

Curriculum Vitae et Studiorum

Rocco De Nicola

Basic Information

Birth: Calitri(AV) June 26 1954

Citizenship: Italian

Home address: Piazza della Stazione, 22 - I-56125 Pisa (Italy)

Current Position: Full professor at IMT - School for Advanced Studies, Lucca.

Short Biography

De Nicola is currently the Rector of IMT School for Advanced Studies, Lucca where he is also a professor of Computer Science.

From 1995 till 2011, he has been a full professor at Dipartimento di Sistemi e Informatica of the University of Florence (Italy). From 1990 till 1995, a full professor at the Dipartimento di Scienze dell'Informazione of the University of Rome "La Sapienza" (Italy). Before that, he was a full-time researcher at IEI-CNR in Pisa, worked at Edinburgh University and for Italtel in Milano, and held two research grants from Olivetti Ivrea.

De Nicola has been a *visiting professor* at *Technical Univerität of Berlin* in 1996, at *Ecole Normale Superiere* de Paris in 2004 and at *Ludwig-Maximilians-Universität* in Munich in 2004 and in 2013; he has also been a *visiting researcher* at *Microsoft Research Laboratories* in Cambridge (UK) in 1999 and 2003.

Education

- PhD in Computer Science from Department of Computer Science of University of Edinburgh (UK) - May 1985.
- Laurea (*magna cum laude*) in Scienze dell'Informazione at Pisa University - December 1978.

Working Experiences

- *July 2011- today.* Full Professor of Computer Science at IMT - School for Advanced Studies, Lucca.
- *November 1995 - June 2011.* Full Professor of Computer Science at the University of Florence.
- *November 1990 - October 1995.* Full Professor of Computer Science at University "La Sapienza" in Rome.
- *October 1982 - October 1990.* Researcher at Istituto di Elaborazione dell'Informazione of CNR in Pisa.

- *March 1981 - September 1983.* PhD student at University of Edinburgh.
- *May 1980 - February 1981.* Researcher at ITALTEL in Milan.
- *April 1978 - April 1980.* Grant from Olivetti to work on a joint project with Istituto di Elaborazione dell'Informazione (IEI) at CNR in Pisa.

Research and its outcomes

De Nicola's research aims at understanding the foundations of distributed computing and at applying the formal techniques based on these foundational studies to the development and the analysis of concurrent distributed systems. Current research concentrates on

- Models and Languages for Open Distributed Systems
- Network Aware Programming
- Service-Oriented Computing
- Specification of Qualitative and Quantitative Properties of Distributed Systems
- Abstract Models for Security and Cryptographic Process Calculi
- Types for Access Control
- Cybersecurity

On these topics, De Nicola collaborates with researchers from many national and international institutions and is the author of more than 200 publications in international refereed journals and conference proceedings. De Nicola has also edited books and special issues of journals. The list of the main research-related publications is reported at the end of this document. Here we report some important recognitions:

Titles: De Nicola has been honored with the title of "Commendatore al Merito della Repubblica Italiana".

Honors: De Nicola is a member of Academia Europaea and a fellow of EATCS.

Citations: De Nicola is one the ISI-Thomson highly cited researchers.

A United States Patent 6751619 "Methods and apparatus for tuple management in data processing system" has been registered with Rocco De Nicola and Antony Rowstron as inventors.

De Nicola is a member of IFIP Working Groups 2.2 , 1.6 and 1.8. He is also a member of Gruppo 2003 (an association of leading Italian scientists) and has served in the executive board of the association.

Teaching

At Florence and/or Rome University, De Nicola has taught: Concurrent Programming, Specification and Analysis of Concurrent Systems, Computer Security, Operating Systems, Algorithms and Data Structures, Computer Architectures, Computability and Formal Languages, Foundations of Programming Languages.

De Nicola has supervised the PhD or master work of several students. Some of them (Luca Aceto, Lorenzo Bettini, Michele Boreale, Flavio Corradini, Daniele Gorla, Michele Loret, Rosario Pugliese, Roberto Segala, Emilio Tuosto, Francesco Tiezzi) are currently playing an important active role in international research and in Italian or European Universities.

Professional Services and Activities

De Nicola is currently:

- Editor in chief for the Journal of Logical and Algebraic Methods in Programming (Elsevier)
- Member of the editorial board of
 - Mathematical Structures in Computer Science (Cambridge University Press).
 - Electronics Proceedings in Theoretical Computer Science.
 - Springer Nature in Computer Science
- Member of the Steering Committee of
 - COORDINATION - International Conference on Coordination Models and Languages.
 - DISCOTEC - International Federated Conference on Distributed Computing Techniques.
 - SEFM - International Conference on Software Engineering and Formal Methods
- Chair of the Steering Committee of ITASEC - The Italian Conference on CyberSecurity.
- Deputy director of Cyber Security National Lab of CINI.
- Member of the "Consiglio Scientifico" of LUCENSE, a research company in Lucca.
- Member of the Board of Directors of the SERICS (SEcurity and RIghts In the Cyberspace) Foundation

De Nicola has been

- Member of the advisory board of CITI: The Research Center for Informatics and Information Technologies (Portugal).
- Member of the advisory board of MT-LAB: Modelling of Information Technology (Denmark).
- Coordinator of the PhD Program in Computer Science at Gran Sasso Science Institute (GSSI) in L'Aquila.
- Coordinator of the PhD Program in Computer Science and Applications at IMT.
- Coordinator of the PhD Program in Informatica ed Applicazioni at University of Florence.
- Director of Studies of the Bachelor (Diploma) and Master (laurea) Curriculae in Informatics at University of Florence.
- Deputy Rector for the management of Information System of University of Florence.
- Vice-President of the board of (5) professors leading CSIAF, the center for computer-based services of University of Florence.
- Deputy Director of Dipartimento di Sistemi ed Informatica at University of Florence.
- Vice-president (Coordinator of the Scientific Committee) of GRIN, the association of all researchers in Computer Science at Italian Universities.

- Chairman of the Steering Committees of the International Conference on Coordination Models and Languages.
- Chairman of the Steering Committees of the International Symposium on Trustworthy Global Computing.
- Member of the Consiglio Accademico of IMT.
- Member of Senato Accademico of IMT
- Member of the "Consiglio Direttivo" of IMT,
- Member of the Consiglio Consortile of CINECA, a consortium of Italian universities for IT services Committees.
- Member of the "Consiglio di Amministrazione" of LUCENSE, a research company in Lucca.
- Member of the "Giunta Amministrativa" of CINI, a consortium of Italian universities for research in Informatics.
- Coordinator of the Working Group defining the Research Challenges on Cybersecurity for Piano Nazionale della Ricerca 2021-2027.

Moreover, De Nicola has served as General Chair of PLI 2001, Conference Chair of PPDP 2001, Program Chair of COORDINATION 2004, TGC 2005 and ESOP 2007, member of the Steering Committee of ETAPS. He has also been a member of the program committee of important international conferences, such as AMAST, CAAP, CONCUR, COORDINATION, FCT, ICALP, LICS, MA, MFCS, PROCOMET, PPDP.

De Nicola has also been *invited speaker* for many international conferences and schools among which IFIP World Congress 1986, COORDINATION 1999, CONCUR 2000, EXPRESS 2004, FMCO 2004, DAIS-FMOODS 2005, QAPL 2006, FSEN 2019.

Recent Research Project

De Nicola is or has recently been principal investigator in projects funded by MIUR, CNR, Microsoft and European Union:

AGILE: *Architectures for Mobility*

2001-2004 IST FET Global Computing - EU 150.000 Euro (Site Coordinator)

MIKADO: *Models and Calculi for Mobility*

2001-2004 IST FET Global Computing - EU 500.000 Euro (Site Coordinator)

NAPI: *Network Aware Programming in Italy*

2001-2004 Microsoft Research Cambridge 400.000 Euro (Project Leader)

NAPOLI: *Network Aware Programming: Objects Languages and Implementations*

2002-2003 MIUR - Italy 300.000 Euro (National Coordinator)

SP4: *Architetture Software ad Alta Qualità di Servizio per Global Computing su Cooperative Wide Area Networks*

2002-2005 Progetto SP4 - CNR 110.000 Euro (Site Coordinator)

SENSORIA: *Software Engineering for Service Oriented Architectures*

2005-2008 IST FET Global Computing - EU 400.000 Euro (Site Coordinator)

PaCo: *Performability-Aware Computing: Logics, Models, and Languages*

2008-2010 MIUR - Italy 20.000 Euro (Site Coordinator).

