K. Deng, R. Verboon, and A. Iosup. *A Periodic Portfolio Scheduler for Scientific Computing in the Data Center*, In the 17th Workshop on Job Scheduling Strategies for Parallel Processing (JSSPP'13). Held in conjunction with the IEEE International Parallel and Distributed Processing Symposium (IPDPS). Boston, MA, USA, May 2013
- [28] B. Ghit, A. Iosup, and D. Epema. *Towards an Optimized Big Data Processing System*. CCGRID 2013 Doctoral Symposium, May 2013.
- [29] S. Shen, A. Iosup, and D. Epema. *Massivizing multi-player online games on cloud*. CCGRID 2013 Doctoral Symposium, May 2013
- [30] A. C. Olteanu, N. Tapus, and Alexandru Iosup. *Extending the Capabilities of Mobile Devices for Online Social Applications through Cloud Offloading*. CCGRID 2013 Doctoral Symposium, May 2013

- [31] A. C. Olteanu, A. Iosup, and N. Tapus, *Towards a Workload Model for Online Social Applications*, ACM/SPEC International Conference of Performance Engineering (ICPE) 2013 (WiP track), April 2013 32% acceptance ratio
- [32] R. van de Bovenkamp, S. Shen, A. Iosup, and F. A. Kuipers: *Understanding and recommending play relationships in online social gaming*. COMSNETS 2013: 1-10 Invited paper
26% acceptance ratio

 2012

**Peer-Reviewed
Conference
Articles**

- [33] A. Iosup, R. Prodan, and D. Epema, *IaaS Cloud Benchmarking: Approaches, Challenges, and Experience*, In the 5th Workshop on Many-Task Computing on Grids and Supercomputers (MTAGS), in conjunction with the ACM/IEEE Conference on High Performance Networking and Computing, (SC'12), Salt Lake City, Utah, USA, November 12, 2012. Invited paper
- [34] Y. Guo and A. Iosup, *The Game Trace Archive*, ACM/IEEE Symposium on Network and Systems Support for Games (NetGames 2012), Venice, Italy, November 22—23, 2012. 15+ citations
20% acceptance ratio
- [35] V. Nae, L. Kopfle, R. Prodan, and A. Iosup, *Massively Multiplayer Online Games on Unreliable Resources*, ACM/IEEE Symposium on Network and Systems Support for Games (NetGames 2012), Venice, Italy, November 22-23, 2012 (accepted as short paper).
- [36] Y. Guo, S. Shen, O. Visser, and A. Iosup, *An Analysis of Online Match-Based Games*, International Workshop on Massively Multiuser Virtual Environments (MMVE) in conjunction with the IEEE International Symposium on Audio-Visual Environments and Games (HAVE 2012), October 08-09, 2012, Munich, Germany.
- [37] E. Folkerts, A. Alexandrov, K. Sachs, A. Iosup, V. Markl, and C. Tosun, *Benchmarking in the Cloud: What it Should, Can, and Cannot Be*, In TPC Technology Conference on Performance Evaluation and Benchmarking (TPCTC 2012), held in conjunction with VLDB 2012, Istanbul, Turkey, Aug 2012.
- [38] D. Villegas, A. Antoniou, S. Masoud-Sadjadi, and Alexandru Iosup, *An Analysis of Provisioning and Allocation Policies for Infrastructure-as-a-Service Clouds: Extended Results*, IEEE/ACM International Symposium on Cluster, Cloud, and Grid Computing (CCGrid 2012) (in print). H-index, 23 citations
27% acceptance ratio
- [39] O. Agmon Ben-Yehuda, A. Schuster, A. Sharov, M. Silberstein, and A. Iosup, *ExPERT: Pareto-Efficient Task Replication on Grids and a Cloud*, IEEE International Parallel and Distributed Processing Symposium (IPDPS 2012) (in print). 10+ citations
21% acceptance ratio

