

Francesco Santini

Curriculum Vitae

My interests are oriented to Abstract Argumentation, Logic, Constraint (Logic) Programming, Concurrent/Coordination Models and Languages, Sentiment Analysis, Machine/Deep Learning, Distributed Ledgers.

Education

April 2009 Ph.D. in Computer Science and Engineering, IMT Institute of Advanced Studies,

ucca.

First Class Honours

2003 Master in Computer Science and Technologies, University of Pisa.

Specialisation in Networks

2001 Bachelor in Computer Science, University of Pisa.

Ph.D. Thesis

Title Soft constraints Tools for Quality Aspects: Languages, Frameworks and Aggregation

Schemes

Advisors Prof. Stefano Bistarelli. Internal board: Dr. Fabio Martinelli and Prof. Ugo

Montanari

Description The aim of thesis was to provide expressive means (e.g., languages and frameworks) in

order to model and solve preference-driven problems with the help of Soft Constraint Programming, benefiting from Artificial Intelligence techniques to tackle this kind

of optimization problems.

Experience

December Associate Professor, Department of Mathematics and Computer Sci-2019 - now Ence, University of Perugia, Italy.

December $% \left(Assistant\ Professor,\ \left(Tenured,\ "RTD-B"\right)\ Department\ of\ Mathematics$

2016 - AND COMPUTER SCIENCE, UNIVERSITY OF PERUGIA, Perugia, Italy.

November

2019

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- June 2015 Assistant Professor, (Non-tenured, "RTD-A") Department of Mathe-November Matics and Computer Science, University of Perugia, Perugia, Italy. 2016
- 2014 2015 Research Fellow, Institute of Informatics and Telematics, National Research Council (CNR), Pisa, Italy.
- 2012 2013 **ERCIM "Alain Bensoussan' Fellow**, EQUIPE PROJET CONTRAINTES, INRIA-ROCQUENCOURT, Paris, France.
- 2011 2012 **ERCIM "Alain Bensoussan" Fellow**, CENTRUM VOOR WISKUNDE EN INFOR-MATICA (CWI), Amsterdam, The Netherlands.
- 2010 2011 Research Fellow, DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE, UNIVERSITY OF PERUGIA, Perugia, Italy.
- 2009 2010 Research Fellow, Department of Science, University "G. d' Annunzio", Pescara, Italy.
- 2006 2009 **Ph.D Student**, IMT (INSTITUTE, MARKETS, TECHNOLOGIES) INSTITUTE OF ADVANCES STUDIES, Lucca, Italy.
- 2004 2006 Research fellow, Institute of Informatics and Telematics, National Research Council (CNR), Pisa, Italy.

Visiting Periods

- 2019 **August 2019**, ROYAL MELBOURNE INSTITUTE OF TECHNOLOGY, Melbourne, Australia.
- 2017 March 2017 April 2017, University of Melbourne and Royal Melbourne Institute of Technology, Melbourne, Australia.
- 2008 **December 2008 May 2009**, CORK CONSTRAINT COMPUTATION CENTRE (4C), Cork, Ireland.

Publications in Journals

- 2021 **Weighted Argumentation**, S. Bistarelli, F. Santini. Journal of Applied Logics IfCoLog Journal, College Publications.
- 2021 Kruskal with Embedded C-semirings to Solve MST Problems with Partiallyordered Costs, S. Bistarelli, F. Rossi, F. Santini. Information Processing Letters, Elsevier.
- 2020 **Soft Constraint Automata with Memory**, K. Dokter, F. Gadducci, B. Lion, F. Santini. Journal of Logical and Algebraic Methods in Programming.
- 2020 Summary Report of the First International Competition on Computational Models of Argumentation, S. Bistarelli, L. Kotthoff, F. Santini, Carlo Taticchi. Al Magazine.
- 2020 ConArgLib: An Argumentation Library with Support to Search Strategies and Parallel Search, S. Bistarelli, F. Rossi, F. Santini. Journal of Experimental & Theoretical Artificial Intelligence.
- 2020 **Abstract Argumentation and (Optimal) Stable Marriage Problems**, *S. Bistarelli*, *F. Santini*. *Argument & Computation*. *IOS Press*.

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- 2019 **End-to-end Voting with Non-permissioned and Permissioned Ledgers**, *S. Bistarelli*, *I. Mercanti*, *P. Santancini*, *F. Santini*. *Journal of Grid Computing*, *Springer*.
- 2018 A Novel Weighted Defence and Its Relaxation in Abstract Argumentation, S. Bistarelli, F. Rossi, F. Santini. International Journal of Approximate Reasoning, Elsevier.
- 2018 Not Only Size, but Also Shape Counts: Abstract Argumentation Solvers Are Benchmark-sensitive, S. Bistarelli, F. Rossi, F. Santini. Journal of Logic and Computation, Oxford Academic.
- 2017 Observational and Behavioural Equivalences for Soft Concurrent Constraint Programming, F. Gadducci, F. Santini, Luis F. Pino, Frank D. Valnecia. Journal of Logical and Algebraic Methods in Programming, Elsevier.
- 2016 Residuation for bipolar preferences in soft constraints, F. Gadducci, F. Santini, Information Processing Letters, vol. 118, Elsevier.
- 2015 A Comparative Test on the Enumeration of Extensions in Abstract Argumentation, S. Bistarelli, F. Rossi, F. Santini, Fundamenta Informaticae, IOS Press.
- 2015 Partially-Distributed Coordination with Reo and Constraint Automata, S-S.T.Q. Jongmans, F. Santini, F. Arbab, Service Oriented Computing and Applications, Springer.
- 2015 On Merging Two Trust-Networks in One with Bipolar Preferences, S. Bistarelli, F. Santini, Mathematical Structures in Computer Science, Cambridge University Press.
- 2014 Timed Soft Concurrent Constraint Programs: An Interleaved and a Parallel Approach, S. Bistarelli, M. Gabbrielli, M. C. Meo, F. Santini, Theory and Practice of Logic Programming.
- 2013 A Secure Non-monotonic Soft Concurrent Constraint Language, S. Bistarelli, F. Santini, Fundamamenta Informaticae 134(3-4): 261-285.
- 2013 Orchestrating Web Services using Reo: From Circuits and Behaviors to Automatically Generated Code, S-S.T.Q. Jongmans, F. Santini, M. Sargolzaei, F. Arbab, H. Afsarmanesh, Service Oriented Computing and Applications 8(4): 277-297, Springer.
- 2012 Coalitions of Arguments: An Approach with Constraint Programming, S. Bistarelli, F. Santini, Fundamenta Informaticae, 124(4): 383-401.
- 2012 A Semiring-Based Framework for the Deduction/Abduction Reasoning in Access Control with Weighted Credentials, S. Bistarelli, F. Martinelli, F. Santini, Computer & Mathematics with Applications, Elsevier.
- 2011 Evaluation of complex security scenarios using defense trees and economic indexes, S. Bistarelli, F. Fioravanti, P., Peretti, F. Santini, Journal of Experimental & Theoretical Artificial Intelligence.
- 2011 Local Arc Consistency for Non-Invertible Semirings, with an Application to Multi-Objective Optimization, S. Bistarelli, F. Gadducci, J. Larrosa, E. Rollon, F. Santini, Expert Systems with Applications, Elsevier.

