

Elisabetta Di Nitto Curriculum Vitae

April 2016

Professional History

Elisabetta Di Nitto is Full Professor at the Dipartimento di Elettronica, Informazione e Bioingegneria of Politecnico di Milano.

From April 1996 to June 1999 she has been researcher at CEFRIEL, leading the software engineering area.

From April 1998 to September 1998 she has been visiting professor at University of California, Irvine (USA).

Elisabetta's expertise lies in the area of software engineering and, in particular, of large-scale, open, service-oriented systems with a special attention to the techniques to make these systems self-adaptable to the changes in the environment and in the performances of its distributed components, and to enable them to identify and incorporate new components at runtime. Recently, she has been focusing on Cloud Computing and, in particular, on how to design applications that can run on multiple clouds in order to limit vendor lock-in and to increase availability and reliability of such applications.

Publications

Elisabetta has published about 100 papers, of which 10 on international journals and 4 (plus a research demo) in the proceedings of the International Conference on Software Engineering.

According to Google Scholar, in April 2016 there are more than 4855 citations (more than 2024 from 2011) of the works that he has co-authored, with a h-index equal to 29 (22 from 2011). According to Scopus, in January 2016 the total number of citations exceeds 1163 (with 92 indexed articles) and the h-index is 15.

Teaching

Elisabetta is teaching the following courses:

- Software Engineering 2 for the graduate curriculum on Computer Science and Engineering at Politecnico di Milano.
- Software Engineering 1 for the online undergraduate curriculum on Ingegneria Informatica at Politecnico di Milano.
- Foundations of computer science for the undergraduate curriculum on Ingegneria Meccanica e Ingegneria Energetica.

Moreover, she has been teaching short courses for PhD students on self-adaptive systems and cloud computing as well as courses for enterprises on software engineering, cloud computing, NoSQL databases, IT governance.

Member of International Boards

- SIGSOFT Executive Committee
- IFIP working group on Services-oriented Systems (WG 2.14/6.12/8.10)
- QE LaB Advisory Board

Evaluator

Elisabetta has been evaluator of project proposals for the following programmes:

EU FP7 programme

Executive Board of the Austrian Science Fund

French CHIST-ERA programme

WWTF Information and Communication Technology Call 2010.

Science Foundation Ireland Starting Investigator Research Grant (SIRG) and Career Development

Award (CDA) (panel member)
Swedish Research Council (panel member)

Member of Editorial Boards

- IEEE Transactions on Software Engineering
- SOCA journal
- Journal of Software: Evolution and Process
- PeerJ Computer Science

Conference committees

- general chair of ESEC-FSE 2015
- program co-chair of ASE 2010
- program co-chair of ServiceWave 2010
- workshops co-chair of ICSE 2010
- workshops co-chair of ICSOC 2006
- demo track chair of ICSE 2007
- tutorial chair of ASE 2014
- program committee of various international conferences such as ICSE (several editions), ASE, FSE, ESEC-FSE, ICSOC, ICAC, ServiceWave, SEKE, DEXA.

Keynote Speaker at International Conferences

- 2010 International Conference on Global Software Engineering
- 2011 Third International Workshop on Principles of Engineering Service-Oriented Systems

Participation in funded projects

- Coordinator of the FP7 Integrated Project MODAClouds (n. 318484), period 2012-2015, overall budget 8.5 MI Euro.
- Scientific director of the Project DICE, period 2015-2018, overall budget 3.95 MI Euro.
- Project scientific director of the Integrated Project SeCSE, period 2004-2008, budget for CEFRIEL 1.7 MI Euro.
- Principal Investigator for Polimi of the STREP SeaClouds, period 2013-2015, budget for Polimi 440 K Euro
- Principal Investigator for Polimi of the FET CASCADAS, period 2006-2009, budget for Polimi 225 K Euro
- Workpackage leader in the S-Cube (Software Services and Systems) Network of Excellence, period 2008-2011 (379 K Euro).
- Supporting the coordination of ART DECO (Adaptive InfRasTuctures for DECentralized Organizations), Italian Ministry for University and Research, period 2006-2009 (653.8 K Euro).
- Participant in the projects SMScom, SLA@SOI, SOA4All, D-ASAP.