 2011

- [40] N. Yigitbasi, O. Sonmez, A. Iosup, and D. Epema, *Performance Evaluation of Overload Control in Multi-Cluster Grids*, Proc. of the 12th IEEE/ACM Int'l. Conference on Grid (Grid2011), pp.173—180.
- [41] S. Shen, O. Visser, and A. Iosup, *RTSenr: An Experimental Environment for Real-Time Strategy Games*, In ACM/IEEE Symposium on Network 33% acceptance ratio

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- and Systems Support for Games (NetGames 2011), Ottawa, Canada, pp.1—6, October 6-7, 2011.
- [42] S. Shen and A. Iosup, *The XFire Online Meta-Gaming Network: Observation and High-Level Analysis*, International Workshop on Massively Multiuser Virtual Environments (MMVE) in conjunction with the IEEE International Symposium on Audio-Visual Environments and Games (HAVE 2011), October 14-17, 2011, Nanchang, JiangXi Province, China. 10+ citations
- [43] B. Zhang, A. Iosup, J. Pouwelse, and D. Epema, *Identifying, Analyzing, and Modeling Flashcrowds in BitTorrent*, IEEE Int'l. Conf. on Peer-to-Peer Computing (P2P'11), Kyoto, Japan, pp.240—249, Aug 2011. 15 citations
- Peer-Reviewed Conference Articles**
- [44] M. Balint, V. Posea, A. Dimitriu, and A. Iosup, *An Analysis of Social Gaming Networks in Online and Face to Face Bridge Communities*, In ACM Workshop on Large-scale System and Application Performance (LSAP 2011), San Jose, CA, USA, June 8, 2011.
- [45] A. Iosup, N. Yigitbasi, and D. Epema, *On the Performance Variability of Production Cloud Services*, IEEE/ACM International Symposium on Cluster, Cloud, and Grid Computing (CCGrid 2011), p.104—113. 85+ citations
27% acceptance ratio
- [46] V. Nae, R. Prodan, T. Fahringer, and A. Iosup, *A new business model for massively multiplayer online games*, ACM/SPEC International Conference of Performance Engineering (ICPE 2011), p.271—282, March 2011.
- 2010
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- [47] A. Iosup, A. Lascateu, and N. Tapus, *CAMEO: Enabling Social Networks for Massively Multiplayer Online Games through Continuous Analytics and Cloud Computing*, In ACM/IEEE Symposium on Network and Systems Support for Games (NetGames 2010), Taipei, Taiwan, November 16-17, 2010. 10+ citations
30% acceptance ratio
- [48] M. Balint, V. Posea, A. Dimitriu, and A. Iosup, *User Behavior, Social Networking, and Playing Style in Online and Face to Face Bridge Communities*, In ACM/IEEE Symposium on Network and Systems Support for Games (NetGames 2010), Taipei, Taiwan, November 16-17, 2010 (short paper)
- [49] N. Yigitbasi, M. Gallet, D. Kondo, A. Iosup, and D. Epema, *Analysis and Modeling of Time-Correlated Failures in Large-Scale Distributed Systems*, In ACM/IEEE International Conference on Grid Computing (Grid'10), Oct 25-29, 2010 in Brussels, Belgium. 20+ citations
23% acceptance ratio
- [50] M. Gallet, N. Yigitbasi, B. Javadi, D. Kondo, A. Iosup, and D. Epema, *A Model for Space-Correlated Failures in Large-Scale Distributed Systems*, In Euro-Par Conference 2010, 2010. 10+ citations
- [51] B. Zhang, A. Iosup, J. Pouwelse, D. Epema, and H. Sips, *Sampling Bias in BitTorrent Measurements*, In Euro-Par Conference 2010, 2010. 15+ citations
- [52] B. Zhang, A. Iosup, J. Pouwelse, D. Epema. *The peer-to-peer trace archive: design and comparative trace analysis*. ACM CoNEXT '10 Student Workshop, Nov 2010. 15+ citations
- [53] V. Posea, M. Balint, A. Dimitriu, A. Iosup, *An analysis of the BBO Fans online social gaming community*, In Roedunet International Conference (RoEduNet), 2010 9th, Jun 24-26, 2010.
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Peer-Reviewed
Conference
Articles