- 2011 A Nonmonotonic Soft Concurrent Constraint Language to Model the Negotiation Process, S. Bistarelli, F. Santini, Fundamenta Informaticae 111(3): 257-279.
- 2010 Unicast and Multicast QoS Routing with Soft Constraint Logic Programming, S. Bistarelli, U. Montanari, F. Rossi, F. Santini, accepted in Transaction on Computational Language, ACM Trans. Comput. Log. 12(1): 5.
- 2010 Semiring-based Frameworks for Trust Propagation in Small-World Networks and Coalition Formation Criteria, S. Bistarelli, S. N. Foley, B. O'Sullivan, F. Santini, Security and Communication Networks (Special Issue), Wiley and Sons.
- 2010 Implementing and Testing a Formal Framework for Constraint-Based Routing over Scale-free Networks, S. Bistarelli, F. Santini, International Journal on Advances in Networks and Services, vol. 2, issn: 1942-2644.
- 2007 An Asymmetric Fingerprint Matching Algorithm for Java Card, S. Bistarelli, F. Santini, A. Vaccarelli, Pattern Analysis and Application Journal, vol. 9, Issue 4, ISSN: 1433-754, Spiringer.

Prefaces in Journals and Book Chapters

- 2019 Special issue of the Knowledge Representation and Reasoning Track, Symposium on Applied Computing (SAC) 2017, S. Bistarelli, F. Santini, P. Torroni: Fundamenta Incormaticae, IOS Press.
- 2020 Handbook of Formal Argumentation, book two, chapter 7 on "Weighted Argumentation", S. Bistarelli, F. Santini.

Publications in Workshop/Conferences

- 2021 **Residuation for Lexicographic Orders**, F. Gadducci, F. Santini. 17th Edition of the European Conference on Logics in Artificial Intelligence (JELIA), LNAI Springer.
- 2021 **Highlighting Poor Anonymity and Security Practice in the Blockchain of Bitcoin**, S. Bistarelli, F. Faloci, I. Mercanti, F. Santini. Track on Decentralized Applications with Blockchain, DLT and Crypto-Currencies, SAC 2021, ACM.
- 2020 Multi-dimensional Stable Matching Problems in Abstract Argumentation, F. Santini: The 14th International Conference on Scalable Uncertainty Management (SUM), LNAI, Springer.
- 2019 Local Expansion Invariant Operators in Argumentation Semantics, S. Bistarelli, F. Santini, C. Taticchi: Dynamics, Uncertainty and Reasoning, The Second Chinese Conference on Logic and Argumentation.
- 2019 A Tool For Ranking Arguments Through Voting-Games Power Indexes, S. Bistarelli, F. Faloci, F. Santini, C. Taticchi: Italian Conference on Computational Logic (CILC), CEUR.
- 2019 CapBAC in Hyperledger Sawtooth, S. Bistarelli, C. Pannacci, F. Santini: International Conference on Distributed Applications and Interoperable Systems (DAIS), LNAI, Springer. SPEAKER.

- 2019 Well-foundedness in Weighted Argumentation Frameworks, S. Bistarelli, F. Santini: Logics in Artificial Intelligence 16th European Conference (JELIA), LNAI, Springer. SPEAKER.
- 2018 Some Thoughts On Well-foundedness in Weighted Abstract Argumentation, S. Bistarelli, F. Santini: International Conference on Principles of Knowledge Representation and Reasoning, AAAI. SPEAKER.
- 2018 Probabilistic Argumentation Frameworks with MetaProbLog and ConArg, S. Bistarelli, T. Mantadelis, F. Santini, C. Taticchi: International Conference on Tools for Artificial Intelligence (ICTAI) 2018, IEEE.
- 2018 A Suite of Tools for the Forensic Analysis of Bitcoin Transactions: Preliminary Report, S. Bistarelli, I. Mercanti, F. Santini: International Workshop On Future Perspective Of Decentralized Applications (at EUROPAR), LNCS.
- 2018 **Studying Dynamics in Argumentation with Rob**, S. Bistarelli, F. Santini, C. Taticchi: 7th International Conference on Computational Models of Argument. COMMA 2018. IOS.
- 2018 Are My Arguments Trustworthy? Abstract Argumentation with Subjective Logic, F. Santini, A. Jøsang, M. S. Pini: International Conference on Information Fusion, IEEE.
- 2018 (Short Paper) An Analysis of Non-standard Transactions, S. Bistarelli, I. Mercanti, F. Santini: Cryptovalley Blockchain Conference, IEEE.
- 2018 Containerisation and Dynamic Frameworks in ICCMA'19., S. Bistarelli, L. Kotthoff, F. Santini, C. Taticchi: International Workshop on Systems and Algorithms for Formal Argumentation (SAFA 2018), CEUR.
- 2018 **Soft Constraint Automata with Memory**, K. Dokter, F.. Gadducci, F. Santini: It's All About Coordination (Arbab Festschrift), Springer, LNCS.
- 2018 Visualising Bitcoin Flows of Ransomware: WannaCry One Week Later, S. Bistarelli, M. Parroccini, F. Santini: Second Italian Conference on Cybersecurity (ItaSEC), CEUR. SPEAKER.
- 2018 Looking for Invariant Operators Preserving Argumentation Semantics, S. Bistarelli, F. Santini, C. Taticchi: The 31st International FLAIRS Conference FLAIRS 2018, AAAI Press.
- 2018 Abstract Argumentation Frameworks to Promote Fairness and Rationality in Multi-experts Multi-criteria Decision making., S. Bistarelli, M. Ceberio, J. A. Henderson, F. Santini: Studies in Systems, Decision and Control, Springer.
- 2017 Properties and Implementation of a Two-step Ranking-based Semantics: On Revising NaE and SC., F. Santini: International Conference on Tools with Artificial Intelligence (ICTAI), IEEE. SPEAKER.
- 2017 A ConArg-based Library for Abstract Argumentation., S. Bistarelli, F. Rossi, F. Santini: International Conference on Tools with Artificial Intelligence (ICTAI), IEEE. SPEAKER.
- 2017 **Go with the -Bitcoin- Flow, with Visual Analytics.**, S. Bistarelli, F. Santini: Conference on Availability, Reliability and Security (ARES), ACM. SPEAKER.

