

Stefano Marrone

assistant professor in
Computer Engineering

Dipartimento di Matematica e Fisica
Università della Campania “Luigi Vanvitelli”
(formerly Seconda Università di Napoli)

Positions:

- 2008-today: assistant professor at Università della Campania “Luigi Vanvitelli”;
- 2006-2008: adjunct professor in Software Engineering at Università della Campania “Luigi Vanvitelli”;
- 2002-2006: Ph.D. student in Electronic Engineering at Università della Campania “Luigi Vanvitelli”;
- 2002-2008: software/safety engineer at Ansaldo Segnalamento Ferroviario/AnsaldoSTS;
- 2002: post-degree junior researcher at Dipartimento di Informatica e Sistemistica of Università “Federico II” di Napoli.

Research topics:

Research activities focus attention on improving design and verification processes of critical computer-based systems:

- mission and safety-critical systems (rail, automotive, avionics, ...);
- complex networked systems (advanced communication systems, sensor networks, smart energy grids);
- software engineering for critical systems;
- critical infrastructure protection.

Research is mainly conducted by the use of formal methods and in particular by the combined use of different formal languages (multiformalism) and by model driven techniques.

Research projects

ongoing:

- 2017-today: investigator in the Governing Adaptive and Unplanned Systems of Systems (**GAUSS**) project funded by the Italian Ministry of Education, University and Research (Ministero Istruzione, Università e Ricerca - MIUR) as a PRIN for the year 2015.

past:

- 2014-2016: investigator and leader of the task T5.1 (Definition of Scenarios and use cases for SPECS validation) in **SPECS** (Secure Provisioning of Cloud Services based on SLA Management), EU FP7 Cooperation in ICT in the period 2013-2016 n°610795.
- 2013-2016: principal investigator in **CRYSTAL** (Critical System Acceleration) ARTEMIS project, Call 2012, agreement number 332830;
- 2012-2014: principal investigator of a research grant CeRICT - AnsaldoSTS in relation with **MBAT** (Combined Model-based Analysis and Testing of Embedded Systems) ARTEMIS project, Call 2010 Project 269335;
- 2011-2014: investigator in **IESWECAN** research project (Informatics for Embedded

- SoftWare Engineering of Construction and Agricultural machiNes) PON01-01516;
- 2012-2013: invited researcher in **METRIP** (MEthodological Tool for Railway Infrastructure Protection) project, funded by European Community, CIPS 2010 (HOME/2010/CIPS/AG/035);
 - 2011-2012: task leader of the design of a predictive software in outbound calls of a contact center as part of a private funded research project with Inova S.p.A. Aversa (CE) – Italy;
 - 2010-2014: researcher in **AGRIGENET** project. Research activities are aimed at building a regional information system for the enhancement and tracking of plant species in Campania. The project is funded by the Campania region as part of the Rural Development Programme 2007-2013.
 - 2010-2012: researcher in **Cloud@Home**, project funded by the Italian Ministry of Education, University and Research (Ministero Istruzione, Universita' e Ricerca - MIUR) as a PRIN for the year 2008.

Didactic Experience

current academic courses

- 2008-2019: *Basi di Dati e Sistemi Informativi* (Data Base and Information Systems) for the bachelor degree in Mathematics at Università della Campania “Luigi Vanvitelli”;
- 2016-2019: *Fondamenti di Informatica* (Programming basics) for the bachelor degree in Mathematics at Università della Campania “Luigi Vanvitelli”;

past academic courses

- 2010-2018: *Reti Logiche e Programmazione a Oggetti* (Digital Circuit Design) for the bachelor degree in Electronic and Computer Engineering at Università della Campania “Luigi Vanvitelli”;
- 2010-2014: *Sistemi Informativi per la Biotecnologie* (Information Systems for Biotechnology) for the master degree in Food and Industrial Biotechnology at Università della Campania “Luigi Vanvitelli”;
- 2009-2011: *Laboratorio di Matematica – modulo: Informatica* (Fundamental of Programming) for the bachelor degree in Mathematics at Università della Campania “Luigi Vanvitelli”;
- 2006-2007: *Algoritmi e Strutture Dati* (Algorithms and Data Structures) for the bachelor degree in Computer Engineering at Università della Campania “Luigi Vanvitelli”;
- 2006-2008: *Ingegneria del Software* (Software Engineering) for the master degree in Computer Engineering at Università della Campania “Luigi Vanvitelli”.