- [54] M. Wojciechowski, M. Capotã, J. Pouwelse, and A. Iosup, *BTWorld: Towards Observing the Global BitTorrent File-Sharing Network*, In ACM Workshop on Large-Scale System and Application Performance (LSAP'10), in conjunction with the ACM/IEEE Int'l. Symp. on High Performance Distributed Computing (HPDC'10).
- [55] O. Sonmez, N. Yigitbasi, S. Abrishami, A. Iosup, and D. Epema, *Performance Analysis of Dynamic Workflow Scheduling in Multicenter Grids*, In the ACM/IEEE Int'l. Symp. on High Performance Distributed Computing (HPDC'10), June 20-25, 2010, Chicago, IL, USA. 20+ citations
25% acceptance ratio
- [56] D. Kondo, B. Javadi, A. Iosup, and D. Epema, *The Failure Trace Archive: Enabling Comparative Analysis of Failures in Diverse Distributed Systems*, In IEEE International Symposium on Cluster Computing and the Grid (CCGrid'10), 2010. **Best Paper Award**
H-index, 95+ citations
23% acceptance ratio
-
- 2009
- [57] S. Ostermann, A. Iosup, N. Yigitbasi, R. Prodan, T. Fahringer, and D. Epema, *A Performance Analysis of EC2 Cloud Computing Services for Scientific Computing*, Cloudcomp 2009, LNICST 34, pp. 115–131, 2010. H-index,
105+ citations
- [58] V. Nae, A. Iosup, R. Prodan, and T. Fahringer, *The Impact of Virtualization on the Performance of Massively Multiplayer Online Games*, In ACM/IEEE Symposium on Network and Systems Support for Games (NetGames 2009), 2009. 15 citations,
27% acceptance ratio
- [59] T. B. Ionescu, A. Iosup, A. Piater, W. Scheuermann, and E. Laurien, *An Aspect-Oriented Approach for Disaster Prevention Simulation Workflows on Supercomputers, Clusters, and Grids*, In IEEE/ACM International Symposium on Distributed Simulation and Real Time Applications (DS-RT 2009), 2009.
- [60] A. Iosup, *POGGI: Puzzle-Based Online Games on Grid Infrastructures*. Euro-Par 2009- Parallel Processing, 15h Int'l. Euro-Par Conference, 2009. **Best Paper Award**
- [61] O. Sonmez, N. Yigitbasi, A. Iosup, and D. Epema, *Trace-Based Evaluation of Job Runtime and Queue Wait Time Predictions in Grids*, In the ACM/IEEE Int'l. Symp. on High Performance Distributed Computing (HPDC'09), 2009. H-index, 35 citations
21% acceptance ratio
- [62] B. Zhang, A. Iosup, P. Garbacki, J. Pouwelse, *A Unified Format for Traces of Peer-to-Peer Systems*, In ACM Workshop on Large-Scale System and Application Performance (LSAP'09), held in conjunction with HPDC, 2009.
- [63] O. Sonmez, B. Grundeken, H. Mohamed, A. Iosup, and D. Epema, *Scheduling Strategies for Cycle Scavenging in Multicenter Grid Systems*, In the IEEE International Symposium on Cluster Computing and the Grid (CCGrid'09), 2009.
- [64] N. Yigitbasi, A. Iosup, S. Ostermann, and D. Epema, *C-Meter: A Framework for Performance Analysis of Computing Clouds*, In the Int'l. Workshop on Cloud Computing (Cloud 2009), held in conjunction

 with CCGrid, 2009.

 H-index,
 100+ citations

 2008

**Peer-Reviewed
 Conference
 Articles**

[65] V. Nae, A. Iosup, S. Podlipnig, R. Prodan, D. Epema, T. Fahringer: *Efficient management of data center resources for massively multiplayer online games*. Proc. of ACM/IEEE Conference on High Performance Networking and Computing (SuperComputing 2008), pp. 10-22, 2008.

 H-index, 40 citations
 20% acceptance ratio

[66] A. Iosup, O. Sonmez, S. Anoep, D. Epema (2008). *The Performance of Bags-of-Tasks in Large-Scale Distributed Systems*. Proc. of the 17th Int'l. Symposium on High-Performance Distributed Computing (HPDC-17 2008), pp. 97-108. 2008.