PhD students

- Luca Cavallaro (2007-2010)
- Daniel J. Dubois (2008-2010)
- Nicola Calcavecchia (2010-2012)
- Santo Lombardo since beginning of 2012
- Marco Miglierina since beginning of 2013
- Luca Florio since October 2013
- Marco Scavuzzo since May 2014
- Michele Guerriero since November 2015

Participation to PhD committees

- Jon Arvid Børretzen, Norwegian University of Science and Technology, defense 2007
- Qin Gu, VU University Amsterdam, defense 2011
- Grégory Nain, Irista University, Renne, defense 2011
- Issac Garcia, University of Grenoble, defense 2012
- Aneta Vulgarakis, Mälardalen University, defense 2012
- Maryam Razavian, VU University Amsterdam, defense 2013
- Paul Snyder, Drexel University, Philadelphia, defense 2013
- Damian Andrew Tamburri, VU University Amsterdam, defense 2014
- Indika Priyantha Kumara Weerasingha Dewage, Swinburne University of Technology, defense 2015

Grants and awards

- Amazon AWS research grant in 2010, 2012 and 2013.
- Microsoft Azure research grant in 2013.
- In the journal Information and Software Technology, vol 50, 2008 the paper co-authored by Cugola, Fuggetta and myself and published on IEEE Transaction on Software Engineering, 27 (9) 2001, pp 827-850 was listed as the second most cited paper of that year.

Activities at Politecnico

- Member of the board of professors of the doctoral program in Information Technology at Politecnico in 2001 before maternity leave.
- Currently, member of the committee for monitoring and improving teaching in IT at Politecnico (Commissione AVA).
- Member of the management committee of the interdepartmental laboratory PoliCloud (grant of 140.000 Euro obtained from the Rector).

Research

I report below the main research themes I've been involved so far.

Software process

Software development is a highly creative activity that, for large projects, requires highly skilled teams in which the interaction between technical and social aspects is properly taken into account. During my PhD studies I have been focusing on how to provide support to software process, on the one side, creating a framework to integrate various types of supporting tools (agendas, project management tools, configuration management platforms, etc.) [A10, A8], on the other side, trying to understand and formalize an approach to manage the process even in the presence of deviations from its prescribed definition [A9, P82].

Recently, in collaboration with colleagues with Vrije University Amsterdam (one of which is now post-doc at Politecnico di Milano under my responsibility), I have been focusing on understanding the role of social aspects in the software process and on identifying approaches to control the negative implications of such aspects [P3, P24].

In [P10], together with Alfonso Fuggetta, I have provided an overview of the field and identified main issues and challenges (according to Google Scholar, this paper from 2014 to now has got 632 citations).

From the experimental side, I have also collaborated with colleagues at ETH, and Malardalen and Zagreb on managing distributed teams of students applying, respectively, contract-based and SCRUM-based development processes [P11, P5].

Software architectures and middleware

The proper definition of the software architecture of a complex system is an important milestone, crucial for all further phases of development, integration, testing, deployment, operation, tuning,

maintenance. During my staying at University of California, Irvine, I have studied ADLs (Architectural Definition Languages) and I have shown that, at the time of writing, ADLs were not sufficiently general to allow designers to completely define a software architecture [P75].

In parallel, I have focused, together with colleagues at Politecnico di Milano, on the event-based architectural style and on the development of a proper middleware for this style [P77, A8] ([A8] is still my most highly cited paper with 806 citations according to Google Scholar). As evaluating software architectures is an important problem to ensure the development of robust and reliable systems, in [P73] we have experimented the adoption of simulation and analysis models for an event-based style.

Service-oriented systems

Service-orientation is a specific architectural paradigm and programming model based on which a software system is composed of autonomous services that can be combined even on the fly to achieve a certain behaviour. The main characteristics of such approach are a high dynamicity and the possibility to dynamically bind to the most suitable services, given the current status of the system. I started working on service-oriented systems as part of the SeCSE project and then I continued within the S-Cube network of excellence. In [P61] my co-authors and I have defined one of the first conceptualizations behind service-orientation. In [P57, P53] we have presented a specific framework to support dynamic binding and adaptation of service-oriented systems and in [P39, P36] we have been focusing on automatic replacement of services and synthesis of service compositions. As part of S-Cube, in [A3] we have presented an overview of service-based applications and related technologies, and in various other papers, among which [P26, A2] we have focused on the importance of “design for adaptation”, that is, of creating at design time the necessary strategies and mechanisms that enable dynamic adaptation at runtime. In [A4] we have shown how we can exploit content-based routing to support communication between services. This work can be seen as a precursor of today architectures based on the concept of microservices that advocate a similar communication paradigm. In [A5] we have defined the “open world assumption” as one of the guiding principles of such service-oriented systems in a pervasive context. Some of the papers listed above have received a good level of citations, for instance, [A3] has got 236 citations, [A5] 235, and [P57] 139.

