

Curriculum Vitae

Stefano Mariani

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Indice

1	Anagrafica	2
2	Abilitazione Scientifica Nazionale	2
3	Posizioni ricoperte	2
4	Percorso di studi	2
5	Attività scientifica	3
5.1	Partecipazione e coordinamento progetti	3
5.1.1	Coordinamento	3
5.1.2	Partecipazione	4
5.2	Periodi di ricerca all'estero	4
5.3	Collaborazioni con altri istituti di ricerca e aziende	4
5.4	Relazioni invitate	6
5.5	Premi e riconoscimenti	6
5.6	Partecipazione a comitati editoriali, organizzazione di conferenze, revisione paritaria	7
5.7	Presentazioni a conferenze	10
5.8	Sviluppo software	12
6	Attività didattica	13
7	Attività istituzionale	14
8	Pubblicazioni	14
8.1	Monografie	14
8.2	Pubblicazioni su riviste internazionali con peer-review	14
8.3	Atti di convegno / workshop internazionali con peer review	17
8.4	Atti di convegno / workshop nazionali con peer review	23
8.5	Articoli invitati ed editoriali	24
9	Dichiarazione finale	25

1 Anagrafica

- Nome e cognome: Stefano Mariani
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2 Abilitazione Scientifica Nazionale

Abilitazione Scientifica Nazionale settore concorsuale 09/H1 fascia II conseguita il 14/04/2021 e valida fino al 14/04/2030 nell'ASN 2018-2020 quadrimestre VI.

3 Posizioni ricoperte

- RTD lettera b) presso il Dipartimento di Scienza e Metodi dell'Ingegneria dell'Università degli Studi di Modena e Reggio Emilia dal 1/7/2016 ad oggi (**posizione attuale**)
- Assegnista di ricerca presso il Dipartimento di Scienza e Metodi dell'Ingegneria dell'Università degli Studi di Modena e Reggio Emilia dal 16/11/2021 al 30/6/2023
- RTD lettera a) presso il Dipartimento di Scienza e Metodi dell'Ingegneria dell'Università degli Studi di Modena e Reggio Emilia dal 7/11/2016 al 6/11/2019, prorogato dal 7/11/2019 al 6/11/2021
- Assegnista di ricerca presso il Dipartimento di Informatica: Scienza e Ingegneria dell'ALMA MATER STUDIORUM–Università di Bologna dal 1/5/2016 al 6/11/2016 (recesso per incompatibilità con contratto RTD a)
- Assegnista di ricerca presso il Dipartimento di Informatica: Scienza e Ingegneria dell'ALMA MATER STUDIORUM–Università di Bologna dal 5/4/2012 al 31/12/2012 (recesso per incompatibilità con borsa di dottorato)

4 Percorso di studi

- Dottorato di ricerca in Informatica (“Doctor Europaeus”) 28° ciclo conseguito con giudizio “ottimo” il 12/5/2016 presso l'ALMA MATER STUDIORUM–Università di Bologna con tesi dal titolo “*Coordination Issues in Complex Socio-technical Systems: Self-organisation of Knowledge in MoK*”

- Laurea magistrale in Ingegneria Informatica conseguita il 20/12/2011 presso l'ALMA MATER STUDIORUM–Università di Bologna con giudizio 107/110 rispettando la durata regolare del corso di 2 anni con tesi dal titolo “*Molecules of Knowledge: a new approach to knowledge production, management and consumption*”

5 Attività scientifica

La mia attività di ricerca nasce nell’ambito dei linguaggi e modelli di coordinazione, dei sistemi multi-agente, e dei sistemi auto-organizzanti. Si evolve poi nella progettazione e nell’applicazione di istanze specifiche di tali modelli ai sistemi pervasivi e socio-tecnici, in particolare nell’ampio dominio dell’Internet delle cose. Tale interesse si declina anche verso l’utilizzo della blockchain come infrastruttura di computazione e coordinazione distribuita, e della programmazione logica come strumento per la diffusione di “intelligenza” nei sistemi pervasivi. In tempi più recenti, sempre sotto la prospettiva della coordinazione di agenti distribuiti e nel contesto del progetto PRIN 2017 “Fluidware”, la mia attività tocca argomenti quali ragionamento causale, modelli di argomentazione, e per rinforzo, sempre nell’ambito dello sviluppo di protocolli di coordinazione. Non da ultimo, il mio impegno nel progetto Europeo H2020 “CONNECARE” mi ha portato ad occuparmi del tema dell’analisi dati e dell’apprendimento automatico per la costruzione di sistemi di supporto alle decisioni in ambito clinico e della medicina personalizzata.