 H-index,
 115+ citations
 17% acceptance ratio

[67] C. Stratan, A. Iosup, and D. Epema (2008). *A Performance Study of Grid Workflow Engines*. Proc. of the 9th IEEE/ACM Int'l. Conference on Grid (Grid2008), pp. 25-32. 2008.

 19% acceptance ratio
 20+ citations

[68] A. Iosup, O. Sonmez, and D. Epema (2008). *DGSim: Comparing Grid Resource Management Architectures through Trace-Based Simulation*. Proc. of Euro-Par 2008 - Parallel Processing, 14th Int'l. Euro-Par Conference. Lecture Notes in Computer Science vol. 5168, pp. 13-25, Springer, 2008.

 30% acceptance ratio
 20+ citations

 2007

[69] A. Iosup, D. Epema, T. Tannenbaum, M. Farallee, and M. Livny (2007). *Inter- Operating Grids through Delegated Matchmaking*. Proc. of ACM/IEEE Conference on High Performance Networking and Computing (SuperComputing 2007). pp. 13-26, 2007.

**Nomination for
 Best Paper Award**
 20% acceptance ratio

[70] A. Iosup, M. Jan, O. Sonmez, and D. Epema (2007). *On the Dynamic Resource Availability in Grids*. Proc. of the 8th IEEE/ACM Int'l Conference on Grid Computing (Grid2007), pp. 26-33. 2007.

 H-index, 90+ citations
 22% acceptance ratio

[71] A. Iosup, M. Jan, O. Sonmez, and D. Epema (2007). *The Characteristics and Performance of Groups of Jobs in Grids*. Proc. of Euro-Par 2007 - Parallel Processing, 13th Int'l. Euro-Par Conference. Lecture Notes in Computer Science vol. 4641, pp. 382-393, Springer, 2007.

 H-index, 50+ citations
 25% acceptance ratio

[72] A. Iosup, D. Epema, P. Couvares, A. Karp, M. Livny (2007). *Build-and-Test Workloads for Grid Middleware: Problem, Analysis, and Applications*. Proc. of the 7th IEEE/ACM Int'l Symp. on Cluster Computing and the Grid (CCGrid07), pp. 205-213. 2007.

 27% acceptance ratio
 10+ citations

 2006

[73] A. Iosup, C. Dumitrescu, D. Epema, H. Li, and L. Wolters (2006). *How Are Real Grids Used? The Analysis of Four Grid Traces and its Implications*. In Proc. of the 7th IEEE/ACM Int'l. Conference on Grid Computing (Grid2006), pp. 262-269. 2006.

 H-index,
 145+ citations
 18% acceptance ratio

[74] A. Iosup and D. Epema (2006). *GrenchMark: A Framework for Analyzing, Testing, and Comparing Grids*. In Proc. of the 6th IEEE/ACM Intl. Symposium on Cluster Computing and the Grid (CCGrid06), pp.

H-index, 65+ citations

313-320. IEEE, 2006.

25% acceptance ratio

- [75] P. Garbacki, A. Iosup, D. Epema, and M. van Steen (2006). *2Fast: Collaborative Downloads in P2P Networks*. In Proc. of the 6th IEEE Int'l. Conference on Peer-to-Peer Computing (P2P'06), pp. 23-30. 2006.

Best Paper Award

H-index, 70+ citations

21% acceptance ratio

- [76] J. Pouwelse, P. Garbacki, J. Wang, A. Bakker, J. Yang, A. Iosup, D. Epema, M. Reinders, M. van Steen, and H. Sips, *Chitraka: A Social-Based Peer-to-Peer System*, In Proc. of the 5th Int'l. Workshop on Peer-to-Peer Systems (IPTPS'06), pp.205-216, 2006.