Autonomic systems

As a natural evolution of my interest in dynamic adaptation, I have been focusing on how to build distributed systems able to be autonomic, i.e., to self-adapt, self-heal, self-evolve in a decentralized way. The main assumptions in this context are that: 1) large systems cannot be based on a centralized autonomic intelligence as this would create a bottleneck and a potential single point of failure, and 2) pervasive systems are typically composed of elements under the control and responsibility of different parties and, as such, cannot be managed by a centralized element.

In this context, initially as part of the CASCADAS and Art Deco projects, we have been studying bio-inspired theoretical approaches that identify ways of developing systems with decentralized intelligence from the analysis of biological systems and the identification of synergies with computational systems. More specifically, we have identified bio-inspired algorithms supporting the definition and adaptation of overlay networks between autonomous and cooperating nodes [P25, P40], load balancing between neighbour nodes [P27], energy optimization [P33], service placement [P8] and auto-scaling [A1]. In this last paper, besides defining a decentralized autonomic model for the problem under analysis and demonstrating its validity through simulation, we have also implemented and deployed a real system on a cloud, using a few tens of nodes and shown that it works in concrete cases. Finally, we have focused on the development of the SelfLet framework [C3, C4, P56] to support the development and execution of decentralized autonomic applications, and we have shown that, by exploiting compositionality, it is possible to formally prove properties on large systems of this kind [P31]. The work on the SelfLet framework is still ongoing and a journal paper is being submitted.

Software engineering for cloud computing and data intensive applications

Cloud computing and big data are two major emerging trends in the ICT industry and they demand for novel approaches to support application developers and operators in exploiting the large number of available resources, services and technologies without being forced to know all their details and peculiarities. Within the context of the MODAClouds project, I have been focusing on the definition of an approach to support the development and operation of applications running on multiple clouds. Besides defining the whole vision of the project [P21, P15, E1], I have been working with my colleagues at the development of an approach to optimize allocation of cloud resources to complex applications [P16], at the development of a programming library to abstract from the different APIs offered by Platform as a Service clouds [P17], and at the development of flexible, reconfigurable and non-intrusive mechanisms for monitoring and self-adaptation [P9, P18, P19], and at the development of a data migration platform that enables applications to move their state from a cloud to the other, even when this state is composed of several Gbytes of data stored in heterogeneous NoSQL databases [P1, P14]. All these activities are currently ongoing and we are submitting journal publications on the results we are achieving.

Within the context of the DICE project, my colleagues and I have been focusing on supporting the development of Data Intensive Applications by exploiting a model-driven approach that allows designers to: i) exploit a variety of different technologies for parallelizing batch and online computations and to combine them without being forced of digging into the details of their implementation, and ii) rely on tools able to analyse the defined models in order to obtain information about performance and safety of the application. The approach is preliminarily presented in [P2, P6].