- ASCENS:** *Autonomic Service-Component Ensembles*
2010-2014 IST FET Self-Awareness in Autonomic Systems - EU 400.000 Euro (Site Coordinator)
- CINA:** *Compositionality, Interaction, Negotiation, Autonomicity*
2013-2016 MIUR - Italy 600.000 Euro (National Coordinator)
- WILIFE:** *WiReLess and Ict technologies For Emergency management*
2013-2016 Regione Toscana - Italy 200.000 Euro (Site Coordinator)
- QUANTICOL:** *A Quantitative Approach to Management and Design of Collective and Adaptive Behaviours*, EU 400.000 Euro (Site Coordinator)
2013-2017 IST FET Foundations of Collective Adaptive Systems - EU 400.000 Euro (Site Coordinator)
- IT-MATTERS:** *Methods and Tools for Trustworthy Systems*
2019-2021 MIUR - Italy 700.000 Euro (National Coordinator)
- SPARTA:** *Re-imagining the way cybersecurity research, innovation, and training are performed in the European Union* - 2019-2022 EU 220.000 Euro (Site Coordinator)
- TOFFEE:** *Tools for Fighting Fakes* - 2019-2022 IMT Internal PAI project 320.000 Euro (Coordinator)
- SERICS:** *SEcurity and RIghts In the CyberSpace* Extended Partnership on Cybersecurity
- 2023-2025 IT 1.100.000 Euro (Site Coordinator)

Refereed International Journals

- [1] S. Bistarelli, R. De Nicola, L. Galletta, C. Laneve, I. Mercanti, A. Veschetti, Stochastic modeling and analysis of the bitcoin protocol in the presence of block communication delays. *Concurrency and Computation - Practice and Experience*. To appear, 2022. Available online <https://onlinelibrary.wiley.com/doi/10.1002/cpe.6749>.
- [2] R. De Nicola, H. C. Melgratti: Multiparty testing preorders. *Log. Methods Comput. Sci.* 19(1) (2023)
- [3] S. Soderi, R. De Nicola, 6G Networks Physical Layer Security Using RGB Visible Light Communications. *IEEE Access* 10: 5482-5496, 2022.
- [4] R. De Nicola, L. Di Stefano, O. Inverso, A. Uwimbabazi: Automated replication of tuple spaces via static analysis. *Sci. Comput. Program.* 223: 102863, 2022.
- [5] R. De Nicola, L. Di Stefano, O. Inverso, Verification of Distributed Systems via Sequential Emulation. *ACM Trans. Softw. Eng. Methodol.* 31(3): 37:1-37:41, 2022.
- [6] J. Hajny, S. Ricci, E. Piesarskas, O. Levillain, L. Galletta, R. De Nicola Framework, Tools and Good Practices for Cybersecurity Curricula. *IEEE Access* 9: 94723-94747, 2021.
- [7] R. Brundo Uriarte, H. Zhou, K. Kritikos, Z. Shi, Z. Zhao, R. De Nicola: Distributed service-level agreement management with smart contracts and blockchain. *Concurr. Comput. Pract. Exp.* 33(14), 2021.
- [8] Guido Caldarelli, R. De Nicola, Marinella Petrocchi, Manuel Pratelli, Fabio Saracco: Flow of online misinformation during the peak of the COVID-19 pandemic in Italy. *EPJ Data Sci.* 10(1): 34, 2021.
- [9] R. De Nicola, M. Petrocchi, M. Pratelli: On the efficacy of old features for the detection of new bots. *Inf. Process. Manag.* 58(6): 102685, 2021.
- [10] A. Balestrucci, R. De Nicola, M. Petrocchi, C. Trubiani A behavioural analysis of credulous Twitter users. *Online Social Networks and Media* 23, 100133, Elsevier 2021.
- [11] R. De Nicola, T. Duong, M. Loreti: Provably correct implementation of the AbC calculus. *Sci. Comput. Program.* 202: 102567, Elsevier 2021.
- [12] G. Caldarelli, R. De Nicola, F. Del Vigna, M. Petrocchi, F. Saracco The role of bot squads in the political propaganda on Twitter *Communications Physics* 3 (1), 1-15, Nature 2020.
- [13] Y. Tonga Uriarte, M. Petrocchi, M. L. Catoni, S. Cresci, R. De Nicola, M. Tesconi, R. Brundo Uriarte: Exploring the relation between festivals and host cities on Twitter: a study on the impacts of Lucca Comics & Games. *J. Inf. Technol. Tour.* 22(4): 625-648, 2020.
- [14] R. De Nicola, A. Maggi, J. Sifakis: The DReAM framework for dynamic reconfigurable architecture modelling: theory and applications. *Int. J. Softw. Tools Technol. Transf.* 22(4): 437-455, Springer 2020.
- [15] R. De Nicola, S. Jähnichen, M. Wirsing, Rigorous engineering of collective adaptive systems: special section, *Int. J. Softw. Tools Technol. Transf.* 22(4): 389-397, Springer 2020.
- [16] R. De Nicola, G.L. Ferrari, R. Pugliese, F. Tiezzi: A formal approach to the engineering of domain-specific distributed systems. *J. Log. Algebraic Methods Program.* 111: 100511, Elsevier 2020.
- [17] Y. Abd Alrahman, R. De Nicola, M. Loreti: Programming interactions in collective adaptive systems by relying on attribute-based communication. *Sci. Comput. Program.* 192: 102428, Elsevier 2020.
- [18] R. De Nicola, L. Di Stefano, O. Inverso: Multi-agent systems with virtual stigmergy. *Science of Computer Programming*, Volume 187, February 2020. Elsevier 2020.
- [19] Y. Abd Alrahman, R. De Nicola, M. Loreti: A calculus for collective-adaptive systems and its behavioural theory, *Information and Computation*, vol. 268, Elsevier 2019.
- [20] R. Brundo Uriarte, R. De Nicola, V. Scoca, F. Tiezzi: Defining and guaranteeing dynamic service levels in clouds In *Future Generation Computer Systems*, Volume 99, October 2019, Pages 27-40, Elsevier 2019.
- [21] A. Aral, I. Brandic, R. Brundo Uriarte, R. De Nicola, V. Scoca Addressing Application Latency Requirements through Edge Scheduling, *J. Grid Comput.*, vol. 17 (4), pp. 677-698, Elsevier 2019.
- [22] R. De Nicola, L. Di Stefano, O. Inverso, Toward formal models and languages for verifiable multi-robot systems. *Frontiers in Robotics and AI*, vol. 5, Article 94, FRONTIERS in Robotics and AI 2018.
- [23] R. Brundo Uriarte, R. De Nicola Blockchain-Based Decentralized Cloud/Fog Solutions: Challenges, Opportunities, and Standards. *IEEE Communications Standards Magazine*, vol. 2, p. 22-28, IEEE 2018.
- [24] R. De Nicola, Tan Duong, O. Inverso, C. Trubiani, AErlang: Empowering Erlang with attribute-based communication, *Science of Computer Programming*, vol. 168, p. 71-93, Elsevier 2018.
- [25] V. Buravlev, R. De Nicola, C. A. Mezzina, Evaluating the efficiency of Linda implementations, *Concurrency and Computation: Practice and Experience*, 30(8), Wiley 2018.