27% acceptance ratio

Peer-Reviewed Conference Articles

- [77] A. Iosup, D.H.J. Epema, C. Franke, A. Papaspyrou, L. Schley, B. Song, and R. Yahyapour (2006). *On Grid Performance Evaluation using Synthetic Workloads*. In E. Frachtenberg and U. Schwiegelshohn (Eds.). Proc. of the 12th Workshop on Job Scheduling Strategies for Parallel Processing (JSSPP'06). Lecture Notes in Computer Science vol. 4376, pp. 232-255, Springer Verlag, 2006.

H-index, 40 citations

- [78] A. Iosup, P. Garbacki, and D. Epema (2006). *Provisioning and Scheduling Resources for World-Wide Data-Sharing Services*. In Proc. of IEEE Int'l. Conf. on e-Science and Grid Computing (e-Science), pp. 84-91. 2006.

- [79] A. Iosup, P. Garbacki, J. Pouwelse, and D. Epema (2006). *Correlating Topology and Path Characteristics of Overlay Networks and the Internet*. In Proc. of the 6th Intl. Workshop on Global and Peer-to-Peer Computing (GP2PC06), pp. 10–17. IEEE, 2006.

H-index, 45+ citations

Other Publications

Book Chapters (Peer-Reviewed)

- [80] A. Iosup, D. Epema, and R. Prodan, *IaaS Cloud Benchmarking: Approaches, Challenges, and Experience*. In Judy Qiu (Eds.) Springer. 2014 (in print)
- [81] A. Iosup and A. Lascateu, *Clouds and Continuous Analytics Enabling Social Networks for Massively Multiplayer Online Games*, In N. Bessis and F. Xhafa (Eds.) Next Generation Data Technologies for Collective Computational Intelligence, Springer Studies in Computational Intelligence, Vol. 352, Chapter 12, pp.303—328, Springer Verlag, 2011. Extends NETGAMES 2010 article.
<http://www.springerlink.com/content/978-3-642-20343-5>
- [82] V. Nae, A. Iosup, R. Prodan. *Massively Multiplayer Online Game Hosting on Cloud Resources*, In R. Buyya, J. Broberg, and A. Goscinski: (Eds.) Cloud Computing: Principles and Paradigms, pp. 1-25, John Wiley & Sons, Inc., Hoboken, NJ, USA, Chapter 19, Jan 2011. Extends SC|08 article.
DOI: <http://dx.doi.org/10.1002/9780470940105.ch19>

Other Conferences and Workshops (Peer-Reviewed)

- [83] S. Ostermann, K. Plankensteiner, R. Prodan, T. Fahringer, and A. Iosup. *Workflow Monitoring and Analysis Tool for ASKALON*, In N. Meyer, D. Talia, and R. Yahyapour (Eds.) Grid and Services Evolution, pp. 19-37, Springer, 2009. ISBN: 978-0-387-85965-1.
- [84] S. Ostermann, R. Prodan, T. Fahringer, A. Iosup, and D. Epema.

A Trace-Based Investigation of the Characteristics of Grid Workflows, In T. Priol and M. Vanneschi (Eds) *From Grids To Service and Pervasive Computing*, pp. 191-204, Springer, 2008. ISBN: 978-0-387-09454-0.

[85] F. Nadeem, R. Prodan, T. Fahringer, and A. Iosup. *Benchmarking Grid Applications*, In D. Talia, R. Yahyapour, and W. Ziegler (Eds.) *Grid Middleware and Services: Challenges and Solutions*, pp. 19-37, Springer, 2008. ISBN: 978-0-387-78445-8.

[86] F. Nadeem, R. Prodan, T. Fahringer, and A. Iosup. *A Framework for Resource Availability Characterization and Online Prediction in Grids*, In S. Gorlatch, P. Fragopoulou, and T. Priol (Eds.) *Grid Computing: Achievements and Prospects*, pp. 209-224, Springer, 2008. ISBN: 978-0-387-09456-4.

[87] J. Bustos-Jimenez, N. Bersano, S. E. Schaeffer, J. Miguel Piquer, A. Iosup and A. Ciuffoletti. *Estimating The Size Of Peer-To-Peer Networks Using Lambert's W Function*, In S. Gorlatch, P. Fragopoulou, and T. Priol (Eds.) *Grid Computing: Achievements and Prospects*, pp. 61-72, Springer, 2008. ISBN: 978-0-387-09456-4.