- 2017 A Hasse Diagram for Weighted Sceptical Semantics with a Unique-status Grounded Semantics, S. Bistarelli, F. Santini: 14th International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR), LNCS, Springer.
- 2017 A Quantitative Partial Model-Checking Function and Its Optimisation, S. Bistarelli, F. Martinelli, I. Matteucci, F. Santini: International Conferences on Logic for Programming, Artificial Intelligence and Reasoning (LPAR), LNCS, Springer. SPEAKER.
- 2017 **An End-to-end Voting-system Based on Bitcoin**, S. Bistarelli, M. Mantilacci, P. Santancini, F. Santini: Symposium on Applied Computing (Trust, Recommendations, Evidence and other Collaboration Know-how Track), SAC, ACM.
- 2016 **Decomposing Global Quantitative Properties into Local Ones**, *I. Matteucci, F. Santini: Quantitative Aspects of Security, DPM/QASA@ESORICS 2016, LNCS, Springer.*
- 2016 A Relaxation of Internal Conflict and Defence in Weighted Argumentation Frameworks, S. Bistarelli, F. Rossi, F. Santini: Logics in Artificial Intelligence 15th European Conference (JELIA), LNAI, Springer. SPEAKER.
- 2016 Graded Justification of Arguments via Internal and External Endogenous Features, F. Santini: International Conference on Scalable Uncertainty Management (SUM 2016), LNCS. SPEAKER.
- 2016 ConArg: A Tool for Classical and Weighted Argumentation, S. Bistarelli, F. Rossi, F. Santini: 6th International Conference on Computational Models of Argument. COMMA 2016, IOS.
- 2016 A Collective Defence Against Grouped Attacks for Weighted Abstract Argumentation Frameworks, S. Bistarelli, F. Rossi, F. Santini: The 29th International FLAIRS Conference FLAIRS 2016, AAAI Press. SPEAKER.
- 2016 Robustness in Abstract Argumentation Frameworks, S. Bistarelli, F. Faloci, F. Santini, C. Taticchi: The 29th International FLAIRS Conference FLAIRS 2016, AAAI Press. SPEAKER.
- 2016 From Arguments and Reviewers to their Simulation: Reproducing a Case-Study, S. Gabbriellini, F. Santini: International Conference on Agents and Artificial Intelligence, ICAART 2016. Scitepress. SPEAKER.
- 2016 From Reviews to Arguments and from Arguments Back to Reviewers' Behaviour, S. Gabbriellini, F. Santini: International Conference on Agents and Artificial Intelligence, ICAART 2016. Revised Selected Papers, LNCS, Springer. SPEAKER.
- 2016 Automated Adaptation via Quantitative Partial Model Checking, S. Bistarelli, F. Martinelli, I. Matteucci, F. Santini: Symposium on Applied Computing (Coordination Models, Languages and Applications Track), SAC 2016, ACM.
- 2016 A Multi-Criteria Ranking of Security Countermeasures, A. Bondavalli, A. Ceccarelli, F. Di Giandomenico, I. Matteucci, N. Nostro, F. Santini: Symposium on Applied Computing (Dependable and Adaptive Distributed Systems Track), SAC 2016, ACM.

- 2015 There Are Two Sides to Every Question Controller vs Attacker -, F. Martinelli, I. Matteucci, F. Santini: Programming Languages with Applications to Biology and Security. Colloquium in Honor of Pierpaolo Degano on the Occasion of His 65th Birthday, LNCS.
- 2015 A Micro Study on the Evolution of Arguments in Amazon.com's Reviews, S. Gabbriellini, F. Santini: Principles and Practice of Multi-Agent Systems (PRIMA 2015), LNCS/LNAI. SPEAKER.
- 2015 Quantitative Analysis of Network Security with Abstract Argumentation, F. Santini, A. Yautsiukhin: QASA 2015, 4th International Workshop on Quantitative Aspects of Security Assurance, LNCS.
- 2015 **Towards Visualising Security with Arguments**, S. Bistarelli, F. Rossi, F. Santini, C. Taticchi: Convegno Italiano Logica Computazionale, CILC 2015. EPTCS.
- 2015 **Network Security Supported by Arguments**, F. Martinelli, F. Santini, A. Yautsiukhin: Conference on Privacy Security and Trust, PST 2015. IEEE. SPEAKER.
- 2015 A Labelled Semantics for Soft Concurrent Constraint Programming, F. Gadducci, F. Santini, Luis F. Pino, Frank D. Valencia: 17th IFIP International Conference on Coordination Models and Languages (COORDINATION). LNCS. SPEAKER.
- 2015 **Defeasible Logic Programming in Satisfiability Modulo CHR**, F. Santini: 14th Conference of the Italian Association for Artificial Intelligence. LNCS/LNAI. SPEAKER.
- 2015 **Semiring-based Specification Approaches for Quantitative Security**, F. Martinelli, I. Matteucci, F. Santini: 13th International Workshop on Quantitative Aspects of Programming Languages and Systems 2015, EPTCS.
- 2014 **Debating Security or Securing a Debate?**, F. Martinelli, F. Santini: International Symposium on Foundations & Practice of Security, FPS 2014, LNCS. SPEAKER.
- 2014 Efficient Solution for Credulous/sceptical Acceptance in Lower-order Dung's Semantics, S. Bistarelli, F. Rossi, F. Santini: International Conference on Tools with Artificial Intelligence, ICTAI 2014, IEEE. SPEAKER.
- 2014 A First Comparison of Abstract Argumentation Reasoning-Tools, S. Bistarelli, F. Rossi, F. Santini: European Conference on Artificial Intelligence, ECAI 2014, IOS. SPEAKER.
- 2014 Benchmarking Hard Problems in Random Abstract AFs: The Stable Semantics, S. Bistarelli, F. Rossi, F. Santini: Computational Models of Arguments, COMMA 2014, IOS. SPEAKER.
- 2014 Enumerating Extensions on Random Abstract-AFs with ArgTools, Aspartix, ConArg2, and Dung-O-Matics, S. Bistarelli, F. Rossi, F. Santini: Computational Logic in Multi-Agent Systems, CLIMA 2014, LNCS. SPEAKER.
- 2014 An Improved Role-based Access to Android Applications with JCHR, S. Bistarelli, G. Costantino, F. Martinelli, F. Santini: International Workshop on Security of Mobile Applications, IWSMA 2014. SPEAKER.
- 2014 Two Trust Networks in One: Using Bipolar Structures to Fuse Trust and Distrust, S. Bistarelli, F. Santini: Conference on Privacy Security and Trust, PST 2014, IEEE. SPEAKER.