Elisabetta Di Nitto – List of publications

Journal papers

- [A1] N. Calcavecchia, B. Caprarescu, E. Di Nitto, D. Dubois, D. Petcu (2012). DEPAS: a decentralized probabilistic algorithm for auto-scaling. *COMPUTING*, vol. 94, p. 1-30, ISSN: 0010-485X, doi: 10.1007/s00607-012-0198-8
- [A2] Antonio Bucchiarone, Cinzia Cappiello, Elisabetta Di Nitto, Barbara Pernici, Alessandra Sandonini (2012). A Variable Context Model for Adaptable Service-Based Applications. *INTERNATIONAL JOURNAL OF ADAPTIVE, RESILIENT AND AUTONOMIC SYSTEMS*, vol. 3, p. 1-19, ISSN: 1947-9220
- [A3] E. Di Nitto, C. Ghezzi, A. Metzger, M. Papazoglou, K. Pohl (2008). A journey to highly dynamic, self-adaptive service-based applications. *AUTOMATED SOFTWARE ENGINEERING*, vol. 15, p. 313-341, ISSN: 0928-8910, doi: 10.1007/s10515-008-0032-x
- [A4] G. Cugola, E. Di Nitto (2008). On Adopting Content-Based Routing in Service Oriented Architectures. *INFORMATION AND SOFTWARE TECHNOLOGY*, vol. 50, p. 22-35, ISSN: 0950-5849, doi: 10.1016/j.infsof.2007.10.004
- [A5] L. Baresi, E. Di Nitto, C. Ghezzi, S. Guinea Montalvo (2007). A Framework for the Deployment of Adaptable Web Service Compositions. *SERVICE ORIENTED COMPUTING AND APPLICATIONS*, vol. 1, p. 75-91, ISSN: 1863-2386, doi: 10.1007/s11761-007-0004-1
- [A6] L. Baresi, E. Di Nitto, C. Ghezzi (2006). Toward Open-World Software: Issue and Challenges. *COMPUTER*, vol. 39, p. 36-43, ISSN: 0018-9162, doi: 10.1109/MC.2006.362
- [A7] E. Di Nitto, L. Mainetti, M. Monga, L. Sbattella, R. Tedesco (2006). Supporting Interoperability and Reusability of Learning Objects: The Virtual Campus Approach. *EDUCATIONAL TECHNOLOGY & SOCIETY*, vol. 9, p. 33-50, ISSN: 1436-4522

- [A8] G. Cugola, E. Di Nitto, A. Fuggetta (2001). The JEDI Event-based Infrastructure and its application to the development of the OPSS WFMS. *IEEE TRANSACTIONS ON SOFTWARE ENGINEERING*, vol. 27, p. 827-850, ISSN: 0098-5589
- [A9] G. Cugola, E. Di Nitto, A. Fuggetta, C. Ghezzi (1996). A Framework for Formalizing Inconsistencies and Deviations in Human-Centered Systems. *ACM TRANSACTIONS ON SOFTWARE ENGINEERING AND METHODOLOGY*, vol. 5, p. 191-230, ISSN: 1049-331X, doi: 10.1145/234426.234427
- [A10] S. Bandinelli, E. Di Nitto, A. Fuggetta (1996). Supporting Cooperation in the SPADE-1 Environment. *IEEE TRANSACTIONS ON SOFTWARE ENGINEERING*, vol. 22, p. 841-865, ISSN: 0098-5589, doi: 10.1109/32.553634

Edited books

- [E1] E. Di Nitto, P. Matthew, D. Petcu, A. Solberg (Eds.) (2016). *Model-Driven Development and Operation of Multi-Cloud Applications*. Springer Briefs. To appear
- [E2] G. Anastasi, E. Bellini, E. Di Nitto, C. Ghezzi, L. Tanca, E. Zimeo (Eds.) (2012). *Methodologies and Technologies for Networked Enterprises*. SPRINGER, ISBN: 9783642317385
- [E3] E. Di Nitto, A.-M. Sassen, P. Traverso, A. Zwegers (Eds.) (2009). *At Your Service: Service-Oriented Computing from an EU Perspective*. p. 1-167, ISBN: 0-262-04253-3
- [E4] L. Baresi, E. Di Nitto (Eds.) (2007). *Test and Analysis of Web Services*. p. 1-478, ISBN: 978-3-540-72911-2
- [E5] E. Di Nitto, A. Fuggetta (Eds.) (1997). *Process Technology*. Di -. Kluwer Academic Pub, ISBN: 9780792380900