[88] C. Dumitrescu, A. Iosup, O. Sonmez, H. Mohamed, and D. Epema. *Virtual Domain Sharing in e-Science based on Usage Service Level Agreements*, In T. Priol and M. Vanneschi (Eds.) *Towards Next Generation Grids*, pp. 15-26, Springer, 2007. ISBN: 978-0-387-72497-3.

[89] C. Stratan, C. Cirstoiu, and A. Iosup. *On the Accuracy of Off-Line Monitoring Information in Grids*. In Proc. of the 16th Int'l. Conference on Control Systems and Computer Science (CSCS-16), pp. 412-19, 2007.

[90] A. Iosup, D. Epema, J. Maassen, and R. van Nieuwpoort. *Synthetic Grid Workloads with Ibis, KOALA, and GrenchMark*, In S. Gorlatch and M. Danelutto (Eds.) *Integrated Research in GRID Computing*, pp. 270-284, Springer, 2006. ISBN: 978-0-387-47656-8.

[91] A. Iosup, P. Garbacki, J. Pouwelse, and D. Epema, *A method for taking fast and accurate geo* snapshots of large P2P networks*. In Proc. of the 15th Intl. Conference on Control Systems and Computer Science (CSCS-15), pp. 663-670, 2005.

[92] A. Iosup, A.L. Varbanescu, T. Ionescu, and N. Tapus. *Gaming for Knowledge: Curriculum on Programming Fundamentals and Technologies*. Proc. of the Fourth Int'l. Conf. Internet-Education-Science (IES'04), 5-9, Oct 2004. Research area: games for under-graduate university courses.

National Conferences (peer-reviewed)

[93] B. Zhang, A. Iosup, J. Pouwelse, and D. Epema, *Identifying, Analyzing, and Modeling Flashcrowds in BitTorrent*, ICT.OPEN/ASCI Conference 2012, Rotterdam, the Netherlands, October 22-23, 2012.

Best Paper Award

[94] Y. Guo, S. Shen, O. Visser, and A. Iosup, *An Analysis of Online Match-Based Games*, ICT.OPEN/ASCI Conference 2012, Rotterdam, the Netherlands, October 22-23, 2012. (short paper)

**Best Poster Award
(3rd place)**

Other Publications (cont'd.)

- [95] S. Shen and A. Iosup, *The XFire Online Meta-Gaming Network: Observation and High-Level Analysis*, ICT.OPEN/ASCI Conference 2011, Veldhoven, the Netherlands, November 14-15, 2011.
- [96] V. Posea, M. Balint, A. Dimitriu, and A. Iosup, *Social Networks Analysis of BBO Fans, an Online Social Gaming Community*, SIREN/ASCI Conference 2010, Veldhoven, the Netherlands, November 1-3, 2010.
- [97] B. Zhang, J. Pouwelse, D. Epema, and A. Iosup, *Towards a Peer-to-Peer Trace Archive*, SIREN/ASCI Conference 2010, Veldhoven, the Netherlands, November 1-3, 2010.
- [98] N. Yigitbasi, M. Gallet, D. Kondo, A. Iosup, and D. Epema, *Understanding Time-Varying Behavior of Failures in Large-Scale Distributed Systems*, SIREN/ASCI Conference 2010, Veldhoven, the Netherlands, November 1-3, 2010.
- [99] P. Garbacki, A. Iosup, D. Epema, and M. van Steen, *Collaborative downloads in file-sharing P2P networks*. In 12th Annual Conference of the Advanced School for Computing and Imaging (ASCI'06) (Lommel, Belgium), pp. 90-98, 2006.
- [100] A. Iosup and D. Epema, *GrenchMark: Towards a generic framework for analyzing, testing, and comparing grids*. In 12th Annual Conference of the Advanced School for Computing and Imaging (ASCI'06) (Lommel, Belgium), pp. 21-29, 2006.
- [101] A. Iosup, P. Garbacki, J. Pouwelse, and D. Epema, *Analyzing BitTorrent: Three lessons from one peer-level view*. In Proc. of the 11th ASCI Conference (ASCI'05) (Heijen, the Netherlands), pp.96-104, 2005.