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- 2014 Partially Distributed Coordination with Reo, Sung-Shik T. Q. Jongmans, Francesco Santini, Farhad Arbab: International Conference on Parallel, Distributed, and Network-based Processing (PDP), Special Session on Formal Approaches to Parallel and Distributed Systems (4PAD).
- 2013 Combining Recommender and Reputation Systems mto Produce Better Online Advice, A. Jøsang, G. Guo, M. S. Pini, F. Santini, Y. Xu: MDAI 2013, Springer.
- 2013 A Tool for Behaviour-based Discovery of Approximately Matching Web Services, M. Sargolzaei, F. Santini, F, Arbab, H. Afsarmanesh: SEFM 2013, 152-166, Springer. SPEAKER.
- 2013 Validating Configurations of Reo circuits in an e-Banking Scenario, M. H. ter Beek, F. Gadducci, F. Santini: International Symposium on Architecting Critical Systems (ISARCS), ACM, 2013. SPEAKER.
- 2013 Solving Subgraph Epimorphism Problems using CLP and SAT, S. Gay, F. Fages, F. Santini, S. Soliman: WCB, ninth Workshop on Constraint Based Methods for Bioinformatics, colocated with CP 2013.
- 2012 Automatic Code Generation for the Orchestration of Web Services with Reo, S.-S. T. Q. Jongmans, F. Santini, M. Sargolzaei, F. Arbab, H. Afsarmanesh: European Conference on Service Oriented and Cloud Computing, ESOCC 2012, Springer, vol 7592.
- 2012 **Preference and Similarity-based Behavioral Discovery of Services**, F. Arbab, F. Santini. 9th International Workshop on Web Services and Formal Methods (WS-FM) 2012, 118-133, Springer. SPEAKER.
- 2012 Modelling and Simulation of Selected Operational IT Risks in the Banking Sector, C. Brandt, F. Santini, N. Kokash, F. Arbab: 26th European Simulation and Modelling Conference (ESM 2012).
- 2012 Towards a Similarity-based Web Service Discovery through Soft Constraint Satisfaction Problems, F. Arbab, S. Bistarelli, D. Pirolandi, F. Santini. 2nd International Workshop on Semantic Search over the Web (SSW12), ACM. SPEAKER.
- 2012 ConArg: Argumentation with Constraints, S. Bistarelli, F. Santini: First Conference on Agreement Technologies, AT 2012, 197-198. SPEAKER.
- 2012 Securely Accessing Shared Resources with Concurrent Constraint Programming, S. Bistarelli, F. Santini: Software Engineering and Formal Methods (SEFM 2012), Springer, vol 7594. SPEAKER.
- 2012 Solving Fuzzy Distributed CSPs: An approach with Naming Games, S. Bistarelli, G. Gosti, F. Santini, Workshop on Declarative Agent Languages and Technologies, DALT 2012, 116-135, LNAI Springer. SPEAKER.
- 2012 A Secure Coordination of Agents with Nonmonotonic Soft Concurrent Constraint Programming, S.Bistarelli, P. Campli, F. Santini, SAC 2012, Track CM Coordination Models, Languages and Applications, ACM, isbn 978-1-4503-0857-1. SPEAKER.