non-institutional courses

- July 2018: lecturer at University of Zaragoza for the short course *Model Driven Engineering*;
- February 2016: lecturer at University of Zaragoza for the short course *Bayesian Networks and their applications in dependability and vulnerability evaluation*;
- May 2015: lecturer in *Software for Mathematics and Physics Teaching* for the Tirocinio Formativo Abilitante (TFA) at Seconda Università di Napoli;
- November 2014: lecturer for the *Data Distribution in Distributed Simulation* module in the post-degree course inside the DISPLAY-FARM project (Italian PON funded project).
- May 2014: lecturer in *Software for Mathematics and Physics Teaching* for the Percorsi Abilitanti Speciali (PAS) at Seconda Università di Napoli;
- September 2013: lecturer at University of Zaragoza for the short course *Verification and Validation of Critical Systems*;
- May 2013: lecturer in *Software for Mathematics and Physics Teaching* for the Tirocinio

- Formativo Abilitante (TFA) at Seconda Università di Napoli
- March 2013: lecturer in *Modelling of Critical Infrastructure Protections* for the post-degree master in Security and Intelligence System (*Sintesys*) at the CeRICT - Italy;
- March 2013: lecturer in *CASE tools* for the post-degree master in Software Engineering for Embedded Systems (*IESWECANfarm*) at the CeRICT – Italy.
- March 2013: lecturer in *Model Driven Engineering* for the post-degree master in Software Engineering for Embedded Systems (*IESWECANfarm*) at the CeRICT – Italy.

Tutoring and doctoral didactic activity:

Tutor/co-tutor of several theses (50+) in both Computer Engineering and Mathematics at both Università della Campania “Luigi Vanvitelli” and Università “Federico II” di Napoli.

Co-tutor of the following Ph.D. theses at the Università “Federico II” di Napoli

- C. Papa, *Una Metodologia per la Modellazione Formale di Sistemi Critici Basata su Metodi e Tecniche di Model Driven Engineering*, Ph.D. in Computer Engineering, University of Naples “Federico II”, XXIII Ciclo;
- U. Gentile, *A Model-driven Approach for the Automatic Generation of System-Level Test Cases*, Ph.D. in Computer Engineering, University of Naples “Federico II”, XXVIII Ciclo.

Member of the Doctoral College of the PhD Program in Mathematics, Physics and Applications for Engineering (2018/2019).

Education:

- 2006: Ph.D. in Electronic Engineering at Università della Campania “Luigi Vanvitelli” (Italy). Dissertation: *A Model Engineering approach for Complex and Critical Computer-based Systems*
- 2002: master degree in Computer Engineering at Università “Federico II” di Napoli (Italy). Dissertation: *Petri Net based object models for the analysis of complex systems* (in italian)

Professional experience:

2002-2008: engineer in the field of validation and verification of railway signaling systems (AnsaldoSTS):

- software engineer: testing of critical software systems (unit, integration and system testing);
- systems engineer: verifying assets driverless metro systems for RAMS (RAMS planning, hazard analysis, RAMS analysis, safety case, ...);
- industrial researcher in the use of formal methods (Generalized Stochastic Petri Nets, Model Checking) for the formal verification of security and availability features of railway signaling systems;

During this period, Stefano Marrone participated to various national and international railway projects: Italian High Speed Lines – **ERTMS lev. 2** (Rome-Naples and Turin-Milan); Radio Block Centre, Italian interlocking systems; Command and Control System (remote controlled interlocking); ERTMS Board level 1 and level 2; **driverless metro systems** (Brescia, Rome, Milan, Thessaloniki).

Institutional activity:

- 2008-today: delegate at job placement and “University third mission” for the Dipartimento di Matematica e Fisica, Università della Campania “Luigi Vanvitelli”.