- [26] A. Labella, R. De Nicola, Initial Algebra for a System of Right-Linear Functors, *Acta Cybernetica*, 23 (1), 191–201, 2017.
- [27] M. Bernardo, R. De Nicola, M. Loreti: Revisiting bisimilarity and its modal logic for nondeterministic and probabilistic processes. *Acta Informatica* 52: 61–106, Springer 2015.
- [28] M. Boreale, R. Bruni, R. De Nicola, M. Loreti. Sessions and Pipelines for Structured Service Programming, *Mathematical Structures in Computer Science*, 25: 666–709, Cambridge University Press, 2015.
- [29] M. Bernardo, R. De Nicola, M. Loreti: Revisiting Trace and Testing Equivalences for Nondeterministic and Probabilistic Processes. *Logical Methods in Computer Science* 10(1), 2014.
- [30] R. De Nicola, M. Loreti, R. Pugliese, F. Tiezzi A Formal Approach to Autonomic Systems Programming: The SCEL Language. *ACM transactions on Autonomous and Adaptive Systems* 9(7), ACM 2014.
- [31] M. Bernardo, R. De Nicola, a M. Loreti: Relating strong behavioral equivalences for processes with nondeterminism and probabilities, *Theoretical Computer Science*, 546(1): 63–92, Elsevier 2014.
- [32] M. Bernardo, R. De Nicola, M. Loreti: A uniform framework for modeling nondeterministic, probabilistic, stochastic, or mixed processes and their behavioral equivalences. *Information and Computation* 225: 29–82, Elsevier 2013.
- [33] R. De Nicola, D. Latella, M. Loreti, and M. Massink. A Uniform Definition of Stochastic Process Calculi, *ACM Computing Surveys* , 46(1): 5, ACM 2013.
- [34] R. De Nicola and D. Gorla and A. Labella Tree-functors, determinacy and bisimulations, *Mathematical Structures in Computer Science*, 20(3):319–358, 2010.
- [35] R. De Nicola and D. Gorla and R.R. Hansen and F. Nielson and H. Riis Nielson and C. W. Probst and R. Pugliese, From Flow Logic to static type systems for coordination languages, *Science of Computer Programming*, 75(6): 376–397, Elsevier 2010.
- [36] R. De Nicola and M. Loreti, Modelling global computations with Klaim, *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences*, (editor Marta Kwiatkowska Tom Rodden Vladimiro Sassone), 336(1881): 3737–3745, 2008.
- [37] R. De Nicola and M. Loreti, Multiple-Labelled Transition Systems for nominal calculi and their logics, *Mathematical Structures in Computer Science*, 18(1): 107–14, 2008.
- [38] G. Castagna, R. De Nicola and D. Varacca, Semantic subtyping for the pi-calculus, *Theoretical Computer Science*, 398(1–3): 217–240, Elsevier 2008.
- [39] R. De Nicola, J.-P. Katoen, D. Latella, M. Loreti and M. Massink, Model checking mobile stochastic logic, *Theoretical Computer Science*, 382(1): Elsevier 42–70, 2007.
- [40] R. De Nicola, D. Gorla, and R. Pugliese. Basic observables for a calculus for global computing. *Information and Computation*, 205(10): 1491–1525, 2007.
- [41] R. De Nicola, D. Gorla, and R. Pugliese. Global computing in a dynamic network of tuple spaces. *Science of Computer Programming*, 64(2): 187–204, Elsevier 2007.
- [42] R. De Nicola, D. Gorla, and R. Pugliese. On the expressive power of klaim-based calculi. *Theoretical Computer Science*, 356(3): 387–421, Elsevier 2006.
- [43] R. De Nicola, D. Gorla, and R. Pugliese. Confining data and processes in global computing applications. *Science of Computer Programming*, 63(1): 57–87, Elsevier 2006.
- [44] R. De Nicola, D. Sangiorgi: Types in concurrency. *Acta Informatica* 42(2–3): 79–81, Springer 2005.
- [45] L. Bettini, R. De Nicola, and M. Loreti. Formulae meet programs over the net: A framework for correct network aware programming. *Autom. Softw. Eng.*, 11(3):245–288, 2004.
- [46] R. De Nicola and M. Loreti. A modal logic for mobile agents. *ACM Transaction on Computational Logic*, 5(1):79–128, ACM 2004.
- [47] Rocco De Nicola and Anna Labella. Nondeterministic regular expressions as solutions of equational systems. *Theoretical Computer Science*, 1–3(302):179–189, Elsevier 2003.
- [48] Michele Boreale, Rocco De Nicola, and Rosario Pugliese. Trace and testing equivalence on asynchronous processes. *Information and Computation*, 172(2):139–164, Elsevier 2002.
- [49] Flavio Corradini, Rocco De Nicola, and Anna Labella. An equational axiomatization of bisimulation over regular expressions. *J. Log. Comput.*, 12(2):301–320, 2002.
- [50] Lorenzo Bettini, Rocco De Nicola, and Rosario Pugliese. Klava: a java package for distributed and mobile applications. *Softw., Pract. Exper.*, 32(14):1365–1394, 2002.
- [51] Xiao Jun Chen and Rocco De Nicola. Algebraic characterizations of trace and decorated trace equivalences over tree-like structures. *Theoretical Computer Science*, 254(1–2):337–361, 2001.
- [52] Michele Boreale, Rocco De Nicola, and Rosario Pugliese. Divergence in testing and readiness semantics. *Theoretical Computer Science*, 266(1–2):237–248, 2001.

- [53] Rocco De Nicola and Rosario Pugliese. Linda-based applicative and imperative process algebras. *Theoretical Computer Science*, 238(1-2):389–437, 2000.
- [54] Rocco De Nicola, Gian Luigi Ferrari, Rosario Pugliese, and Betti Venneri. Types for access control. *Theoretical Computer Science*, 240(1):215–254, 2000.
- [55] Flavio Corradini, Rocco De Nicola, and Anna Labella. A finite axiomatization of nondeterministic regular expressions. *ITA*, 33(4/5):447–466, 1999.
- [56] Michele Boreale, Rocco De Nicola, and Rosario Pugliese. Basic observables for processes. *Information and Computation*, 149(1):77–98, 1999.
- [57] Flavio Corradini, Rocco De Nicola, and Anna Labella. Models of nondeterministic regular expressions. *Journal of Computer and System Sciences*, 59(3):412–449, 1999.
- [58] Rocco De Nicola, Gian Luigi Ferrari, and Rosario Pugliese. Klaim: A kernel language for agents interaction and mobility. *IEEE Trans. Software Eng.*, 24(5):315–330, 1998.
- [59] Flavio Corradini and Rocco De Nicola. Locality based semantics for process algebras. *Acta Informatica*, 34(4):291–324, 1997.
- [60] Rocco De Nicola and Scott A. Smolka. Concurrency: Theory and practice. *ACM Comput. Surv.*, 28(4es):52, 1996.
- [61] Flavio Corradini and Rocco De Nicola. On four partial ordering semantics for a process calculus. *Fundamenta Informaticae*, 27(4):349–383, 1996.
- [62] Michele Boreale and Rocco De Nicola. A symbolic semantics for the pi-calculus. *Information and Computation*, 126(1):34–52, 1996.
- [63] Michele Boreale and Rocco De Nicola. Testing equivalence for mobile processes. *Information and Computation*, 120(2):279–303, 1995.
- [64] Rocco De Nicola and Frits W. Vaandrager. Three logics for branching bisimulation. *Journal of ACM*, 42(2):458–487, 1995.
- [65] Rocco De Nicola and Roberto Segala. A process algebraic view of input/output automata. *Theoretical Computer Science*, 138(2):391–423, 1995.
- [66] Rocco De Nicola, Alessandro Fantechi, Stefania Gnesi, and Gioia Ristori. An action-based framework for verifying logical and behavioural properties of concurrent systems. *Computer Networks and ISDN Systems*, 25(7):761–778, 1993.
- [67] Pierpaolo Degano, Rocco De Nicola, and Ugo Montanari. Universal axioms for bisimulations. *Theoretical Computer Science*, 114(1):63–91, 1993.
- [68] Pierpaolo Degano, Rocco De Nicola, and Ugo Montanari. A partial ordering semantics for ccs. *Theoretical Computer Science*, 75(3):223–262, 1990.
- [69] Pierpaolo Degano, Rocco De Nicola, and Ugo Montanari. A distributed operational semantics for ccs based on condition/event systems. *Acta Informatica*, 26(1/2):59–91, 1988.
- [70] Rocco De Nicola. Extensional Equivalences for Transition Systems. *Acta Informatica*, 24(2):211–237, 1987.
- [71] Rocco De Nicola. Two complete axiom systems for a theory of communicating sequential processes. *Information and Control*, 64(1-3):136–172, 1985.
- [72] Rocco De Nicola and Matthew Hennessy. Testing equivalences for processes. *Theoretical Computer Science*, 34:83–133, 1984.