Chapters in books

- [C1] Andreas Metzger and Elisabetta Di Nitto. "Addressing Highly Dynamic Changes in Service-Oriented Systems: Towards Agile Evolution and Adaptation." *Agile and Lean Service-Oriented Development: Foundations, Theory, and Practice*. IGI Global, 2013. 33-46. doi:10.4018/978-1-4666-2503-7.ch002
- [C2] A. Bucchiarone, C. Cappiello, E. Di Nitto, S. Gorlatch, D. Meiländer, A. Metzger (2012). Design for Adaptation in Service-Oriented Systems in the Cloud. In: Dana Petcu; José Luis Vázquez-Poletti. *European Research Activities in Cloud Computing*. p. 203-230, Cambridge Scholars Publishing, ISBN: 9781443835077
- [C3] N.M. Calcavecchia, E. Di Nitto, D.J. Dubois, C. Ghezzi, V. Mazza, M. Rossi (2012). Complex Autonomic Systems for Networked Enterprises: Mechanisms, Solutions and Design Approaches. In: G. Anastasi; Bellini; E. Di Nitto; C. Ghezzi; L. Tanca; E. Zimeo. *Methodologies and Technologies for Networked Enterprises*. p. 91-122, SPRINGER, ISBN: 9783642317385
- [C4] N.M. Calcavecchia, D. Ardagna, E. Di Nitto (2010). The emergence of load balancing in distributed systems: the SelfLet approach. In: Ardagna, Danilo, Zhang, Li. *Run-time Models for Self-managing Systems and Applications*. p. 1-28, ISBN: 9783034604321
- [C5] Metzger, S. Benbernou, M. Carro, M. Driss, G. Kecskemeti, R. Kazhemiakin, K. Krytikos, A. Mocchi, E. Di Nitto, B. Wetzstein, F. Silvestri (2010). Analytical quality assurance. In: M. Papazoglou, K. Pohl; Parkin; A. Metzger. *Service research challenges and solutions for the future internet*. p. 209-270, SPRINGER, ISBN: 9783642175985, doi: 10.1007/978-3-642-17599-2

- [C6] Andrikopoulos, A. Bucchiarone, E. Di Nitto, R. Kazhamiakin, S. Lane, V. Mazza, I Richardson (2010). Service engineering. In: M. Papazoglou; K. Pohl; M. Parkin; A. Metzger. Service research challenges and solutions for the future internet. p. 271-338, SPRINGER, ISBN: 9783642175985
- [C7] L. Baresi, F. Bruschi, E. Di Nitto, D. Sciuto (2003). SystemC code generation from UML models. In: CHDL Series. System Specification and Design Languages. p. 161-171

Papers in proceedings of conferences and workshops

- [P1] Marco Scavuzzo, Damian A. Tamburri and Elisabetta Di Nitto. Providing Big Data Applications with Fault-Tolerant Data Migration Across Heterogeneous NoSQL Databases. In the Proceedings of the 2nd International Workshop on BIG Data Software Engineering. To appear 2016.
- [P2] Michele Guerriero, Saeed Tajfar, Damian Andrew Tamburri and Elisabetta Di Nitto. Towards A Model-Driven Design Tool for Big Data Architectures. In the Proceedings of the 2nd International Workshop on BIG Data Software Engineering. To appear 2016.
- [P3] Damian A Tamburri and Elisabetta Di Nitto. When software architecture leads to social debt. In Software Architecture (WICSA), 2015 12th Working IEEE/IFIP Conference on, pages 61–64. IEEE, 2015.
- [P4] Ferran Borreguero, Elisabetta Di Nitto, Dmitrii Stebliuk, Damian A Tamburri, and Chengyu Zheng. Fathoming software evangelists with the d-index. In Cooperative and Human Aspects of Software Engineering (CHASE), 2015 IEEE/ACM 8th International Workshop on, pages 85–88. IEEE, 2015.
- [P5] Ivana Bosnic, Federico Ciccozzi, Igor Cavrak, Elisabetta Di Nitto, Juraj Feljan, and Raffaella Mirandola. Introducing scrum into a distributed software development course. In Proceedings of the 2015 European Conference on Software Architecture Workshops, ECSAW '15, pages 34:1–34:8, New York, NY, USA, 2015. ACM.
- [P6] Giuliano Casale, Danilo Ardagna, Matej Artac, Franck Barbier, E Di Nitto, Alexis Henry, Gabriel Iuhasz, Christophe Joubert, Jose Merseguer, Victor Ion Munteanu, et al. Dice: quality-driven development of data-intensive cloud applications. In Proceedings of the Seventh International Workshop on Modeling in Software Engineering, pages 78–83. IEEE Press, 2015.
- [P7] Elisabetta Di Nitto, Raffaella Mirandola, Santi Raffa, and Damian A Tamburri. Towards geezmo: high-frequency zest and mood-polling for proactive software development problem-solving. In Proceedings of the 7th International Workshop on Social Software Engineering, pages 9–16. ACM, 2015.
- [P8] Daniel J Dubois, Giuseppe Valetto, Donato Lucia, and Elisabetta Di Nitto. Mycocloud: Elasticity through self-organized service placement in decentralized clouds. In Cloud Computing (CLOUD), 2015 IEEE 8th International Conference on, pages 629–636. IEEE, 2015.
- [P9] Lorenzo Cianciaruso, Francesco Di Forenza, Elisabetta Di Nitto, Marco Miglierina, Nicolas Ferry, and Arnor Solberg. Using models at runtime to support adaptable monitoring of multi-clouds applications. In Symbolic and Numeric Algorithms for Scientific Computing (SYNASC), 2014 16th International Symposium on, pages 401–408. IEEE, 2014.
- [P10] Alfonso Fuggetta and Elisabetta Di Nitto. Software process. In Proceedings of the Conference on Future of Software Engineering, pages 1–12, June 2014.
- [P11] Nordio M., Estler H.C., Meyer B., Aguirre N., Prikladnicki R., Di Nitto E., and Savidis A. An experiment on teaching coordination in a globally distributed software engineering class. In