Editorial activity:

Conference Chair:

- Chair of the 1st Workshop on Safety & Security Assurance for Critical Infrastructures Protection (S4CIP16 – Madrid, Spain – May 25th 2016); in conjunction with the 7th International Conference on Ambient Systems, Networks and Technologies ANT 2016.
- Chair of the 2nd Workshop on Safety & Security Assurance for Critical Infrastructures Protection (S4CIP17 – Paris, France – April 29th 2017); in conjunction with the 2nd European Symposium on Security and Privacy (EuroS&P 2017).
- Chair of the 3rd Workshop on Safety & Security Assurance for Critical Infrastructures Protection (S4CIP18 – London, UK – April 27th 2018); in conjunction with the 3rd European Symposium on Security and Privacy (EuroS&P 2018).

Editorial Board:

- Journal of Computers (JCP) – Academy Publisher;
- RSRS-BOOK 2012 - Railway Safety, Reliability and Security: Technologies and Systems Engineering (IGI Global);
- Theory and Application of Multi-Formalism Modeling (IGI Global)

Technical Committee Member:

- ACM/SPEC International Conference on Performance Engineering 2014 (ICPE 14);
- ACM/SPEC International Conference on Performance Engineering 2019 (ICPE 19);
- International Conference on Algorithms and Architectures for Parallel Processing (ICA3PP) from 2013 to 2014;
- International Conference on Advances in System Simulation (SIMUL) from 2013 to 2014;
- International Conference on Performance, Safety and Robustness in Complex Systems and Applications 2014 (PESARO) from 2014 to 2016;
- Workshop on Research and Use of Multiformalism Modeling Methods (WRUMMM) in 2012 and 2014;
- European Conference on Modelling and Simulation (ECMS) for 2014 to 2016.
- European Simulation Conference (ESM) from 2008 to 2014;
- European Concurrent Engineering Conference (ECEC) from 2008 to 2014;
- Industrial Simulation Conference (ISC) from 2008 to 2014;
- IEEE International Conference on Autonomic and Trusted Computing (ATC) from 2013 to 2014;
- 10th IEEE International Conference on Ubiquitous Intelligence and Computing (UIC 13);
- International Conference on Consumer Electronics, Communications and Networks (CECNet 13);
- International Workshop on Non-functional Properties in Modeling: Analysis, Languages, Processes 2013 (NiM-ALP 13);
- International Workshop on Critical Computer Based Systems 2011 (CCBS 2011);
- International Conference on Information Assurance and Security 2008 (IAS 2008).

Organizing Committee:

- participation to organizing committee of 30th International Conference on Computer Safety, Reliability and Security (SAFECOMP 2011), Naples (Italy) September 2011

Journal External reviewer (last five years):

- *IEEE Computers*: IEEE Wireless Magazine, IEEE Software, IEEE Transaction on Mobile Computing;
- *Inderscience*: International Journal of Computational Complexity and Intelligent Algorithms (IJCCIA), International Journal of Simulation and Process Modelling (IJSPM), International Journal of Critical Computer-Based Systems (IJCCBS);
- *Oxford University Press*: The Computer journal;

- *Elsevier*: Control Engineering Practice, Reliability Engineering & System Safety (RESS), Chinese Journal of Aeronautics (CJA), International Journal of Electrical Power and Energy Systems, Computers & Electrical Engineering (CEE), International Journal of Critical Infrastructure Protection (IJCIP);
- *IOS Press*: International Journal of High Speed Networks;
- *Springer*: International Journal of Software Tools and Technology Transfer.