Edited Books

- [1] R. De Nicola, eva Kuehn, editors. *Software Engineering and Formal Methods - 14th International Conference*, volume 9763 of *Lecture Notes in Computer Science*, Springer 2016,
- [2] R. De Nicola, and R. Hennicker, editors. *Software, Services, and Systems*, volume 8950 of *Lecture Notes in Computer Science*; Springer, 2015.
- [3] M. Bernardo, R. De Nicola, J. Hillston, editors. *Formal Methods for the Quantitative Evaluation of Collective Adaptive Systems - 16th International School on Formal Methods for the Design of Computer, Communication, and Software Systems*. volume 9700 of *Lecture Notes in Computer Science*, Springer 2016.
- [4] R. De Nicola, and C. Julien, editors. *Proceedings COORDINATION 2013*, volume 7890 of *Lecture Notes in Computer Science*; Springer, 2013.
- [5] P. Degano, R. De Nicola, and J. Meseguer, editors. *Concurrency, Graphs and Models*, volume 5065 of *Lecture Notes in Computer Science*; Springer, 2008.
- [6] R. De Nicola, editor. *Programming Languages and Systems, 16th European Symposium on Programming, ESOP 2007, Proceedings*, volume 4421 of *Lecture Notes in Computer Science*. Springer, 2007.

- [7] R. De Nicola, D. Sangiorgi, editors. Special issue on "Types in Concurrency". *Acta Informatica*, volume 42 N. 2-5. Springer, 2005.
- [8] R. De Nicola, D. Sangiorgi, editors. *Trustworthy Global Computing, Selected papers of TGC 2005*, volume 3705 of *Lecture Notes in Computer Science*. Springer, 2004.
- [9] R. De Nicola, G.L. Ferrari, and G. Meredith, editors. *Coordination Models and Languages, 6th International Conference, COORDINATION 2004, 2004, Proceedings*, volume 2949 of *Lecture Notes in Computer Science*. Springer, 2004.
- [10] R. De Nicola, U. Montanari, editors. Special issue on "Concurrency and Compositionality". *Theoretical Computer Science*, Volume 96 (1). Elsevier, 1992.
- [11] P. Bottoni, R. De Nicola, D. Gorla: Essays for a Tribute to Anna Labella - Special Issue. *J. Log. Algebraic Methods Program.* 121: 100663. 2021

Invited Contributions to Books or Conference Proceedings

- [1] G. Caldarelli, R. De Nicola, M. Petrocchi, F. Saracco Information spreading and the role of automated accounts on Twitter: Two case studies. In "Democracy and Fake News: Information Manipulation and Post-Truth Politics", S. Giusti and E. Piras (editors), Routledge 2021
- [2] A. Maggi, R. De Nicola, J. Sifakis: A Logic-Inspired Approach to Reconfigurable System Modelling. In "From Reactive Systems to Cyber-Physical Systems" *Lecture Notes in Computer Science* vol. 11500, pp. 181-20, Springer 2019.
- [3] R. De Nicola, T. Duong, O. Inverso, F. Mazzanti: A Systematic Approach to Programming and Verifying Attribute-Based Communication Systems. In "From Software Engineering to Formal Methods and Tools, and Back", *Lecture Notes in Computer Science* vol. 11865, pp. 377-396, Springer 2019.
- [4] R. De Nicola and T. Duong and O. Inverso and F. Mazzanti: Verifying Properties of Systems Relying on Attribute-Based Communication, *AERlang: Empowering Erlang with Attribute-Based Communication*, *Lecture Notes in Computer Science* 10500, 169–190, Springer 2017.
- [5] M. Andric, R. De Nicola, A. Lluch-Lafuente: Replicating Data for Better Performances in X10. In *Semantics, Logics, and Calculi - Essays Dedicated to Hanne Riis Nielson and Flemming Nielson on the Occasion of Their 60th Birthdays* *Lecture Notes in Computer Science*, vol. 9560, pp. 236–251, Springer 2016.
- [6] R. De Nicola C.A. Mezzina, H. Torres Vieira: Global Protocol Implementations via Attribute-Based Communication. *Programming Languages with Applications to Biology and Security - Essays Dedicated to Pierpaolo Degano on the Occasion of His 65th Birthday*. *Lecture Notes in Computer Science*, vol. 9465, pp. 219-237, Springer 2015.
- [7] R. De Nicola, R. Hennicker A Homage to Martin Wirsing. In *Software, Services, and Systems- Essays Dedicated to Martin Wirsing on the Occasion of His Retirement from the Chair of Programming and Software Engineering* vol. 8950 of *Lecture Notes in Computer Science* p. 1-12, Springer, 2015.
- [8] R. De Nicola, A. Lluch-Lafuente, M. Loreti, A. Morichetta, R. Pugliese, V. Senni, F. Tiezzi: Programming and Verifying Component Ensembles. in *From Programs to Systems. The Systems perspective in Computing, essays in Honor of Joseph Sifakis* *Lecture Notes in Computer Science* vol. 8415, 69-83 , Springer 2014.
- [9] R. De Nicola A Formal Approach to Autonomic Systems Programming: The SCEL Language - (Long Abstract). *Proc. FACS 2014, Lecture Notes in Computer Science* Vol. 8997, 24-28, Springer 2015.
- [10] R. De Nicola A formal approach to autonomic systems programming: the SCEL language. *Proc. of the 15th Italian Conference on Theoretical Computer Science (ICTCS 2014)*, *CEUR Workshop Proceedings* 1231, CEUR-WS.org, 2014
- [11] M. Wirsing, R. De Nicola, M. Hoelzl: Introduction to "Rigorous Engineering of Autonomic Ensembles"-Track Introduction. *Proc. ISoLA (1), Lecture Notes in Computer Science* Vol. 8802, 96-98. Springer 2014.
- [12] L. Belzner, R. De Nicola, A. Vandin and M. Wirsing, Reasoning (on) Service Component Ensembles in Rewriting Logic, *Specification, Algebra, and Software, Essays Dedicated to Kokichi Futatsugi*, *Lecture Notes in Computer Science* vol. 8373, pp. 188-211, 2014.
- [13] R. De Nicola Processes Algebra, in *Encyclopedia of Parallel Computing*, Ed. David Padua, Springer 15 pages, 2011.
- [14] R. De Nicola Behavioral Equivalences, in *Encyclopedia of Parallel Computing*, Ed. David Padua, Springer 10 pages, 2011.
- [15] M. Bernardo, R. De Nicola and M. Loreti Uniform Labeled Transition Systems for Nondeterministic, Probabilistic, and Stochastic Processes *Calculi, First International Workshop on Process Algebra and Coordination*, volume 60 of *Electronic Proceeding in Theoretical Computer Science* pages 66-75, 2011.