**Other
Publications
(cont'd.)**

Posters and Technical Reports

- Posters in ACM/IEEE SuperComputing 2007, IEEE Grid 2007, European Grid Conference 2005, SIREN 2007-08, SYSTOR'11, etc.
- Over ten PDS Technical and CoreGrid Technical Reports, and contributions to several EU project deliverables (PEDCA, EYE, I-Share, and CoreGRID).

***Best Poster Award
3rd CCGRID'13,
1st SYSTOR'11, etc.***

Note: The theses (Ph.D., M.Sc., B.Sc.) have been described in an earlier section of this CV.

APPENDIX B. INTERNATIONAL IMPACT: COMMUNITY SERVICE LIST

Summary

- Over 350 article reviewed since 2009.
- Reviewer of top journals in the area of **Parallel and Distributed Systems**.
- **PC Member of top conferences in the area of Parallel and Distributed Systems**. Appointed Track and General Chair.
- **PC Member of top workshops in the areas of Cloud Computing and of Online Gaming**.

Journal	[1] IEEE Transactions on Parallel and Distributed Systems (TPDS)	2007— <i>ongoing</i>
Reviewer	[2] Elsevier Concurrency and Computation: Practice and Experience (CCPE)	2009— <i>ongoing</i>
Best:		
IEEE TPDS 2.203 ISI 5yIF10 1.733 ISI IF10	[3] Elsevier Future Gen. Computer Systems (FGCS)	2008— <i>ongoing</i>
	[4] Elsevier Journal of Parallel and Distributed Computing (JPDC)	2010— <i>ongoing</i>
	[5] IEEE Transactions on Software Engineering (ToSE)	2012— <i>ongoing</i>
Elsevier FGCS 1.752 ISI 5yIF10 2.229 ISI IF10	[6] IEEE Transactions on Services Computing (TSC)	2012— <i>ongoing</i>
	[7] IEEE Transactions on Knowledge Data Engineering (TKDE)	2012
Elsevier CCPE 1.004 ISI 5yIF10 1.322 ISI IF10	[8] IEEE Communication Letters	2012
	[9] Elsevier Journal on Systems and Software	2012
	[10] Springer Multimedia Systems Journal (MMSJ)	2012— <i>ongoing</i>
	[11] Springer Journal of Grid Computing (JoGC)	2006—2009
	[12] InderScience Int. J. Adv. Media and Comput. (IJAMC)	2011— <i>ongoing</i>
International Conferences	[13] International Conference on P2P, Parallel, Grid, Cloud, and Internet Computing (3PGCIC), PC Member.	2011
Best:	[14] IEEE International Conference on Advanced Information Networking and Applications (AINA), http://www.aina-conference.org/ , PC Member.	2011
ACM HPDC (2006—2014)	[15] IEEE/ACM International Symposium on Cluster, Cloud, and Grid Computing (CCGrid), http://www.buyya.com/ccgrid/ , PC Member, Reviewer.	2005— <i>ongoing</i>
IEEE CCGrid (2005—2015)	[16] IEEE TCSC SCALE Challenge. Co-Chair.	2013 Co-Chair
Euro-Par (2005—2014)	[17] IEEE Cluster 2014. PC Member, Track Chair.	2014 Track Chair
IEEE Grid (2005—2011)	[18] IEEE International Conference on Cloud Computing Technology Science (CloudCom), http://www.cloudcom.org/ , PC Member.	2010—2011, 2013—2014
IEEE P2P (2007)	[19] IEEE International Conference on Computational Science and Engineering (CSE), PC Member.	2012
IEEE ICPADS (2011—2012)		
ACM NetGames (2011—2014)		
ACM/SPEC ICPE (2013—2014)		