Scientific Publications:¹

- **(J)** Bernardi, S., Marrone, S., Merseguer, J., Nardone, R., Vittorini, V.; Towards a model-driven engineering approach for the assessment of non-functional properties using multi-formalism; *Software and Systems Modeling*, 16 February 2018, Pages 1-24; DOI: 10.1007/s10270-018-0663-8
- **(C)** Marrone, S.; Towards a unified definition of cyber and physical vulnerability in critical infrastructures; *Proceedings - 2nd IEEE European Symposium on Security and Privacy Workshops, Euro S&P Workshops 2017*; pp. 167-173; 2017
- **(C)** Nardone, R., Rodriguez, R.J., Marrone, S.; Formal security assessment of Modbus protocol; *11th International Conference for Internet Technology and Secured Transactions, ICITST 2016*; pp. 142-147; 2017;
- **(B)** Canonico, R., Marrone, S., Nardone, R., Vittorini, V.; A Framework to Evaluate 5G Networks for Smart and Fail-Safe Communications in ERTMS/ETCS; *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics) - 10598 LNCS*, pp. 34-50;
- **(J)** Gentile, U., Bernardi, S., Marrone, S., Merseguer, J., Vittorini, V.; A model driven approach for assessing survivability requirements of critical infrastructures; *Journal of High Speed Networks* 23(2), pp. 175-186; 2017; DOI: 10.3233/JHS-170564
- **(J)** Benerecetti, M., De Guglielmo, R., Gentile, U., Marrone, S., Mazzocca, N., Nardone, R., Peron, A., Velardi, L., Vittorini, V.; *Dynamic state machines for modelling railway control systems*; *Science of Computer Programming*; 2017; 10.1016/j.scico.2016.09.002
- **(J)** Annarita Drago, A., Marrone, S., Mazzocca, N., Nardone, R., Tedesco, A., Vittorini, V., *A model-driven approach for vulnerability evaluation of modern physical protection systems*; to appear in *Software and System Modeling*; 2016; 10.1007/s10270-016-0572-7
- **(B)** Flammini, F., Marrone, S., Mazzocca, N., Vittorini, V.; *Fuzzy decision fusion and multiformalism modelling in physical security monitoring*; *Studies in Computational Intelligence*; 2016; 10.1007/978-3-319-26450-9_4
- **(C)** Gentile, U., Marrone, S., De Paola, F., Nardone, R., Mazzocca, N., Giugni, M.; *Model-Based Water Quality Assurance in Ground and Surface Provisioning Systems*; *Proceedings - 2015 10th International Conference on P2P, Parallel, Grid, Cloud and Internet Computing, 3PGCIC 2015*; 2016; 10.1109/3PGCIC.2015.97
- **(C)** Rodríguez, R.J., Marrone, S.; *Model-based vulnerability assessment of self-adaptive protection systems*; *Studies in Computational Intelligence*; 2016; 10.1007/978-3-319-25017-5_41
- **(C)** Marrone, S., Gentile, U.; *Finding Resilient and Energy-saving Control Strategies in Smart Homes*; *Procedia Computer Science*; 2016; 10.1016/j.procs.2016.04.195
- **(J)** Gentile, U., Marrone, S., Mazzocca, N., Nardone, R.; *Cost-energy modelling and profiling of smart domestic grids*; *International Journal of Grid and Utility Computing*;

¹ J: journal, C: conference paper, B: book chapter.

Further details and updates at <https://www.scopus.com/authid/detail.uri?authorId=55866451000>