- [16] M. Bernardo, R. De Nicola and M. Loreti. Uniform Labeled Transition Systems for Nondeterministic, Probabilistic, and Stochastic Processes, *Trustworthy Global Computing - 5th International Symposium, TGC 2010*, volume 6084 of *Lecture Notes in Computer Science* pages 35-56; Springer, 2010.
- [17] R. De Nicola, D. Latella, M. Loreti, and M. Massink. On a Uniform Framework for the Definition of Stochastic Process Languages, *Formal Methods for Industrial Critical Systems*, volume 5825 of *Lecture Notes in Computer Science* pages 9-25; Springer, 2009.
- [18] P. Degano, R. De Nicola, and J. Meseguer. Ugo Montanari in a Nutshell, *Concurrency, Graphs and Models*, volume 5065 of *Lecture Notes in Computer Science* pages 7-8; Springer, 2008.
- [19] M. Boreale, R. Bruni, L. Caires, R. De Nicola, I. Lanese, M. Loreti, F. Martins, U. Montanari, A. Ravara, D. Sangiorgi, V. Thudichum Vasconcelos, G. Zavattaro. SCC: A Service Centered Calculus. WS-FM 2006: 38-57, LNCS Springer 2006
- [20] R. De Nicola. Languages and Process Calculi for Network Aware Programming - Short Summary. ICTAC 2005: 49-52, LNCS Springer 2006.
- [21] R. De Nicola, J.-P. Katoen, D. Latella, M. Massink. Towards a Logic for Performance and Mobility. Electr. Notes Theor. Comput. Sci. 153(2): 161-175 (2006)
- [22] R. De Nicola. From Process Calculi to Klaim and Back. Electr. Notes Theor. Comput. Sci. 162: 159-162 (2006)
- [23] R. De Nicola and M. Loreti. MoMo: A Modal Logic for Reasoning About Mobility, In Frank S. de Boer et al., editors, *Formal Methods for Components and Objects*, number 3657 in LNCS. pages 95-119. Springer, 2005.
- [24] L. Bettini, R. De Nicola. Mobile Distributed Programming in X-Klaim. in Marco Bernardo and Alessandro Bogliolo editors, *Formal Methods for Mobile Computing*, 5th International School on Formal Methods for the Design of Computer, Communication, and Software Systems, number 3465 in LNCS, page 29-68 Springer, 2005.
- [25] R. De Nicola, D. Gorla, and R. Pugliese. Pattern Matching over a Dynamic Network of Tuple Spaces. FMOODS - Formal Methods for Open Object-Based Distributed Systems, volume 3535 of *Lecture Notes in Computer Science*, pages 1-14. Springer, 2005.
- [26] R. De Nicola, D. Gorla, and R. Pugliese. On the expressive power of klaim-based calculi. *Electronic Notes in Theoretical Computer Science, Proc. Express 2004*, 128(2):117-30, 2005. Proceedings of the 11th International Workshop on Expressiveness in Concurrency (EXPRESS 2004).
- [27] Rocco De Nicola, Gian Luigi Ferrari, and Rosario Pugliese. Programming access control: The klaim experience. In Catuscia Palamidessi, editor, *CONCUR*, volume 1877 of *Lecture Notes in Computer Science*, pages 48-65. Springer, 2000.
- [28] Rocco De Nicola, Gian Luigi Ferrari, and Rosario Pugliese. Types as specifications of access policies. In Jan Vitek and Christian D. Jensen, editors, *Secure Internet Programming*, volume 1603 of *Lecture Notes in Computer Science*, pages 118-146. Springer, 1999.
- [29] Rocco De Nicola. Coordination and access control of mobile agents. In Paolo Ciancarini and Alexander L. Wolf, editors, *COORDINATION*, volume 1594 of *Lecture Notes in Computer Science*, pages 1-2. Springer, 1999.
- [30] Rocco De Nicola and Frits W. Vaandrager. Action versus state based logics for transition systems. In Irène Guessarian, editor, *Semantics of Systems of Concurrent Processes*, volume 469 of *Lecture Notes in Computer Science*, pages 407-419. Springer, 1990.
- [31] Rocco De Nicola. Action and state-based logics for process algebras. In Jos C. M. Baeten and Jan Friso Groote, editors, *CONCUR*, volume 527 of *Lecture Notes in Computer Science*, pages 20-22. Springer, 1991.
- [32] Pierpaolo Degano, Rocco De Nicola, and Ugo Montanari. Partial orderings descriptions and observations of nondeterministic concurrent processes. In J. W. de Bakker, Willem P. de Roever, and Grzegorz Rozenberg, editors, *REX Workshop*, volume 354 of *Lecture Notes in Computer Science*, pages 438-466. Springer, 1988.
- [33] Luca Aceto, Rocco De Nicola, and Alessandro Fantechi. Testing equivalences for event structures. In Marisa Venturini Zilli, editor, *Mathematical Models for the Semantics of Parallelism*, volume 280 of *Lecture Notes in Computer Science*, pages 1-20 Springer, 1987.
- [34] Rocco De Nicola. Net theory and application - response. In *IFIP World Congress 1986*, pages 833-836, IFIP 1986.

Contributions in Books or Conference Proceedings

- [1] M. Pratelli, M. Petrocchi, F. Saracco, R. De Nicola: Swinging in the States: Does disinformation on Twitter mirror the US presidential election system? WWW (Companion Volume) 2023: 1395-1403

- [2] R. De Nicola, L. Di Stefano, O. Inverso, Serenella Valiani: Process Algebras and Flocks of Birds. A Journey from Process Algebra via Timed Automata to Model Learning Lecture Notes in Computer Science 13560, pp. 512-523, Springer 2022.
- [3] M. Wirsing, R. De Nicola, S. Jähnichen: Rigorous Engineering of Collective Adaptive Systems Introduction to the 4th Track Edition. Lecture Notes in Computer Science 13703, pp. 3-12, Springer 2022.
- [4] R. De Nicola, L. Di Stefano, O. Inverso, Serenella Valiani: Modelling Flocks of Birds from the Bottom Up. Lecture Notes in Computer Science 13703, pp. 82-96, Springer 2022.
- [5] A. Uwimbabazi, O. Inverso, R. De Nicola Automated Replication of Tuple Spaces via Static Analysis. FSEN 2021: Lecture Notes in Computer Science vol. 12818, 18-34, Springer 2021.
- [6] C. Siwach, G. Costa, R. De Nicola Enhancing Malware Classification with Symbolic Features. ITASEC 2021: CEUR Workshop Proceedings 2940, 509-522, CEUR-WS.org 2021.
- [7] S. Belluccini, R. De Nicola, M. Dumas, P. Pullonen, B. Re, F. Tiezzi: Verification of Privacy-Enhanced Collaborations. FormalISE@ICSE 2020: 8th International Conference on Formal Methods in Software Engineering, ACM 2020.
- [8] S. Belluccini, R. De Nicola, B. Re, F. Tiezzi: PALM: A Technique for Process ALgebraic Specification Mining. Integrated Formal Methods IFM 2020, Lecture Notes in Computer Science vol. 12546, pp. 397-418, Springer 2020.
- [9] R. De Nicola, T. Duong, M. Loreti: ABEL - A Domain Specific Framework for Programming with Attribute-Based Communication. In "Coordination Models and Languages" - Coordination 2019, Lecture Notes in Computer Science vol. 11533 pp. 111-128, Springer 2019.
- [10] A. Balestrucci, R. De Nicola, M. Petrocchi, C. Trubiani: Do You Really Follow Them? Automatic Detection of Credulous Twitter Users. In "Intelligent Data Engineering and Automated Learning" - IDEAL 2019, Lecture Notes in Computer Science vol. 11871 pp. 402-410, Springer 2019.
- [11] V. Cozza, V. T. Hoang, M. Petrocchi, R. De Nicola: Transparency in Keyword Faceted Search: An Investigation on Google Shopping. In "Digital Libraries: Supporting Open Science" - IRCDL 2019: Communications in Computer and Information Science vol.988, pp. 29-43, Springer 2019.
- [12] A. Balestrucci, R. De Nicola, O. Inverso, C. Trubiani: Identification of credulous users on Twitter. In proc. "Symposium on Applied Computing" - SAC 2019, pp. 2096-2103, ACM 2019.
- [13] R. De Nicola, A. Maggi, J. Sifakis DReAM: Dynamic Reconfigurable Architecture Modeling. In Leveraging Applications of Formal Methods, Verification and Validation: Distributed Systems Lecture Notes in Computer Science, vol. 11246, p. 13-31, Springer 2018.
- [14] Y. Abd Alrahman, R. De Nicola, G. Garbi, GoAt: Attribute-Based Interaction in Google Go. In Leveraging Applications of Formal Methods, Verification and Validation: Distributed Systems Lecture Notes in Computer Science, vol. 11246, p. 288-303, Springer 2018.
- [15] R. De Nicola, L. Di Stefano, O. Inverso, Multi-agent systems with virtual stigmergy. In Software Technologies: Applications and Foundations - STAF 2018 Collocated Workshops, Toulouse, Lecture Notes in Computer Science, vol. 11176, p. 351-366, Springer 2018.
- [16] V. Scoca, A. Aral, I. Brandic, R. De Nicola, R. Brundo Uriarte: Scheduling Latency-Sensitive Applications in Edge Computing. CLOSER 2018: 158-168, IEEE, 2018
- [17] R. De Nicola G. Ferrari, R. Pugliese, F. Tiezzi A formal approach to the engineering of domain-specific distributed systems. Proceedings Coordination 2018, Lecture Notes in Computer Science, vol. 10852, p. 110-141, Springer 2018.
- [18] Y. Abd Alrahman, R. De Nicola, G. Garbi, M. Loreti: A Distributed Coordination Infrastructure for Attribute-Based Interaction. Proceedings FORTE 2018, Lecture Notes in Computer Science 10854,1-20, Springer 2018 .
- [19] V. Scoca, R. Brundo Uriarte and R. De Nicola: Smart Contract Negotiation in Cloud Computing. 10th International Conference on Cloud Computing (CLOUD), 592-599, IEEE, 2017.
- [20] R. De Nicola and T. Duong and O. Inverso and C. Trubiani: AErlang: Empowering Erlang with Attribute-Based Communication. In Coordination Models and Languages - 19th IFIP WG 6.1 International Conference, COORDINATION, Lecture Notes in Computer Science 10319, 21-39, Springer 2017.
- [21] R. De Nicola and T. Duong and O. Inverso and C. Trubiani: AErlang at Work, SOFSEM 2017: Theory and Practice of Computer Science - 43rd International Conference on Current Trends in Theory and Practice of Computer Science, Lecture Notes in Computer Science 10139, 485-497, Springer 2017.
- [22] V. Buravlev, R. De Nicola, C.A. Mezzina: Tuple Spaces Implementations and Their Efficiency. In Coordination Models and Languages - 18th IFIP WG 6.1 International Conference, COORDINATION Lecture Notes in Computer Science, vol. 9686, pp. 51-66, Springer 2016.
- [23] R. Brundo Uriarte and F. Tiezzi and R. De Nicola Dynamic SLAs for Clouds. In Service-Oriented and Cloud Computing - 5th IFIP WG 2.14 European Conference, ESOC, Lecture Notes in Computer Science, vol. 9846, pp. 34-49, Springer 2016.