- Software Engineering Education and Training (CSEE&T), 2014 IEEE 27th Conference on, pages 109–118, 2014.
- [P12] D. Petcu, DI NITTO E., D. Ardagna, A. Solberg, and G. Casale. Towards multi-clouds engineering. In INFOCOM Workshops, pages 1–6, 2014.
- [P13] Dana Petcu, Elisabetta Di Nitto, Danilo Ardagna, Arnor Solberg, and Giuliano Casale. Towards multi-clouds engineering. In Computer Communications Workshops (INFOCOM WKSHPS), 2014 IEEE Conference on, pages 1–6. IEEE, 2014.
- [P14] Marco Scavuzzo, Elisabetta Di Nitto, and Stefano Ceri. Interoperable data migration between NoSQL columnar databases. In 2014 IEEE 18th International Enterprise Distributed Object Computing Conference Workshops and Demonstrations (EDOCW), pages 154–162. IEEE, 2014.
- [P15] E. Di Nitto, M. Almeida, D. Ardagna, G. Casale, C. Dorin Craciun, N. Ferry, V. Munteș, and A. Solberg. Supporting the development and operation of multi-cloud applications: The modacLOUDS approach. In MICAS- SYNASC 2013 Workshops Proceedings, pages 417–423, 2013.
- [P16] Davide Franceschelli, Danilo Ardagna, Michele Ciavotta, and DI NITTO E. Space4cloud: A tool for system performance and cost evaluation of cloud systems. In Multi-Cloud 2013 Workshop Proceedings, pages 27–34, 2013.
- [P17] Filippo Giove, Davide Longoni, Majid Shokrolahi Yancheshmeh, Danilo Ardagna, and DI NITTO E. An approach for the development of portable applications on PaaS clouds. In Closer 2013 Proceedings, pages 591–601, 2013.
- [P18] Marco Miglierina, Marco Balduini, Narges Shahmandi Hoonejani, DI NITTO E., and Danilo Ardagna. Exploiting stream reasoning to monitor multi-cloud applications. In OrdRing 2013 Workshop Proceedings, pages 33–36, 2013.
- [P19] Marco Miglierina, Giovanni Paolo Gibilisco, Danilo Ardagna, and DI NITTO E. Model based control for multi-cloud applications. In MISE 2013 Workshop Proceedings, pages 37–43, 2013.
- [P20] D.A. Tamburri, R. De Boer, Di Nitto E., P. Lago, and H. van Vliet. Dynamic networked organizations for software engineering. In Proceedings of the 2013 International Workshop on Social Software Engineering, pages 5–12, 2013.
- [P21] Ardagna, E. Di Nitto, D. Petcu, P. Mohagheghi, S. Mosser, P. Matthews, A. Gericke, C. Ballagny, F. D'Andria, C. Nechifor, C. Sheridan (2012). MODACLOUDS: A Model-Driven Approach for the Design and Execution of Applications on Multiple Clouds. In: MISE 2012. Zurich, 2/6/2012-3/6/2012, p. 1-7
- [P22] Di Nitto, D. Meiländer, S. Gorlatch, A. Metzger, H. Psaiër, S. Dustdar, M. Razavian, D. Tamburri, P. Lago (2012). Research challenges on engineering service-oriented applications. In: -. Software Services and Systems Research-Results and Challenges (S-Cube), 2012 Workshop on European. Zurich, Switzerland, 2012, p. 14-20
- [P23] Metzger, K. Pohl, M. Papazoglou, E. Di Nitto, A. Marconi, D. Karastoyanova (2012). Research challenges on adaptive software and services in the future internet: towards an S-Cube research roadmap. In: -. Software Services and Systems Research-Results and Challenges (S-Cube), 2012 Workshop on European. Zurich, Switzerland, 2012, p. 1-7
- [P24] D.A. Tamburri, E. Di Nitto, P. Lago, H. Van Vliet (2012). On the Nature of GSE Organizational Social Structures: an Empirical Study. In: 7th IEEE International Conference on Global Software Engineering. p. 114-123, Puerto Alegre, Brazil
- [P25] Di Nitto, D.J. Dubois, A. Margara (2012). Reconfiguration Primitives for Self-adapting Overlays in Distributed Publish-Subscribe Systems. In: Sixth IEEE International Conference