2016; 10.1504/IJGUC.2016.081012

- **(C)** Nardone, R., Gentile, U., Benerecetti, M., Peron, A., Vittorini, V., Marrone, S., Mazzocca, N.; *Modeling railway control systems in promela*; Communications in Computer and Information Science; 2016; 10.1007/978-3-319-29510-7_7
- **(J)** Marrone, S., Rodríguez, R.J., Nardone, R., Flammini, F., Vittorini, V.; *On synergies of cyber and physical security modelling in vulnerability assessment of railway systems*; Computers and Electrical Engineering; 2015; 10.1016/j.compeleceng.2015.07.011
- **(B)** Flammini, F., Marrone, S., Mazzocca, N., Nardone, R., Vittorini, V.; *Using Bayesian Networks to evaluate the trustworthiness of '2 out of 3' decision fusion mechanisms in multi-sensor applications*; IFAC-PapersOnLine; 2015; 10.1016/j.ifacol.2015.09.606
- **(C)** Marrone, S., Nardone, R.; *Automatic resource allocation for high availability cloud services*; Procedia Computer Science; 2015; 10.1016/j.procs.2015.05.176
- **(J)** Gribaudo, M., Iacono, M., Marrone, S.; *Exploiting Bayesian Networks for the analysis of combined Attack Trees*; Electronic Notes in Theoretical Computer Science; 2015; 10.1016/j.entcs.2014.12.014
- **(B)** Vittorini, V., Marrone, S., Mazzocca, N., Nardone, R., Drago, A.; *A model-driven process for physical protection system design and vulnerability evaluation*; Topics in Safety, Risk, Reliability and Quality; 2015; 10.1007/978-3-319-04426-2_8
- **(B)** Marrone, S., Mazzocca, N., Pragliola, C., Sforza, A., Sterle, C., Vittorini, V.; *The METRIP tool*; Topics in Safety, Risk, Reliability and Quality; 2015; 10.1007/978-3-319-04426-2_10
- **(C)** Amato, F., Cozzolino, G., D'Alessio, A., Marrone, S., Mazzocca, N., Mele, G., Nardone, R.; *Towards model-driven assessment of clinical processes*; Smart Innovation, Systems and Technologies; 2015; 10.1007/978-3-319-19830-9_11
- **(C)** Nardone, R., Gentile, U., Peron, A., Benerecetti, M., Vittorini, V., Marrone, S., De Guglielmo, R., Mazzocca, N., Velardi, L.; *Dynamic state machines for formalizing railway control system specifications*; Communications in Computer and Information Science; 2015; 10.1007/978-3-319-17581-2_7
- **(J)** Flammini, F., Marrone, S., Iacono, M., Mazzocca, N., Vittorini, V.; *A multiformalism modular approach to ertms/etcs failure modeling*; International Journal of Reliability, Quality and Safety Engineering; 2014; 10.1142/S0218539314500016
- **(C)** Gentile, U., Mazzocca, N., Nardone, R., Marrone, S.; *A cost-energy trade-off model in smart energy grids*; Proceedings - 2014 9th International Conference on P2P, Parallel, Grid, Cloud and Internet Computing, 3PGCIC 2014; 2014; 10.1109/3PGCIC.2014.83
- **(J)** Iacono, M., Marrone, S.; *Model-based availability evaluation of composed web services*; Journal of Telecommunications and Information Technology; 2014;
- **(C)** Gentile, U., Marrone, S., Mele, G., Nardone, R., Peron, A.; *Test specification patterns for automatic generation of test sequences*; Lecture Notes in Computer Science (including

subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); 2014; 10.1007/978-3-319-10702-8_12

- **(C)** Flammini, F., Gentile, U., Marrone, S., Nardone, R., Vittorini, V.; *A Petri Net pattern-oriented approach for the design of physical protection systems*; Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); 2014; 10.1007/978-3-319-10506-2_16
- **(J)** Marrone, S., Flammini, F., Mazzocca, N., Nardone, R., Vittorini, V.; *Towards Model-Driven V&V assessment of railway control systems*; International Journal on Software Tools for Technology Transfer; 2014; 10.1007/s10009-014-0320-7
- **(C)** Amalfitano, D., Amatucci, N., Fasolino, A.R., Gentile, U., Mele, G., Nardone, R., Vittorini, V., Marrone, S.; *Improving code coverage in android apps testing by exploiting patterns and automatic test case generation*; WISE 2014 - Proceedings of the 2014 ACM International Workshop on Long-Term Industrial Collaboration on Software Engineering, Co-located with ASE 2014; 2014; 10.1145/2647648.2656426
- **(C)** Barberio, G., Di Martino, B., Mazzocca, N., Velardi, L., Amato, A., De Guglielmo, R., Gentile, U., Marrone, S., Nardone, R., Peron, A., Vittorini, V.; *An interoperable testing environment for ERTMS/ETCS control systems*; Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); 2014; 10.1007/978-3-319-10557-4_18
- **(J)** Iacono, M., Marrone, S.; *Telemaco: A language oriented tool for graph-based models layout optimization*; Journal of Telecommunications and Information Technology; 2013;
- **(J)** D'Arienzo, M., Iacono, M., Marrone, S., Nardone, R.; *Petri net based evaluation of energy consumption in wireless sensor nodes*; Journal of High Speed Networks; 2013; 10.3233/JHS-130482
- **(C)** Drago, A., Marrone, S., Mazzocca, N., Tedesco, A., Vittorini, V.; *Model-driven estimation of distributed vulnerability in complex railway networks*; Proceedings - IEEE 10th International Conference on Ubiquitous Intelligence and Computing, UIC 2013 and IEEE 10th International Conference on Autonomic and Trusted Computing, ATC 2013; 2013; 10.1109/UIC-ATC.2013.78
- **(C)** Flammini, F., Marrone, S., Mazzocca, N., Pappalardo, A., Pragliola, C., Vittorini, V.; *Trustworthiness evaluation of multi-sensor situation recognition in transit surveillance scenarios*; Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); 2013; 10.1007/978-3-642-40588-4_31
- **(C)** Battista, E., Casola, V., Marrone, S., Mazzocca, N., Nardone, R., Vittorini, V.; *An integrated lifetime and network quality model of large WSNs*; Proceedings - M&N 2013: 2013 IEEE International Workshop on Measurements and Networking; 2013; 10.1109/IWMN.2013.6663791
- **(J)** Marrone, S., Nardone, R., Tedesco, A., D'Amore, P., Vittorini, V., Setola, R., De Cillis, F., Mazzocca, N.; *Vulnerability modeling and analysis for critical infrastructure protection applications*; International Journal of Critical Infrastructure Protection; 2013; 10.1016/j.ijcip.2013.10.001