- [24] Van Tien Hoang and V. Cozza and M. Petrocchi and R. De Nicola: Online User Behavioural Modeling with Applications to Price Steering, Proceedings of the 2nd International Workshop on Personalization & Recommender Systems in Financial Services, CEUR Workshop Proceedings, 16–21, 2016.
- [25] Y. Abd Alrahman, R. De Nicola, M. Loreti: On the Power of Attribute-Based Communication. In Formal Techniques for Distributed Objects, Components, and Systems - 36th IFIP WG 6.1 International Conference, FORTE, Lecture Notes in Computer Science, vol. 9688, pp. 1–18, Springer 2016.
- [26] Y. Abd Alrahman, R. De Nicola, M. Loreti: Programming of CAS Systems by Relying on Attribute-Based Communication. In Leveraging Applications of Formal Methods, Verification and Validation: Foundational Techniques - 7th International Symposium, ISO/LA, Lecture Notes in Computer Science, vol. 9952, pp. 539–553, Springer 2016.
- [27] M. Andric, R. De Nicola, A. Lluch-Lafuente: Replica-Based High-Performance Tuple Space Computing. In *COORDINATION* Lecture Notes in Computer Science, vol. 9037, pp. 3–18, Springer 2015.
- [28] F. Shams, A. Cerone, R. De Nicola: On Integrating Social and Sensor Networks for Emergency Management. In Software Engineering and Formal Methods - SEFM 2015 Colocated Workshops. Lecture Notes in Computer Science, vol. 9509, pp. 145–160, Springer 2015.
- [29] R. De Nicola, A. Maggi, M. Petrocchi, A. Spognardi, F. Tiezzi: Twitlang(er): Interactions Modeling Language (and Interpreter) for Twitter. In Software Engineering and Formal Methods - SEFM 2015 Lecture Notes in Computer Science, vol. 9276, pp. 327–343, Springer 2015.
- [30] R. De Nicola, H. C. Melgratti: Multiparty Testing Preorders. Trustworthy Global Computing - 10th International Symposium, Lecture Notes in Computer Science, vol. 9533, pp. 16–31, Springer 2015.
- [31] L. Bortolussi, R. De Nicola, V. Galpin, S. Gilmore, J. Hillston, D. Latella, M. Loreti, M. Massink: CARMA: Collective Adaptive Resource-sharing Markovian Agents. In Proceedings Thirteenth Workshop on Quantitative Aspects of Programming Languages and Systems, EPTCS 194, pp. 16–31, 2015.
- [32] Y. Abd Alrahman, R. De Nicola, M. Loreti, F. Tiezzi, R. Vigo: A calculus for attribute-based communication. 5: In Proceedings of the 30th Annual ACM Symposium on Applied Computing, pp. 1840–1845, ACM 2015.
- [33] Van Tien Hoang, A. Spognardi, F. Tiezzi, M. Petrocchi, R. De Nicola: Domain-specific queries and Web search personalization: some investigations. In Proceedings 11th International Workshop on Automated Specification and Verification of Web Systems, EPTCS 188, pp. 51–58, 2015.
- [34] R. De Nicola, G. Iacobelli and M. Tribastone: Dimming Relations for the Efficient Analysis of Concurrent Systems via Action Abstraction, in *FORTE*, Lecture Notes in Computer Science, vol. 8461, pp. 216–23, Springer 2014.
- [35] A. Celestini, G. Costantino, R. De Nicola, Z. Maamar, F. Martinelli, M. Petrocchi, F. Tiezzi: Reputation-Based Composition of Social Web Services. Proc. 28th IEEE International Conference on Advanced Information Networking and Applications (AINA 2014), 735–742. IEEE Computer Society, 2014.
- [36] G. Cabri, N. Capodieci, L. Cesari, R. De Nicola, R. Pugliese, F. Tiezzi, F. Zambonelli: Self-expression and Dynamic Attribute-Based Ensembles in SCEL. In Proc. *Technologies for Mastering Change - 6th International Symposium, ISO/LA 2014*, Lecture Notes in Computer Science 8802, 147–163, Springer 2014.
- [37] R. Vigo, A. Celestini, F. Tiezzi, R. De Nicola, F. Nielson, H. Riis Nielson: Trust-Based Enforcement of Security Policies. In proc. *Trustworthy Global Computing*, TGC 2014, Lecture Notes in Computer Science 8902, 176–191, Springer 2014.
- [38] L. Cesari, R. De Nicola, R. Pugliese, M. Puviani, F. Tiezzi, F. Zambonelli: Formalising Adaptation Patterns for Autonomic Ensembles. In proc. *Formal Aspects of Component Software* (FACS 2013), Lecture Notes in Computer Science 8348, 100–118, Springer 2013.
- [39] T. Bures, R. De Nicola, I. Gerostathopoulos, N. Hoch, M. Kit, N. Koch, G. V. Monreale, U. Montanari, R. Pugliese, N. B. Serbedzija, M. Wirsing, F. Zambonelli: A Life Cycle for the Development of Autonomic Systems: The E-mobility Showcase. In proc. *7th IEEE International Conference on Self-Adaptation and Self-Organizing Systems* (SASOW 2013), 71–76. IEEE Computer Society 2013.
- [40] A. Celestini, R. De Nicola and F. Tiezzi, Network-Aware Evaluation Environment for Reputation Systems, in *Trust Management*, IFIP Advances in Information and Communication Technology, vol. 401, pp. 231–238, Springer 2013.
- [41] A. Celestini, R. De Nicola and F. Tiezzi, Specifying and analysing reputation systems with a coordination language, Proc. 28th Annual ACM Symposium on Applied Computing, SAC '13, pp. 1363–1368, ACM Press, 2013.
- [42] M. Bernardo M, R. De Nicola and M. Loreti, Group-by-Group Probabilistic Bisimilarities and Their Logical Characterizations, Proceedings Trustworthy Global Computing vol 8358 of Lecture Notes in Computer Science, pp. 315–33; Springer, 2013.