**International
Conferences
(cont'd.)**

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| [20] IEEE International Workshop on Data Intensive Computing in the Clouds (DataCloud), PC Member. | <i>2011—ongoing</i> |
| [21] Euro-Par International Conference on Parallel Processing (Euro-Par), http://www.europar.org/ , Local Chair, Chair Track Performance Evaluation and Tools, PC Member, Reviewer. | <i>2005—ongoing
Track Co-Chair</i> |
| [22] International Conference on Emerging Intelligent Data and Web Technologies (EIDWT), PC Member | <i>2012</i> |
| [23] ACM SIGOPS EuroSys, Shadow PC Member. | <i>2010</i> |
| [24] IEEE Globecom, PC Member. | <i>2011</i> |
| [25] IEEE/ACM International Conference on Grid (Grid), PC Member, Reviewer. | <i>2005—2011</i> |
| [26] IEEE International Conference on High Performance Computing and Communications (HPCC), PC Member | <i>2013</i> |
| [27] ACM/IEEE Int'l. Symp. on High Performance Distributed Computing (HPDC), http://www.hpdc.org/ . Workshops Chair, Industry Session Chair, Publicity Chair, PC Member, Reviewer. | <i>2006—ongoing
Workshops Chair</i> |
| [28] IEEE International Conference on Computer Communication Networks (ICCCN), http://www.iccn.org , Track Grid and Cloud Computing (GCC), PC Member. | <i>2012</i> |
| [29] International Conference on Distributed Computing Systems (ICDCS), Reviewer. | <i>2006</i> |
| [30] IEEE International Conference on Parallel and Distributed Systems (ICPADS), PC Member. | <i>2010—ongoing</i> |
| [31] ACM/SPEC International Conference on Performance Engineering (ICPE), PC Member. | <i>2013—ongoing
General Chair 2016</i> |
| [32] IEEE International Conference on Parallel Processing (ICPP), Publicity and Liaison Co-Chair, PC Member. | <i>2013
Publicity Co-Chair</i> |
| [33] IEEE International Parallel and Distributed Processing Symposium (IPDPS), http://www.ipdps.org/ , Reviewer. | <i>2008</i> |
| [34] Workshop on Job Scheduling Strategies for Parallel Processing (JSSPP). PC member. | <i>2013—2014</i> |
| [35] ACM Workshop on Large-scale System and Application Performance (LSAP), PC Member. | <i>2008—2011</i> |
| [36] IEEE International Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems (MASCOTS), Additional Reviewer. | <i>2011—ongoing</i> |
| [37] International Workshop on Massively Multiuser Virtual Environments (MMVE), PC Member. | <i>2011—ongoing</i> |
| [38] ACM Workshop on Many-Task Computing on Grids and Supercomputers (MTAGS), in conjunction with ACM SC, PC Member. | <i>2008—ongoing</i> |
| [39] International Workshop on Network-aware Data Management (NDM), in conjunction with ACM SC, PC Member. | <i>2012</i> |
| [40] ACM/IEEE Symposium on Network and Systems Support for Games (NetGames), PC Member. | <i>2011—ongoing</i> |

	[41] IEEE International Conference on Peer-to-Peer Computing (P2P), PC Member.	2007
	[42] Workshop on Real-Time Online Interactive Applications on the GRID (ROIA), PC Member.	2008—2009
	[43] International Symposium on Computer Architecture and High Performance Computing (SBAC-PAD).	2013
	[44] IEEE Workshop on Scientific Cloud Computing (ScienceCloud), PC Member.	2010—ongoing
	[45] ACM/IEEE Conference on High Performance Networking and Computing (SuperComputing, SC), ACM SRC PC, Reviewer.	2007
	[46] Workshop on Networks and Games (WNG) with IEEE NCM, PC Member.	2009
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National Conferences	[47] ICT.Open/ASCI, Track Organizer, Best-Paper Award Committee, Track Chair, PC Member. <i>500 participants.</i>	2011-2012 Track Chair
	[48] ASCI Conference, General Chair, PC Member. <i>150 participants.</i>	2007—2012 General Chair
	[49] GNARP Workshop, Co-Chair	2007—2008
	[50] IEEE Int'l. High Perf. Grid M'ware WS. (HiPerGRID), PC Member.	2009