5.1 Partecipazione e coordinamento progetti

5.1.1 Coordinamento

Internazionali:

- Progetto europeo “*Personalised Connected Care for Complex Chronic Patients*” (CONNECARE), EU H2020-RIA (contratto numero 689802) dal 7/11/2016 al 6/11/2019, leader dei task:
 - Task 3.4 “*Screening and risk stratification DSS*”, volto alla costruzione di un sistema di supporto alle decisioni per la valutazione e la stratificazione del rischio clinico di pazienti cronici
 - Task 3.5 “*Mapping DSS*”, volto alla costruzione di un sistema di supporto alle decisioni per la geolocalizzazione di pazienti cronici su mappa e visualizzazione sulla base del rischio clinico
 - Task 3.6 “*Self-adaptive Clinical Pathways CDSS*”, volto alla costruzione di un sistema di supporto alle decisioni per il suggerimento di percorsi clinici personalizzati ai medici coinvolti nel progetto
 - Task 4.6 “*Recommender system for self-management*”, volto alla costruzione di un artefatto software per favorire il coinvolgimento dei pazienti tramite l’invio automatico di messaggi motivazionali in merito all’aderenza dei pazienti alle prescrizioni suggerite dai medici coinvolti nel progetto

e responsabile dei deliverables:

- D3.2 “*First Screening and Risk Stratification DSS*”
- D3.4 “*Stratification and Mapping DSS*”
- D3.5 “*Self-Adaptive Clinical Pathways CDSS*”
- D4.6 “*Recommender System for Self-management*”

Nazionali:

- Progetto nazionale “Fluidware” PRIN 2017 dal 7/11/2019 ad oggi, responsabile del WP3 “Software engineering”

5.1.2 Partecipazione

Internazionali:

- Progetto europeo H2020 “BISON” (Grant Agreement No. 645323) (<https://apice.unibo.it/xwiki/bin/view/BISON/Partners/UNIBO>) dal 02/05/2016 al 01/11/2016
- Progetto europeo “*Self-aware Pervasive Service Ecosystems*” (SAPERE), FP7-ICT-2009.8.5: Self-awareness in Autonomic Systems (contratto numero 256873) dal 5/4/2012 al 31/12/2012

Nazionali:

- Progetto FAR Dipartimentale “Sviluppo di un Sistema Personalizzato a Supporto della Mobilità Urbana tramite Smartphone e Droni” dall’ 1/3/2017 al 30/6/2018

5.2 Periodi di ricerca all’estero

Ricercatore in visita dall’ 1/4/2014 al 30/6/2014 presso il Distributed Systems Group della Technical University di Vienna, Austria¹, per collaborazione con il Prof. Schahram Dustdar e il Prof. Hong-Linh Truong sul tema della “Coordination-aware Elasticity”. L’attività ha portato alla pubblicazione di un articolo presso una conferenza internazionale di settore² e allo sviluppo di nuove funzionalità del software rSYBL per il supporto all’elasticità nel cloud³.

5.3 Collaborazioni con altri istituti di ricerca e aziende

Nel corso della mia attività di ricerca ho collaborato con diversi istituti di ricerca nazionali ed internazionali e con aziende private:

- Pomiager S.r.l., Bologna
- Dipartimento di Informatica - Scienza e Ingegneria (DISI), Università di Bologna
- Research Institute for Human-centred Artificial Intelligence, Università di Bologna