- [43] M. Bernardo M, R. De Nicola and M. Loreti, Revisiting Trace and Testing Equivalences for Nondeterministic and Probabilistic Processes, in Foundations of Software Science and Computational Structures - 15th International Conference, FOSSACS 2012, volume 7213 of *Lecture Notes in Computer Science* pages 195-209; Springer, 2012.
- [44] R. De Nicola, D. Latella, M. Loreti and M. Massink, SoSL: A Service-Oriented Stochastic Logic, Rigorous Software Engineering for Service-Oriented Systems - Results of the SENSORIA Project on Software Engineering for Service-Oriented Computing, volume 6582 of *Lecture Notes in Computer Science* pages 447-466; Springer, 2011.
- [45] L. Caires, R. De Nicola, R. Pugliese, V.T. Vasconcelos and G. Zavattaro, Core Calculi for Service-Oriented Computing, Rigorous Software Engineering for Service-Oriented Systems - Results of the SENSORIA Project on Software Engineering for Service-Oriented Computing, volume 6582 of *Lecture Notes in Computer Science* pages 153-188; Springer, 2011.
- [46] R. De Nicola, A. Margheri A and F. Tiezzi Orchestrating Tuple-Based Languages, Trustworthy Global Computing - 6th International Symposium, TGC 2011, volume 7173 of *Lecture Notes in Computer Science* pages 160-178; Springer, 2011.
- [47] L. Acciai, M. Boreale and R. De Nicola, Linear-Time and May-Testing in a Probabilistic Reactive Setting, *FMOODS/FORTE Formal Techniques for Distributed Systems*, volume 6722 of *Lecture Notes in Computer Science* pages 29-43; Springer, 2011.
- [48] R. De Nicola, D. Latella, M. Loreti, and M. Massink. SoSL: A Service-Oriented Stochastic Logic, *Results of the SENSORIA Project*, volume 6582 of *Lecture Notes in Computer Science* pages 447-466; Springer, 2011.
- [49] L. Caires, R. De Nicola, R. Pugliese, V. T. Vasconcelos and G. Zavattaro Core Calculi for Service-Oriented Computing, *Results of the SENSORIA Project*, volume 6582 of *Lecture Notes in Computer Science* pages 153-188; Springer, 2011.
- [50] R. De Nicola, D. Latella, M. Loreti, and M. Massink. MarCaSPiS: a Markovian Extension of a Calculus for Services, *Electr. Notes Theor. Comput. Sci.* 229 (4): 11-26 (2009)
- [51] R. De Nicola, D. Latella, M. Loreti, and M. Massink. Rate-Based Transition Systems for Stochastic Process Calculi, *Automata, Languages and Programming, 36th International Colloquium, ICALP 2009, Rhodes, Greece, July 5-12, 2009, Proceedings, Part II*, volume 5556 of *Lecture Notes in Computer Science* pages 435-446; Springer, 2009.
- [52] L. Bettini, R. De Nicola, and M. Loreti. Implementing Session Centered Calculi, *Formal Methods for Open Object-Based Distributed Systems (FMOODS2008)*, volume 5051 of *Lecture Notes in Computer Science* pages 100-111; Springer, 2008.
- [53] R. De Nicola, D. Gorla, Daniele, R. Hansen, F. Nielson, H. Riis Nielson, C.W. Probst and R. Pugliese. From Flow Logic to Static Type Systems for Coordination Languages, *Coordination Models and Languages, 6th International Conference, COORDINATION 2008*, volume 5052 of *Lecture Notes in Computer Science* pages 17-32; Springer, 2008.
- [54] M. Boreale, R. Bruni, R. De Nicola, and M. Loreti. Sessions and Pipelines for Structured Service Programming, *Formal Methods for Open Object-Based Distributed Systems (FMOODS2008)*, volume 5051 of *Lecture Notes in Computer Science* pages 19-38; Springer, 2008.
- [55] L. Bettini, R. De Nicola, D. Falassi, and M. Loreti. Implementing a Distributed Mobile Calculus Using the IMC Framework. *Electr. Notes Theor. Comput. Sci.* 181: 63-79 (2007)
- [56] L. Bettini, R. De Nicola, D. Falassi, M. Lacoste, M. Loreti, A Flexible and Modular Framework for Implementing Infrastructures for Global Computing. *DAIS 2005*: 181-193
- [57] R. De Nicola, D. Gorla, and R. Pugliese. Basic observables for a calculus for global computing. In C. Palamidessi et al., editor, *Proc. ICALP 2005*, number 3580 in LNCS, page 1226-1238 Springer, 2005.
- [58] R. De Nicola, D. Gorla, and R. Pugliese. Global computing in a dynamic network of tuple spaces. In J.M. Jacquet and G.P. Picco, editors, *Proc. of COORDINATION 2005*, number 3454 in LNCS, pages 157-172. Springer, 2005.
- [59] R. De Nicola, G.L. Ferrari, U. Montanari, R. Pugliese, and Emilio Tuosto. A basic calculus for modeling service level agreement. In J.M. Jacquet and G.P. Picco, editors, *Proc. of COORDINATION 2005*, number 3454 in LNCS. Springer, 2005.
- [60] G. Castagna, R. De Nicola, and D. Varacca. Semantic subtyping for the pi-calculus. In *Proc. of LICS '05*, page 92-101. IEEE, 2005.
- [61] R. De Nicola, D. Latella, and M. Massink. Formal modeling and quantitative analysis of klaim-based mobile systems. In H. Haddad et al., editor, *Proceedings of the 20th Annual ACM Symposium on Applied Computing*, pages 428-435. Association for Computing Machinery, 2005.
- [62] L. Bettini, R. De Nicola, D. Falassi, M., L. Lopes, L. Oliveira, H. Paulino, and V. Vasconcelos. A software framework for rapid prototyping of run-time systems for mobile calculi. In C. Priami and P. Quaglia, editors, *Global Computing*, volume 3267 of *Lecture Notes in Computer Science*, pages 179-207. Springer, 2004.

- [63] Lorenzo Bettini, Viviana Bono, Rocco De Nicola, Gian Luigi Ferrari, Daniele Gorla, Michele Loreti, Eugenio Moggi, Rosario Pugliese, Emilio Tuosto, and Betti Venneri. The klaim project: Theory and practice. In Corrado Priami, editor, *Global Computing*, volume 2874 of *Lecture Notes in Computer Science*, pages 88–150. Springer, 2003.
- [64] Rocco De Nicola, Gian Luigi Ferrari, Ugo Montanari, Rosario Pugliese, and Emilio Tuosto. A formal basis for reasoning on programmable qos. In Nachum Dershowitz, editor, *Verification: Theory and Practice*, volume 2772 of *Lecture Notes in Computer Science*, pages 436–479. Springer, 2003.
- [65] Lorenzo Bettini, Rocco De Nicola, and Michele Loreti. Formalizing properties of mobile agent systems. In Farhad Arbab and Carolyn L. Talcott, editors, *COORDINATION*, volume 2315 of *Lecture Notes in Computer Science*, pages 72–87. Springer, 2002.
- [66] Lorenzo Bettini and Rocco De Nicola. A java middleware for guaranteeing privacy of distributed tuple spaces. In Nicolas Guelfi, Egidio Astesiano, and Gianna Reggio, editors, *FIDJI*, volume 2604 of *Lecture Notes in Computer Science*, pages 175–184. Springer, 2002.
- [67] Luis Filipe Andrade, Paolo Baldan, Hubert Baumeister, Roberto Bruni, Andrea Corradini, Rocco De Nicola, José Luiz Fiadeiro, Fabio Gadducci, Stefania Gnesi, P. Hoffman, Nora Koch, Piotr Kosiuczenko, A. Lapadula, Diego Latella, Antónia Lopes, Michele Loreti, Mieke Massink, Franco Mazzanti, Ugo Montanari, C. Oliveira, Rosario Pugliese, Andrzej Tarlecki, Michel Wermelinger, Martin Wirsing, and Artur Zawlocki. Agile: Software architecture for mobility. In Martin Wirsing, Dirk Pattinson, and Rolf Hennicker, editors, *WADT*, volume 2755 of *Lecture Notes in Computer Science*, pages 1–33. Springer, 2002.
- [68] Lorenzo Bettini and Rocco De Nicola. Translating strong mobility into weak mobility. In Gian Pietro Picco, editor, *Mobile Agents*, volume 2240 of *Lecture Notes in Computer Science*, pages 182–197. Springer, 2001.
- [69] Lorenzo Bettini, Rocco De Nicola, and Rosario Pugliese. Xklaim and klava: Programming mobile code. *Electr. Notes Theoretical Computer Science*, 62, 2001.
- [70] Rocco De Nicola and Michele Loreti. A modal logic for klaim. In Teodor Rus, editor, *AMAST*, volume 1816 of *Lecture Notes in Computer Science*, pages 339–354. Springer, 2000.
- [71] Rocco De Nicola, Rosario Pugliese, and Antony I. T. Rowstron. Proving the correctness of optimising destructive and non-destructive reads over tuple spaces. In António Porto and Gruia-Catalin Roman, editors, *COORDINATION*, volume 1906 of *Lecture Notes in Computer Science*, pages 66–80. Springer, 2000.
- [72] Michele Boreale, Rocco De Nicola, and Rosario Pugliese. Process algebraic analysis of cryptographic protocols. In Tommaso Bolognesi and Diego Latella, editors, *FORTE*, volume 183 of *IFIP Conference Proceedings*, pages 375–392. Kluwer, 2000.
- [73] Lorenzo Bettini, Rocco De Nicola, Gian Luigi Ferrari, and Rosario Pugliese. Mobile applications in x-klaim. In Antonio Corradi, Andrea Omicini, and Agostino Poggi, editors, *WOA*, pages 1–6. Pitagora Editrice Bologna, 2000.
- [74] Flavio Corradini, Rocco De Nicola, and Anna Labella. Graded modalities and resource bisimulation. In C. Pandu Rangan, Venkatesh Raman, and R. Ramanujam, editors, *FSTTCS*, volume 1738 of *Lecture Notes in Computer Science*, pages 381–393. Springer, 1999.
- [75] Michele Boreale, Rocco De Nicola, and Rosario Pugliese. A theory of "may" testing for asynchronous languages. In Wolfgang Thomas, editor, *FoSSaCS*, volume 1578 of *Lecture Notes in Computer Science*, pages 165–179. Springer, 1999.
- [76] Michele Boreale, Rocco De Nicola, and Rosario Pugliese. Proof techniques for cryptographic processes. In *LICS*, pages 157–166, 1999.
- [77] Simone Vegliani and Rocco De Nicola. Possible worlds for process algebras. In Davide Sangiorgi and Robert de Simone, editors, *CONCUR*, volume 1466 of *Lecture Notes in Computer Science*, pages 179–193. Springer, 1998.
- [78] Michele Boreale, Rocco De Nicola, and Rosario Pugliese. Asynchronous observations of processes. In Maurice Nivat, editor, *FoSSaCS*, volume 1378 of *Lecture Notes in Computer Science*, pages 95–109. Springer, 1998.
- [79] Lorenzo Bettini, Rocco De Nicola, Rosario Pugliese, and Gian Luigi Ferrari. Interactive mobile agents in x-klaim. In *WETICE*, pages 110–117. IEEE Computer Society, 1998.
- [80] Rocco De Nicola and Anna Labella. Tree morphisms and bisimulations. *Electr. Notes Theoretical Computer Science*, 18, 1998.
- [81] Rocco De Nicola, Gian Luigi Ferrari, and Rosario Pugliese. Coordinating mobile agents via blackboards and access rights. In David Garlan and Daniel Le Métayer, editors, *COORDINATION*, volume 1282 of *Lecture Notes in Computer Science*, pages 220–237. Springer, 1997.
- [82] Michele Boreale, Rocco De Nicola, and Rosario Pugliese. Basic observables for processes. In Pierpaolo Degano, Roberto Gorrieri, and Alberto Marchetti-Spaccamela, editors, *ICALP*, volume 1256 of *Lecture Notes in Computer Science*, pages 482–492. Springer, 1997.