- **(B)** Nardone, R., Marrone, S.; *A model-driven methodology to evaluate performability of metro systems*; Theory and Application of Multi-Formalism Modeling; 2013; 10.4018/978-1-4666-4659-9.ch012
- **(B)** Marrone, S., Mazzocca, N., Nardone, R., Vittorini, V.; *Combining heterogeneity, compositionality, and automatic generation in formal modelling*; Theory and Application of Multi-Formalism Modeling; 2013; 10.4018/978-1-4666-4659-9.ch002
- **(C)** Flammini, F., Marrone, S., Mazzocca, N., Vittorini, V.; *Petri net modelling of physical vulnerability*; Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); 2013; 10.1007/978-3-642-41476-3_11
- **(C)** D'Arienzo, M., Iacono, M., Marrone, S., Nardone, R.; *Estimation of the energy consumption of mobile sensors in wsn environmental monitoring applications*; Proceedings - 27th International Conference on Advanced Information Networking and Applications Workshops, WAINA 2013; 2013; 10.1109/WAINA.2013.33
- **(J)** Bernardi, S., Flammini, F., Marrone, S., Mazzocca, N., Merseguer, J., Nardone, R., Vittorini, V.; *Enabling the usage of UML in the verification of railway systems: The DAM-rail approach*; Reliability Engineering and System Safety; 2013; 10.1016/j.res.2013.06.032
- **(C)** Battista, E., Casola, V., Mazzocca, N., Nardone, R., Marrone, S.; *A compositional modelling approach for large Sensor Networks design*; Proceedings - 2013 8th International Conference on P2P, Parallel, Grid, Cloud and Internet Computing, 3PGCIC 2013; 2013; 10.1109/3PGCIC.2013.71
- **(C)** Barbierato, E., Iacono, M., Marrone, S.; *PerfBPEL: A graph-based approach for the performance analysis of BPEL SOA applications*; Proceedings of the 2012 6th International ICST Conference on Performance Evaluation Methodologies and Tools, VALUETOOLS 2012; 2012; 10.4108/icst.valuetools.2012.250340
- **(J)** Marrone, S., Mazzocca, N., Nardone, R., Presta, R., Romano, S.P., Vittorini, V.; *A SAN-based modeling approach to performance evaluation of an IMS-compliant conferencing framework*; Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); 2012; 10.1007/978-3-642-35179-2_13
- **(C)** Marrone, S., Nardone, R., Orazio, A., Petrone, I., Velardi, L.; *Improving verification process in driverless metro systems: The MBAT project*; Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); 2012; 10.1007/978-3-642-34032-1_23
- **(C)** Flammini, F., Marrone, S., Mazzocca, N., Nardone, R., Vittorini, V.; *Model-driven V&V processes for computer based control systems: A unifying perspective*; Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); 2012; 10.1007/978-3-642-34032-1_20
- **(C)** Bernardi, S., Flammini, F., Marrone, S., Merseguer, J., Papa, C., Vittorini, V.; *Model-driven availability evaluation of railway control systems*; Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in