¹<http://www.infosys.tuwien.ac.at/index.html>

²<http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=7027526>

³<http://github.com/tuwiendsg/rSYBL/tree/coordination>

- Dipartimento di Scienze Pure e Applicate, Università di Urbino
- Computer Science Center, University of Geneva, Svizzera
- School of Computer Science, University of St Andrews, Scotland, Regno Unito
- EURECAT Technology Centre, Digital Health Unit, Barcellona, Spagna
- Dipartimento di Informatica, Sistemistica e Comunicazione, Università Milano-Bicocca
- Dipartimento di Ingegneria Informatica, Modellistica, Elettronica e Sistemistica, Università della Calabria
- Institute of Information Systems Engineering, Wien Technical University, Austria
- Dipartimento di Scienze Fisiche, Informatiche e Matematiche, Università di Modena e Reggio Emilia
- AUSL Romagna, Rimini e Ospedale M. Bufalini, Cesena
- Bag-Era, Grenoble, Francia
- Scuola di Scienze e Tecnologie, Università di Camerino
- Cisco Systems, San Jose, Stati Uniti
- Institut d'Investigacions Biomediques August Pi i Sunyer, Barcelona, Spain
- Hospital Clinic de Barcelona, Barcelona, Spain
- Center for Biomedical Network Research in Respiratory Diseases, Madrid, Spain
- Universitair Medisch Centrum Groningen, Groningen, Paesi Bassi
- Dipartimento di Ingegneria e Architettura, Università di Parma
- Istituto Di Calcolo E Reti Ad Alte Prestazioni, Consiglio Nazionale delle Ricerche
- University of Applied Sciences Western Switzerland, Delemont, Svizzera
- University of Exeter, Exeter, Regno Unito
- Johannes Kepler University Linz, Linz, Austria

5.4 Relazioni invitate

Invited speaker:

- alla conferenza internazionale “Software Technologies: Applications and Foundations” (STAF 2018), Toulouse, France, 25–29/06/2018, con articolo “*Coordination of Complex Socio-Technical Systems: Challenges and Opportunities*” pubblicato in *Lecture Notes in Computer Science*, vol 11176, Springer

Seminari invitati:

- Picone Marco, Mariani Stefano: “Edge Digital Twins on MEC Software Architectures.” *Intel Converged Edge Meetup*. Online, 08/09/2021.
- Mariani, Stefano: “The quest towards coordination from distributed to socio-technical systems.” *Research seminar “AI: from tutorials to hands on”*. Namur, Belgium, 06/12/2019.
- Mariani, Stefano: “Spatial Multi-Agent Systems.” *18th European Agent Systems Summer School*. Catania, Italy, 28/07/2016.
- Mariani, Stefano: “Advanced Coordination Techniques: Experiments with TuCSOn and ReSpecT.” *Mobile and Distributed Programming course, Faculty of Computer Science, University of Namur*. Namur, Belgium, 28/04/2016.
- Mariani, Stefano: “Molecules of Knowledge: Self-Organisation in Knowledge-Intensive Environments.” *Distributed Systems Group, TU Wien*. Wien, Austria, 29/04/2014.

5.5 Premi e riconoscimenti

Best paper award:

- Marco Gambelli, Stefano Mariani, Giacomo Cabri, Franco Zambonelli: *Combining Coordination Strategies for Autonomous Vehicles in Intersection Networks*. 14th International Symposium on Intelligent Distributed Computing, Online, 16-18/09/2021.
- Roberta Calegari, Giovanni Ciatto, Stefano Mariani, Enrico Denti, Andrea Omicini: *Micro-Intelligence for the IoT: SE Challenges and Practice in LPaaS*. International Conference on Cloud Engineering, Orlando, FL, USA, 17–20/04/2018.
- Stefano Mariani: *On the “Local-to-Global” Issue in Self-Organisation: Chemical Reactions with Custom Kinetic Rates*. Fundamentals of Collective Adaptive Systems Workshop, Eighth IEEE International Conference on Self-Adaptive and Self-Organizing Systems, London, UK, 08–12/09/2014.

Altri riconoscimenti:

- vincitore hackaton “DroidCon2020 MEC hackaton” (<https://it.droidcon.com/2020/hackathon/>) insieme al Dott. Marco Picone

5.6 Partecipazione a comitati editoriali, organizzazione di conferenze, revisione paritaria

Organizzazione di convegni:

- EDAS co-chair per “22nd International Conference on Pervasive Computing and Communications”, Biarritz, Francia, 11-15/3/2023 (<https://percom.org/2024/organizing-committee/>)
- EDAS co-chair per “21st International Conference on Pervasive Computing and Communications”, Atlanta, USA, 13-17/3/2023 (<https://percom.org/2023/organizing-committee/>)
- co-chair per “XIV Workshop on Agents Applied to Healthcare”, Online, 9/5/2022 (<https://a2hc.github.io/a2hc2022/committees/>)
- co-chair per “XIII Workshop on Agents Applied in Healthcare”, Online, 4/5/2021 (<https://a2hc2021.github.io/committees/>)
- co-chair per “International Workshop on Healthcare Intelligent Multi-Agent Systems”, Online, 8/5/2020 (<https://apice.unibo.it/xwiki/bin/view/HIMAS2020/Organizers>)
- co-chair per “XII Workshop on Agents Applied in Health Care”, Turin, 28/10/2019 (https://www.up.pt/arquivoweb/web.fe.up.pt/_a2hc19/organisation.html)

Partecipazione a comitati editoriali:

- American Journal of Engineering and Applied Sciences, Science Publications (dal 2020 ad oggi)

Guest-editor:

- “Agent-based Systems in Healthcare”, Computer Methods and Programs in Biomedicine, Elsevier (2024, ISSN 1872-7565)
- “Autonomous Agents and Multi-Agent Systems Applied in Healthcare”, Electronics, MDPI (2021, ISSN 2079-9292)
- “Advances in Multi-Agent Systems”, Applied Sciences, MDPI (2021, ISSN 2076-3417)
- “Multi-Agent Systems 2019”, Applied Sciences, MDPI (2019, ISSN 2076-3417)
- “Multi-Agent Systems”, Applied Sciences, MDPI (2018, ISSN 2076-3417)

Partecipazione a comitati di programma:

- The 25th International Conference on Principles and Practice of Multi-Agent Systems, 2024
- The 23rd International Conference on Autonomous Agents and Multi-Agent Systems, 2024
- The 2nd World Conference on eXplainable Artificial Intelligence, 2024

- 3rd DISCOLI Workshop on DIStributed COLlective Intelligence, 2024
- 6th International Congress on Blockchain and Applications, 2024
- 22nd International Conference on Practical applications of Agents and Multi-Agent Systems, 2024
- 25th Workshop “From Objects to Agents”, 2024
- 37th International Symposium on Computer Based Medical Systems, 2024
- The 22nd International Conference on Autonomous Agents and Multi-Agent Systems, 2023
- 5th International Congress on Blockchain and Applications, 2023
- The 1st World Conference on eXplainable Artificial Intelligence, 2023
- 11th Ecuadorian Conference on Information and Communication Technologies, 2023
- International Conference on Intelligent Metaverse Technologies & Applications, 2023
- 24th Workshop “From Objects to Agents”, 2023
- 36th International Symposium on Computer Based Medical Systems, 2023
- 25th International Conference on Coordination Models and Languages, 2023 (Artifacts evaluation committee member)
- 37th AAAI Conference on Artificial Intelligence, 2023 (Senior PC member)
- 2023 IEEE Consumer Communications & Networking Conference
- 4th International Congress on Blockchain and Applications, 2022
- Fourth International IEEE Workshop on Social (Media) Sensing, 2022
- 23rd Workshop “From Objects to Agents”, 2022
- 15th International Symposium on Intelligent Distributed Computing, 2022
- Coordination, Organisations, Institutions, and Norms at the 21st International Conference on Autonomous Agents and Multiagent Systems, 2022
- 1st DISCOLI Workshop on DIStributed COLlective Intelligence, 2022
- 10th Ecuadorian Conference on Information and Communication Technologies, 2022
- 14th International Symposium on Intelligent Distributed Computing, 2021
- 20th International Conference on Autonomous Agents and Multiagent Systems, 2021
- 22nd Workshop “From Objects to Agents”, 2021
- 3rd International Congress on Blockchain and Applications, 2021

- 9th Ecuadorian Conference on Information and Communication Technologies, 2021
- Eleventh International Conference on Cloud Computing, GRIDs, and Virtualization, 2020
- 2nd International Congress on Blockchain and Applications, 2020
- 24th European Conference on Artificial Intelligence, 2020
- 1st International Congress on Blockchain and Applications, 2019
- 19th Workshop “From Objects to Agents”, 2018
- 1st workshop on Architectures, Languages and Paradigms for IoT, 2017
- 14th IEEE International Conference on Networking, Sensing and Control, 2017
- 18th Workshop “From Objects to Agents”, 2017
- 17th Workshop “From Objects to Agents”, 2016
- 10th IEEE International Conference on Self-Adaptive and Self-Organizing Systems, 2016
- 15th Workshop “From Objects to Agents”, 2014
- 14th Workshop “From Objects to Agents”, 2013