- [83] Rocco De Nicola, Gian Luigi Ferrari, and Rosario Pugliese. Locality based linda: Programming with explicit localities. In Michel Bidoit and Max Dauchet, editors, *TAPSOFT*, volume 1214 of *Lecture Notes in Computer Science*, pages 712–726. Springer, 1997.
- [84] Rocco De Nicola and Rosario Pugliese. A process algebra based on linda. In Paolo Ciancarini and Chris Hankin, editors, *COORDINATION*, volume 1061 of *Lecture Notes in Computer Science*, pages 160–178. Springer, 1996.
- [85] Xiao Jun Chen and Rocco De Nicola. Algebraic characterizations of decorated trace equivalences over tree-like structures. In Friedhelm Meyer auf der Heide and Burkhard Monien, editors, *ICALP*, volume 1099 of *Lecture Notes in Computer Science*, pages 63–74. Springer, 1996.
- [86] Rocco De Nicola, Alessandro Fantechi, Stefania Gnesi, Salvatore Larosa, and Gioia Ristori. Verifying hardware components within jack. In Paolo Camurati and Hans Eveking, editors, *CHARME*, volume 987 of *Lecture Notes in Computer Science*, pages 246–260. Springer, 1995.
- [87] Flavio Corradini, Rocco De Nicola, and Anna Labella. Fully abstract models for nondeterministic regular expressions. In Insup Lee and Scott A. Smolka, editors, *CONCUR*, volume 962 of *Lecture Notes in Computer Science*, pages 130–144. Springer, 1995.
- [88] Michele Boreale and Rocco De Nicola. A symbolic semantics for the pi-calculus (extended abstract). In Bengt Jonsson and Joachim Parrow, editors, *CONCUR*, volume 836 of *Lecture Notes in Computer Science*, pages 299–314. Springer, 1994.
- [89] Flavio Corradini and Rocco De Nicola. Distribution and locality of concurrent systems. In Serge Abiteboul and Eli Shamir, editors, *ICALP*, volume 820 of *Lecture Notes in Computer Science*, pages 154–165. Springer, 1994.
- [90] Rocco De Nicola and Anna Labella. A completeness theorem for nondeterministic Kleene algebras. In Igor Prívara, Branislav Rován, and Peter Ruzicka, editors, *MFCS*, volume 841 of *Lecture Notes in Computer Science*, pages 536–545. Springer, 1994.
- [91] Michele Boreale and Rocco De Nicola. Testing equivalence for mobile processes (extended abstract). In Rance Cleaveland, editor, *CONCUR*, volume 630 of *Lecture Notes in Computer Science*, pages 2–16. Springer, 1992.
- [92] Pierpaolo Degano, Rocco De Nicola, and Ugo Montanari. Observation trees. In S. Purushothaman and Amy E. Zwarico, editors, *NAPAW*, Workshops in Computing, pages 103–118. Springer, 1992.
- [93] Rocco De Nicola, Alessandro Fantechi, Stefania Gnesi, and Gioia Ristori. An action based framework for verifying logical and behavioural properties of concurrent systems. In Kim Guldstrand Larsen and Arne Skou, editors, *CAV*, volume 575 of *Lecture Notes in Computer Science*, pages 37–47. Springer, 1991.
- [94] Rocco De Nicola, Ugo Montanari, and Frits W. Vaandrager. Back and forth bisimulations. In Jos C. M. Baeten and Jan Willem Klop, editors, *CONCUR*, volume 458 of *Lecture Notes in Computer Science*, pages 152–165. Springer, 1990.
- [95] Rocco De Nicola and Gian Luigi Ferrari. Observational logics and concurrency models. In Kesav V. Nori and C. E. Veni Madhavan, editors, *FSTTCS*, volume 472 of *Lecture Notes in Computer Science*, pages 301–315. Springer, 1990.
- [96] Rocco De Nicola, Paola Inverardi, and Monica Nesi. Using the axiomatic presentation of behavioural equivalences for manipulating CCS specifications. In Joseph Sifakis, editor, *Automatic Verification Methods for Finite State Systems*, volume 407 of *Lecture Notes in Computer Science*, pages 54–67. Springer, 1989.
- [97] Pierpaolo Degano, Rocco De Nicola, and Ugo Montanari. On the consistency of “truly concurrent” operational and denotational semantics (extended abstract). In *LICS*, pages 133–141. IEEE Computer Society, 1988.
- [98] Rocco De Nicola and Matthew Hennessy. CCS without tau’s. In Hartmut Ehrig, Robert A. Kowalski, Giorgio Levi, and Ugo Montanari, editors, *TAPSOFT, Vol.1*, volume 249 of *Lecture Notes in Computer Science*, pages 138–152. Springer, 1987.
- [99] Pierpaolo Degano, Rocco De Nicola, and Ugo Montanari. CCS is an (augmented) contact free c/e system. In Marisa Venturini Zilli, editor, *Mathematical Models for the Semantics of Parallelism*, volume 280 of *Lecture Notes in Computer Science*, pages 144–165. Springer, 1987.
- [100] Rocco De Nicola. Models and operators for nondeterministic processes. In Michal Chytil and Václav Koubek, editors, *MFCS*, volume 176 of *Lecture Notes in Computer Science*, pages 433–442. Springer, 1984.
- [101] Rocco De Nicola. A complete set of axioms for a theory of communicating sequential processes. In Marek Karpinski, editor, *FCT*, volume 158 of *Lecture Notes in Computer Science*, pages 115–126. Springer, 1983.
- [102] Rocco De Nicola and Matthew Hennessy. Testing equivalence for processes. In Josep Díaz, editor, *ICALP*, volume 154 of *Lecture Notes in Computer Science*, pages 548–560. Springer, 1983.

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