- 2012 Semiring-based constraint models and frameworks for security-related scenarios, S. Bistarelli, F. Santini, 7th International Conference on Risks and Security of Internet and Systems (CRiSIS), IEEE. SPEAKER.
- 2012 Solving and Testing Argumentation Frameworks with a Constraint-based Tool: ConArg, S. Bistarelli, F. Santini, First International Workshop on the Theory and Applications of Formal Argumentation (TAFA), LNAI. SPEAKER.
- 2011 Finding Partitions of Arguments with Dung's Properties via SCSPs, S. Bistarelli, P. Campli, F. Santini, SAC 2011, Track CSP Constraint Solving and Programming, ACM. SPEAKER.
- 2011 **Solving Fuzzy DCSPs with Naming Games**, S. Bistarelli, G. Gosti, F. Santini, Annual ERCIM Workshop on Constraint Solving and Constraint Logic Programming, CSCLP 2011.
- 2011 ConArg: A Constraint-based Computational Framework for Argumentation Systems, S. Bistarelli, F. Santini, International Conference on tools for Artificial Intelligence, ICTAI 2011, IEEE. SPEAKER.
- 2011 **Solving Fuzzy DCSPs with Naming Games**, S. Bistarelli, G. Gosti, F. Santini, International Conference on tools for Artificial Intelligence, ICTAI 2011, IEEE.
- 2011 **Negotiation on mobile devices using Weighted RTML Credentials**, *S. Bistarelli, F. Martinelli, F. Roperti, F. Santini, to appear in LNCS , ItAIS 2011*.
- 2010 A Common Computational Framework for Semiring-based Argumentation Systems, S. Bistarelli, F. Santini, European Conference on Artificial Intelligence, ECAI 2010. SPEAKER.
- 2010 **Deduction and Abduction with Soft Constraints**, S. Bistarelli, F. Martinelli, F. Santini, 5th Multidisciplinary Workshop on Advances in Preference. SPEAKER.
- 2010 Computing Coalition of Arguments with CSPs, S. Bistarelli, P. Campli, F. Santini, Italian Conference on Theoretical Computer Science (ICTCS) 2010. SPEAKER.
- 2010 A Formal Framework for Trust Policy Negotiation in Autonomic Systems: Abduction with Soft Constraints, S. Bistarelli, P. Campli, F. Santini, S. Bistarelli, F. Martinelli, F. Santini, Autonomous and Trusted Computing (ATC2010), Springer LNCS. SPEAKER.
- 2010 Solving Weighted Argumentation Frameworks with Soft Constraints, S. Bistarelli, D. Pirolandi, F. Santini CILC 2010 Italian Conference on Computational Logic. SPEAKER.
- 2010 Solving Weighted Argumentation Frameworks with Soft Constraints, S. Bistarelli, D. Pirolandi, F. Santini, Recent Advances in Constraints 2009, Revised Selected Papers. Springer LNCS. SPEAKER.
- 2010 Extending Soft Arc Consistency to Non-Invertible Semirings, S. Bistarelli, F. Gadducci, E. Rollon and F. Santini, 9th Mexican International Conference on Artificial Intelligence, MICAI-2010, to appear in LNAI Springer.
- 2010 Argumentation-based Interactions among Agents: Solving Weighted and Bipolar Frameworks with Soft CSPs, S. Bistarelli, D. Pirolandi, F. Santini, SofT'10 10th Workshop on Preferences and Soft Constraints. SPEAKER.

- 2009 C-semirings for Minimum Spanning Tree Problems, S. Bistarelli, F. Santini, Recent Trends in Algebraic Development Techniques, WADT'08, LNCS vol. 5486, pages 56-70, ISBN 978-3-642- 03428-2. SPEAKER.
- 2009 **Soft Constraints for Dependable Service-Oriented Architectures**, *S. Bistarelli*, *F. Santini*, *Architecting Dependable Systems VI*, *LNCS vol. 5835*, pages 76-97, *ISBN:* 978-3-642-10247-9. 2009.
- 2009 **Soft Constraints for Quality Aspects in Service Oriented Architectures**, *S. Bistarelli*, *F. Santini*, *YR-SOC 2009*, *EPTCS 2: 51-65. SPEAKER*.
- 2009 Constraint-based Languages to Model the Blood Coagulation Cascade, S. Bistarelli, M. Bottalico, F. Santini, Logic-based approaches in Bioinformatics.
- 2009 Generalizing Soft Arc Consistency Algorithms through an LCD-based Semiring Transformation, S. Bistarelli, F. Gadducci, E. Rollon and F. Santini, 24-esimo Convegno Italiano di Logica Computazionale. CILC.
- 2008 **Propagating Multitrust within Trust Networks**, S. Bistarelli, F. Santini, Track on "Trust, Recommendations, Evidence and other Collaboration Know-how", SAC 2008, ACM. SPEAKER.
- 2008 From Marriages to Coalitions: A Soft CSP Approach, S. Bistarelli, S. N. Foley, B. O'Sullivan, F. Santini, Recent Advances in Constraints 2008, Revised Selected Papers. Lecture Notes in Computer Science 5655 Springer 2009, pages 1-15. SPEAKER.
- 2008 Weighted Datalog and Levels of Trust, S. Bistarelli, F. Martinelli, F. Santini, Advances in Policy Enforcement (APE 2008) @ ARES 2008, IEEE. SPEAKER.
- 2008 **SCLP for Trust Propagation in Small-World Networks**, *S. Bistarelli, F. Santini,* "Recent Advances in Constraints", LNAI vol. 5129, Springer. SPEAKER.
- 2008 **Timed Soft Concurrent Constraint Programs**, S. Bistarelli, M. Gabbrielli, M. C. Meo, F. Santini, COORDINATION 2008, vol. 5052, Springer. SPEAKER.
- 2008 A Semantic Foundation for Trust Management Languages with Weights: An Application to the RT Family, S. Bistarelli, F. Martinelli, F. Santini, Autonomic and Trusted Computing (ATC-08), volume 5060, Springer. SPEAKER.
- 2008 Managing Quality of Service with Soft Constraints, F. Santini, Doctoral Consortium at AAAI-08, AAAI press, isbn: 978-1-57735-368-3. SPEAKER.
- 2008 A Nonmonotonic Soft Concurrent Constraint Language for SLA Negotiation, S. Bistarelli, F. Santini, Views on Designing Complex Architectures (VODCA'08), ENTCS. SPEAKER.
- 2008 **Managing Quality of Service with Soft Constraints**, F. Santini, ICLP 2008, vol. 5366, LNCS Springer. SPEAKER.
- 2007 Modelling Multicast QoS routing by Using Best-Tree Search in AND-OR Graphs and Soft Constraint Logic Programming, S. Bistarelli, U. Montanari, F. Rossi, F. Santini, ENTCS volume 190 issue 3, pp 111-127, Quantitative Aspects of Programming Languages, QAPL 2007. SPEAKER.

2006 An Asymmetric Fingerprint Matching Algorithm for Java Card, S. Bistarelli, F. Santini, A. Vaccarelli, Audio- and Video-Based Biometric Person Authentication, AVBPA 2005, LNCS vol. 3546, Springer. SPEAKER.

Fund Raising and third mission

- 2020 Al evangelization c/o Micra Software & Services S.r.l., Machine and Deep learning, 12 hours.
- 2019 Founding member and CTO of Manent.Al startup company, spinoff of the University of Perugia, 80K euro of initial raised investement (hosted in Digital-hub accelerator, Pisa, Italy, www.manent.ai).
- 2017 27K euro from "Fondazione Cassa Risparmi Perugia" and "Banca' Italia". Project REMIX on discovering tumblers services in the Bitcoin block-chain.
- 2016 Microsoft Azure Research Award on Data Analytics: 5K euro.
- 2016 9K euro from Banca d'Italia. Project BITCOIN on visualising the Bitcoin block-chain.