on Self-Adaptive and Self-Organizing Systems. p. 99-208, Lyon, France, doi:
10.1109/SASO.2012.27

- [P26] Meiländer, A. Bucchiarone, C. Cappiello, E. Di Nitto, S. Gorlatch (2012). Using a Lifecycle Model for Developing and Executing Real-Time Online Applications on Clouds. In: ICSSOC'11 Proceedings of the 2011 international conference on Service-Oriented Computing. p. 33-43, Paphos, Cyprus
- [P27] Valetto, P. L. Snyder, D. J. Dubois, E. Di Nitto, N. M. Calcavecchia (2011). A Self-Organized Load-Balancing Algorithm for Overlay-Based Decentralized Service Networks. In: Fifth IEEE International Conference on Self-Adaptive and Self-Organizing Systems (SASO) 2011. Ann Arbor, MI, USA, 3/10/2011 - 7/10/2011 , p. 168-177
- [P28] Nordio, C. Ghezzi, B. Meyer, E. Di Nitto, G. Tamburrelli, J. Tschannen, N. Aguirre, V. Kulkarni (2011). Teaching software engineering using globally distributed projects: the DOSE course. In: Richard N. Taylor, Harald Gall, Nenad Medvidovic (Eds.). Proceedings of the 2011 Community Building Workshop on Collaborative Teaching of Globally Distributed Software Development. Waikiki, Honolulu , HI, USA, May 21-28, 2011, p. 36-40, ACM, ISBN: 9781450304450, doi: 10.1145/1984665.1984673
- [P29] S.I. Hashmi, V. Clerc, M. Razavian, C. Manteli, D.A. Tamburri, P. Lago, E. Di Nitto, I. Richardson (2011). Using the cloud to facilitate global software development challenges. In: 6th ICGSE Workshop on Tool Support Development and Management in Distributed Software Projects. Helsinki, p. 70-77, doi: 10.1109/ICGSE-W.2011.19
- [P30] A. CAPRARESCU, CALCAVECCHIA N, E. DI NITTO, D. J. DUBOIS (2010). SOS Cloud: Self-Organizing Services in the Cloud. In: International ICST Conference on Bio-Inspired Models of Network, Information, and Computing Systems. Boston, MA, USA, December 1-3, 2010, p. 1-8
- [P31] Silvia Bindelli, Carlo Alberto Furia, Elisabetta Di Nitto, Matteo Rossi (2010). Using Compositionality to Formally Model and Analyze Systems Built of a High Number of Components. In: -. Proceedings of the 15th International Conference on Engineering of Complex Computer Systems. Oxford (UK), 22-26 March 2010, p. 85-94, ISBN: 9781424466382, doi: 10.1109/ICECCS.2010.65
- [P32] A. BUCCHIARONE, CAPPIELLO C, E. DI NITTO, R. KAZHAMIKIN, V. MAZZA (2010). A Context-driven Adaptation Process for Service-based Applications. In: {Proceedings of the 2nd International Workshop on Principles of Engineering Service-Oriented Systems. Cape Town, South Africa, p. 50-56, ISBN: 9781605589633
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