Bioinformatics); 2011; 10.1007/978-3-642-24270-0_2

- (C) Barbierato, E., Gribaudo, M., Iacono, M., Marrone, S.; Performability modeling of exceptions-aware systems in multiformalism tools; Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); 2011; 10.1007/978-3-642-21713-5_19
- (C) Iacono, M., Romano, E., Marrone, S.; *Adaptive monitoring of marine disasters with intelligent mobile sensor networks*; EESMS 2010 - 2010 IEEE Workshop on Environmental, Energy, and Structural Monitoring Systems, Proceedings; 2010; 10.1109/EESMS.2010.5634179
- (C) Marrone, S., Papa, C., Vittorini, V.; *Multiformalism and transformation inheritance for dependability analysis of critical systems*; Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); 2010; 10.1007/978-3-642-16265-7_16
- (J) Flammini, F., Marrone, S., Mazzocca, N., Vittorini, V.; *A new modeling approach to the safety evaluation of N-modular redundant computer systems in presence of imperfect maintenance*; Reliability Engineering and System Safety; 2009; 10.1016/j.ress.2009.02.014
- (C) Franceschinis, G., Gribaudo, M., Iacono, M., Marrone, S., Moscato, F., Vittorini, V.; *Interfaces and binding in component based development of formal models*; VALUETOOLS 2009 - 4th International Conference on Performance Evaluation Methodologies and Tools; 2009; 10.4108/ICST.VALUETOOLS2009.7677
- (C) Donini, R., Marrone, S., Mazzocca, N., Orazio, A., Papa, D., Venticinque, S.; *Testing complex safety-critical systems in SOA context*; Proceedings - CISIS 2008: 2nd International Conference on Complex, Intelligent and Software Intensive Systems; 2008; 10.1109/CISIS.2008.78
- (C) Iacono, M., Marrone, S.; *A performance driven modelling approach for SOA based application*; ESM 2008 - 2008 European Simulation and Modelling Conference: Modelling and Simulation 2008; 2008;
- (C) Flammini, F., Marrone, S., Mazzocca, N., Vittorini, V.; *Evaluating the Hazardous Failure Rate of majority voting computer architectures by means of Bayesian Network models*; Proceedings of the European Safety and Reliability Conference 2007, ESREL 2007 - Risk, Reliability and Societal Safety; 2007;
- (C) Moscato, F., Flammini, F., Di Lorenzo, G., Vittorini, V., Marrone, S., Iacono, M.; *The software architecture of the OsMoSys Multisolution Framework*; VALUETOOLS 2007 - 2nd International ICST Conference on Performance Evaluation Methodologies and Tools; 2007;
- (C) Flammini, F., Marrone, S., Mazzocca, N., Vittorini, V.; *Modeling system reliability aspects of ERTMS/ETCS by fault trees and Bayesian networks*; Proceedings of the European Safety and Reliability Conference 2006, ESREL 2006 - Safety and Reliability for Managing Risk; 2006;
- (C) Iacono, M., Marrone, S., Mazzocca, N., Moscato, F., Vittorini, V.; *A model analysis of a distributed monitoring system using a multi-formalism approach*; Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture

Notes in Bioinformatics); 2006; 10.1007/11558958_59

- (C) Flammini, F., Mazzocca, N., Iacono, M., Marrone, S.; *Using repairable fault trees for the evaluation of design choices for critical repairable systems*; Proceedings of IEEE International Symposium on High Assurance Systems Engineering; 2005; 10.1109/HASE.2005.26
- (C) Franceschinis, G., Gribaudo, M., Iacono, M., Marrone, S., Mazzocca, N., Vittorini, V.; *Compositional modeling of complex systems: contact center scenarios in osmosys*; Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); 2004:
- (C) Franceschinis, G., Marrone, S., Mazzocca, N., Vittorini, V.; *SWN client-server composition operators in the OsMoSys framework*; In Proc. of 10th International Workshop on Petri Nets and Performance Models (PNPM), Chicago (USA) - September 2003, IEEE – ISBN: 0-7695-1976-8

Stefano Marrone

Dipartimento di Matematica e Fisica, Università della Campania “Luigi Vanvitelli”

viale Lincoln, 5 – 81100 Caserta, Italia

tel: +39 0823 27 5101

fax: +39 0823 27 4753

mob: +39 3402761871

email: stefano.marrone@unicampania.it