Project reviewing

- 2020 Advanced Robotics and enabling digital TEchnologies & Systems 4.0 (Artes), reviewing panel member, Bando Artes 4.0 N3 2019.
- 2020 Advanced Robotics and enabling digital TEchnologies & Systems 4.0 (Artes), reviewing panel member, Bando Artes 4.0 N1 2019.

Groups and Support

- 2021-now Member of CINI Italian High Performance Computing Lab (node of Perugia).
- 2018—now Member of CINI AIIS, Artificial Intelligence and Intelligence Systems, Knowledge Representation and Automated Reasoning (KRAR) Lab at http://KRARLab.dmi.unipg.it.
- 2018-now Member of the Italian Association for Machine Learning (IAML).
- 2018—now Member of Argumentation in Artificial Intelligence Working Group AlxIA subgroup (https://sites.google.com/a/aixia.it/argomentazione/members).
- 2017–now Member of the European Cyber Security Organization (ECSO), WG2 on "Market deployment".
- 2016-2020 MSCA-RISE "GEO-SAFE" (691161), Geospatial based Environment for Optimisation Systems Addressing Fire Emergencies.
- 2016—now Member of CINI Italian Cyber Security National Lab (node of Perugia http://www.dmi.unipg.it/cybersecuritylab/index.html).
 - 2016 Project Viscolla ("Visualization of co-autorship"), funded by Fondazione Cassa Risparmi di Perugia.
 - 2015 GNCS project: "Efficient Methods for Argumentation-based Decision Support (EMADS)".
- 2014-2015 Member of MIUR-PRIN 2010XSEMLC: "Security Horizons".

- 2014-2016 Member of COST Action IC1205: Computational Social Choice, WG3: Information Merging.
- 2012-2014 European Network for Social Intelligence (SINTELNET), WG5: Social Coordination.
- 2009-2012 Member of COST Action IC0602: Algorithmic Decision Theory, WG3: Preference in Reasoning and Decision.
- 2009-2012 Member of COST Action IC0801: Agreement Technologies, WG4: Argumentation & Negotiation, and WG5: Trust.
 - 2010 Member of MIUR-PRIN 2010-FP79LR project: "Logical Methods of Information Management".
 - 2008 Member of MIUR PRIN 2008-9M932N: "Innovative and multi-disciplinary approaches for constraint and preference reasoning".
 - 2005 Member of MIUR-PRIN 2005-015491, title: "Multidisciplinary Novel Approaches for Reasoning with constraints and preferences".

Services for the scientific community

- 2024 PC-member of IJCAI 24
- 2023 PC-member of IJCAI 23
- 2022 PC-member of IJCAI-ECAI 22
- 2022 Program Co-chair of Knowledge Representation and Reasoning track, Symposium on Applied Computing (SAC 2022).
- 20122 PC-member of International Conference on Autonomous Agents and Multiagent Sytems (AAMAS 2022).
- 2021 PC-member of International Workshop on Emerging Technologies for Authorization and Authentication (ETAA 2021).
- 2021 PC-member of tth Workshop on Advances In Argumentation In Artificial Intelligence (Al^3) .
- 2021 PC-member of IEEE International Conference on Tools with Artificial Intelligence (ICTAI 2021).
- 2021 PC-member of International Workshop on Safety, securiTy, and pRivacy In automotiVe systEms (STRIVE 2021).
- 2021 Program Co-chair of Knowledge Representation and Reasoning track, Symposium on Applied Computing (SAC 2021).
- 2021 PC-member of International Joint Conference on Artificial Intelligence (IJCAI 2021).
- 2021 PC-member of International Conference on Agents and Artificial Intelligence (ICAART 2021).
- 2020 PC-member of International Conference on Principles and Practice of Multi-Agent Systems (PRIMA 2020).
- 2020 PC-member of International Workshop on "Experimental Evaluation of Algorithms for solving problems with combinatorial explosion" (RCRA 2020).
- 2020 PC-member of IEEE International Conference on Tools with Artificial Intelligence (ICTAI 2020).

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- 2020 PC-member of 4th Workshop on Advances In Argumentation In Artificial Intelligence (Al^3) .
- 2020 PC-member of International Workshop on Emerging Technologies for Authorization and Authentication (ETAA 2020).
- 2020 Demo Program-chair of International Conference on Computational Models of Argument (COMMA 2020).
- 2020 PC-member of International Conference on Computational Models of Argument (COMMA 2020).
- 2020 PC-member of International Workshop on Safety, securiTy, and pRivacy In automotiVe systEms (STRIVE 2020).
- 2020 PC-member of International Joint Conference on Artificial Intelligence (IJCAI 2020).
- 2020 PC-member of International Conference on Agents and Artificial Intelligence (ICAART 2020).
- 2020 Program Co-chair of Knowledge Representation and Reasoning track, Symposium on Applied Computing (SAC 2020).
- 2019 PC-member of International Workshop on "Experimental Evaluation of Algorithms for solving problems with combinatorial explosion" (RCRA 2019).
- 2019 PC-member of International Conference on Principles and Practice of Multi-Agent Systems (PRIMA 2019).
- 2019 PC-member of International Workshop on Emerging Technologies for Authorization and Authentication (ETAA 2019).
- 2019 PC-member of IEEE International Conference on Tools with Artificial Intelligence (ICTAI 2019).
- 2019 PC-member of International Workshop on Safety, securiTy, and pRivacy In automotiVe systEms (STRIVE 2019).
- 2019 Program Chair of the 3rd Workshop on Advances In Argumentation in Artificial Intelligence (Al³).
- 2019 PC-member of International Conference on Formal Aspects of Component Software (FACS 2019).
- 2019 PC-member of International Conference on Autonomous Agents and Multiagent Sytems (AAMAS 2019).
- 2019 PC-member of International Conference on Agents and Artificial Intelligence (ICAART 2019).
- 2019 Program Co-chair of Knowledge Representation and Reasoning track, Symposium on Applied Computing (SAC 2019).
- 2018-now Review Editor in Non-Financial Blockchain journal.
 - 2018 PC-member of 2nd Workshop on Advances In Argumentation In Artificial Intelligence (Al^3) .
 - 2018 PC-member of International Workshop on Emerging Technologies for Authorization and Authentication (ETAA 2018).

- 2018 PC-member of International Workshop on Safety, securiTy, and pRivacy In automotiVe systEms (STRIVE 2018).
- 2018 PC-member of International Conference on Formal Aspects of Component Software (FACS 2018).
- 2018 PC-member of International Workshop on "Experimental Evaluation of Algorithms for solving problems with combinatorial explosion" (RCRA 2018).
- 2018 PC-member of Workshop on Systems and Algorithms for Formal Argumentation (SAFA 2018).
- 2018 PC-member of IEEE International Conference on Tools with Artificial Intelligence (ICTAI 2018).
- 2018 PC-member of International Conference on Computational Models of Argument (COMMA 2018).
- 2018 PC-member of International Conference on Autonomous Agents and Multiagent Sytems (AAMAS 2018).
- 2018 PC-member of AAAI Conference on Artificial Intelligence (AAAI 2018).
- 2018 PC-member of International Conference on Agents and Artificial Intelligence (ICAART 2018).
- 2018 Program Co-chair of Knowledge Representation and Reasoning track, Symposium on Applied Computing (SAC 2018).
- 2017 PC-member of International Workshop on "Experimental Evaluation of Algorithms for solving problems with combinatorial explosion" (RCRA 2017).
- 2017 Editor of Fundamenta Informaticae Special Issue (Distinguished Collection) on Knowledge Representation and Reasoning Track @SAC 2017.
- 2017 PC-member of International Joint Conference on Artificial Intelligence (IJCAI 2017).
- 2017 PC-member of 1st Workshop on Advances In Argumentation In Artificial Intelligence (AI³).
- 2017 PC-member of International Conference on Principles and Practice of Multi-Agent Systems (PRIMA 2017).
- 2017 PC-member of AAAI Conference on Artificial Intelligence (AAAI 2017).
- 2017 PC-member of International Conference on Agents and Artificial Intelligence (ICAART 2017).
- 2017 PC-member of International Conference on Formal Aspects of Component Software (FACS 2017).
- 2017 Program Co-chair of Knowledge Representation and Reasoning track, Symposium on Applied Computing (SAC 2017).
- 2016 PC-member of International Conference on Formal Aspects of Component Software (FACS 2016).
- 2016 PC-member of International Joint Conference on Artificial Intelligence (IJCAI 2016).
- 2016 PC-member of International Conference on Computational Models of Argument (COMMA 2016).

- 2016 PC-member of International Conference on Agents and Artificial Intelligence (ICAART 2016).
- 2015 PC-member of International Conference on Principles and Practice of Multi-Agent Systems (PRIMA 2015).
- 2015 PC-member of International Workshop on "Experimental Evaluation of Algorithms for solving problems with combinatorial explosion" (RCRA 2015).
- 2015 PC-member of International Joint Conference on Artificial Intelligence (IJCAI 2015).
- 2015 PC-member of IEEE Trust Security and Privacy in Computing and Communications TrustCom (Security Track).
- 2014 PC-member of Italian Conference on Theoretical Computer Science (ICTCS 2014).
- 2013 PC-member of International Joint Conference on Artificial Intelligence (IJCAI 2013).
- 2013 PC-member of the Symposium on Applied Computing (SAC), track on "Constraint Solving and Programming and Knowledge Representation and Reasoning".
- 2012 PC-member of the Symposium on Applied Computing (SAC), track on "Constraint Solving and Programming and Knowledge Representation and Reasoning".
- 2010 Program Chair of SofT 2011, 11th Workshop on Preferences and Soft Constraints (co-located with CP2011).
- 2011 PC-member of the Symposium on Applied Computing (SAC), track on "Constraint Solving and Programming and Knowledge Representation and Reasoning".
- 2010 PC-member of the Symposium on Applied Computing (SAC), track on "Constraint Solving and Programming and Knowledge Representation and Reasoning".

2008–present I have been involved in the review process of the following conferences and workshops CP, IJCAI, AAAI, ECAI, ICLP, COORDINATION, MFCS, SEFM, ICTAI, TGC, WS-FM, ESOCC, SAC (track on Service Oriented Architectures and Programming), PPDP, CSCLP, IFIPTM, ESORICS, ItaSEC, GECCO; and following journals, AI Communications, RAIRO-Operations Research and Theory and Practice of Logic Programming (TPLP) journal, Theoretical Computer Science (TCS), Fuzzy Sets and Systems, Science of Computer Programming, Journal of Artificial Societies and Social Simulation (JASSS), Argument & Computation - Special Issue on Applications of Logical Approaches to Argumentation, Knowledge Engineering Review journal, Information and Computation.

European Master in Theoretical Chemistry and Computational Modelling (TCCM)

Teaching (undergraduate/graduate)

- 2020 EUROPEAN MASTER IN THEORETICAL CHEMISTRY AND COMPUTATIONAL MODELLING (TCCM), Course on Machine Learning, Department of Chemistry, Biology, and Biotechnology, University of Perugia.
- 2019-2020 System, social and mobile security (post-graduate students, 'master Primo Livello'), 40 hours teaching. University of Perugia (Department of Law).
- 2017-now CyberChallenge.it, several 2-hour lectures on Network Security, Security Assessment, Machine/Deep LEarning attacks.

- 2017-now Systems, Social, and Mobile Security, 14 hours teaching. Master in Computer Science, University of Perugia (2 CFU).
- 2018-now DIDACTICS OF COMPUTER SCIENCE, 7 hours teaching. Master in Computer Science, University of Perugia (1 CFU).
- 2015-now Computer Programming I, 73 hours teaching. Bachelor in Computer Science, University of Perugia (9 CFU).
- 2014-now Introduction to Computer Science, 30 hours teaching. Bachelor in Obstetrics, University of Perugia (2 CFU).
- 2015-now Introduction to Computer Science, 24 hours teaching. Bachelor in Dentistry, University of Perugia (4 CFU).
- 2015-2016 INFORMATICS II, 62 hours teaching. Bachelor in Mathematics, University of Perugia.
- 2009-2010 LAB. OF WEB TECHNOLOGIES, 40 hours teaching. Bachelor in "Computer Science for Economics", Faculty of Economics, University "G. d'Annunzio" di Chieti-Pescara (lectures covered XHTML and CSS).
- 2009-2010 PLANNING AND ASSESSING SECURITY IN COMPUTER SCIENCE, 10 hours support to Master in Computer Science, University of Perugia.
- 2009-2010 CONSTRAINT SYSTEMS, 10 hours support to Master in Computer Science, University of Perugia.

Organisation

- 2020 Co-chair of the 8th International Conference on Computational Models of Argument (COMMA)
- 2019-now Cyberchallenge.it, https://cyberchallenge.it
 - 2019 International Competition on Computational Models of Argumentation (third edition), http://iccma19.dmi.unipg.it
 - 2018 Distributed Ledger Technology Workshop, Perugia
 - 2014 15th Italian Conference on Theoretical Computer Science, Perugia
 - 2011 17th International Conference on Principles and Practice of Constraint Programming (2011), taking care also of the local sponsorships.

Supervision of students

- 2017-now Work-related learning for High-school students ("Alternanza Scuola Lavoro").
 - 2017 Tutor of the Hong Kong Baptist University-University of Perugia Summer Exchange Programme.
- 2015-now Organisation of extracurricular activities for undergraduate students.
- 2015-now Supervision of stages, bachelor, and master thesis in Computer Science (University of Perugia).
- 2012-2017 Supervision of a PhD student in Computer Science at the University of Amsterdam.

PhD boards and courses

- 2019-now Member of the board of study of the PhD programme in "Computer Science and Mathematics, University of Camerino (Cycle XXXV).
- 2019-now Member of the board of study of the Master programme in "Data protection, cybersecurity e digital forensics", University of Perugia.
- 2021-2022 ARGUMENTATION: UNSTRUCTURED AND STRUCTURED APPROACHES, TOOLS, AND APPLICATIONS, (3 CFU 18 hours). PhD in Mathematics and Computer Science, University of Camerino.
- 2018-2019 ARGUMENTATION: UNSTRUCTURED AND STRUCTURED APPROACHES, TOOLS, AND APPLICATIONS, (6 CFU). PhD in Mathematics, Computer Science e Statistics, University of Firenze/Perugia/Indam.
- 2017-2018 ARGUMENTATION: UNSTRUCTURED AND STRUCTURED APPROACHES, TOOLS, AND APPLICATIONS, 18 hours teaching. PhD in Business-Institutions-Markets, University "G. d'Annunzio" Chieti-Pescara.

Invited talks

- 2017 Title: "A Relaxation of Internal Conflict and Defence in Weighted Argumentation Frameworks", School of Computing and Information Technology, University of Wollongong, Australia. (ref. Aditya Ghose)
- 2016 Title: "A Relaxation of Internal Conflict and Defence in Weighted Argumentation Frameworks", Department of Mathematics and Computer Science, University Renee-Descartes, Paris, France. (ref. Prof. Pavlos Moraitis)
- 2013 Title: "Computational Models and Tools to Solve Abstract Argumentation Frameworks;;, Department of Computer Science University of Tulane, New Orleans, Lousiana, USA. (ref. Prof. Brent Venable)
- 2012 Tutorial: "Semiring-based Constraint Models and Frameworks for Security-related Scenario;; given at the 7th International Conference on Risks and Security of Internet of Systems (Crisis, IEEE)

Attended summer schools/courses

- 2018 Advanced Course on Data Science & Machine Learning, Pontignano, Italy
- 2011 6th International School on Constraint Programming "Hybrid Methods for Constraint Programming" (ACP school), Turunc, Turkey.
- 2010 1st International School on Constraint Handling Rules (CHR), Leuven, Belgium.
- 2008 8th International School on Foundations of Security Analysis and Design (FOSAD 2008), Bertinoro Italy.
- 2007 3rd International School on Constraint Programming (ACP school), Lloret de Mar, Spain.
- 2006 Participation to the 6th International School on Foundations of Security Analysis and Design (FOSAD 2006), Bertinoro Italy.

Grants and Awards

- 2016 Microsoft Azure Research Award on Data Analytics.
- 2015 Grant from Gruppo Nazionale per il Calcolo Scientifico (GNCS) to support my presence at FLAIRS 2015.
- 2015 FP7 Marie Curie Award (from the FP7 Marie Curie action team).
- 2015 Micro Travel Grant from the Marie Curie Alumni Association.
- 2011 IJCAI Travel Grant Program to support my presence at IJCAI 2011.
- 2010 European Coordinating Committee for Artificial Intelligence to support my presence at ECAI 2010.
- 2010 "Progetto Giovani Ricercatori" prize, Gruppo Nazionale per il Calcolo Scientifico (GNCS).
- 2008 Grant from Gruppo Nazionale per il Calcolo Scientifico (GNCS) to support my presence at SAC 2008.
- 2008 Grant from Association for the Advancement of Artificial Intelligence (AAAI) to support my presence at AAAI 2008.
- 2008 Best Paper for "A Formal and Practical Framework for Constraint-Based Routing", S. Bistarelli, F. Santini, International Conference on Networking (ICN 2008), "A Formal and Practical Framework for Constraint-Based Routing", IEEE, pp. 162-167, 2008, ISBN: 978-0-7695-3106-9.

Other Projects

2020 Author of Cybersecurity articles on ICT Security Magazine.

Administrative duties

- 2015-2019 Member of the steering committee of the Bachelor and Master in Computer Science, Department of Mathematics and Computer Science, Perugia
 - 2020 Member of "Commissione paritetica", Department of Mathematics and Computer Science, Perugia

Certifications

- 2018 Italian qualification to Associate Professor (enginnering, sector 09/H1) from 26/7/18 until 26/7/24.
- 2018 Italian qualification to Associate Professor (computer science, sector 01/B1) from 7/8/18 until 7/8/24.
- 2018 Training certificate on "Laboratorio e tecniche di comunicazione per docenti".
- 2016 Qualification a Maitre de confrences (French qualification to Associate Professor) from 29/01/2016 until 31/12/20.
- 2004 Qualification for the (Italian) Engineer Profession.
- 2009 Executive Master in Project Management (PST-BIC Livorno).