Attività di revisore per:

- IEEE International Conference on Pervasive Computing and Communications (PerCom)
- IFAAMAS International Conference on Autonomous Agents and Multiagent Systems (AAMAS)
- AAAI Conference on Artificial Intelligence (AAAI)
- Springer Journal of Medical Systems
- Pervasive and Mobile Computing, Elsevier, ISSN: 1574-1192
- ACM Transactions on Autonomous and Adaptive Systems (TAAS)
- International Conference on Autonomous Agents and Multiagent Systems (AAMAS)
- International Joint Conferences on Artificial Intelligence (IJCAI)
- IEEE Internet of Things Journal
- Artificial Intelligence in Medicine, Elsevier, ISSN: 0933-3657
- Science of Computer Programming, Elsevier, ISSN: 0167-6423
- European Conference on Artificial Intelligence (ECAI)

5.7 Presentazioni a conferenze

- T30** *20th Workshop on Context and Activity Modelling and Recognition (CoMoReA)*. Biarritz, France, 11/3/2024. Mariani, Stefano: “Distributed Discovery of Causal Networks in Pervasive Environments.”
- T29** *4th IEEE International Conference on Autonomic Computing and Self-Organizing Systems (ACSOS)*. Toronto, Canada, 25-29/09/2023. Mariani, Stefano: “Learning Stigmergic Communication for Self-organising Coordination.”
- T28** *21st International Conference on Practical Applications of Agents and Multi-Agent Systems (PAAMS)*. Guimaraes, Portugal, 12-14/07/2023. Mariani, Stefano: “Multi-agent Learning of Causal Networks in the Internet of Things.”
- T27** *11th International Workshop on Engineering Multi-Agent Systems (EMAS)*. London, UK, 29-30/06/2023. Mariani, Stefano: “Towards developing Digital Twin enabled Multi-Agent Systems.”
- T26** *24th International Conference on Principles and Practice of Multi-Agent Systems (PRIMA)*. Valencia, Spain, 16-18/11/2022. Mariani, Stefano: “Cooperative Driving at Intersections Through Agent-Based Argumentation.”
- T25** *10th International Workshop on Engineering Multi-Agent Systems (EMAS)*. Online, 9-10/5/2022. Mariani, Stefano: “About Digital Twins, agents, and multiagent systems: a cross-fertilisation journey”.
- T24** *30th IEEE International Conference on Enabling Technologies: Infrastructure for Collaborative Enterprises (WETICE)*. Online, 27–29/10/2021. Mariani, Stefano: “An Adaptive Approach for the Coordination of Autonomous Vehicles at Intersections.”
- T23** *10th International Symposium On Leveraging Applications of Formal Methods, Verification and Validation (ISOLA)*. Online, 25–29/10/2021. Mariani, Stefano: “Degrees of Autonomy in Coordinating Collectives of Self-Driving Vehicles.”
- T22** *14th International Symposium on Intelligent Distributed Computing (IDC)*. Online, 16/9/2021. Mariani, Stefano: “Combining Coordination Strategies for Autonomous Vehicles in Intersection Networks.”
- T21** *XIII International Workshop on Agents Applied in Healthcare (A2HC)*. Online, 04/05/2021. Mariani, Stefano: “Augmenting BDI agency with a Cognitive Service: general architecture and validation in healthcare domain.”
- T20** *XVII International Workshop on Context and Activity Modeling and Recognition (CoMoReA)*. Online, 22/03/2021. Mariani, Stefano: “Developing a “Sense of Agency” in IoT Systems: Preliminary Experiments in a Smart Home Scenario.”

- T19** *12th International Conference on Internet and Distributed Computing Systems*. Napoli, Italy, 10–12/10/2019. Mariani, Stefano: “Argumentation-based Coordination in IoT: a Speaking Objects Proof-of-Concept.”
- T18** *32nd IEEE International Symposium on Computer-Based Medical Systems*. Cordoba, Spain, 05–07/06/2019. Mariani, Stefano: “Risk Prediction as a Service: a DSS architecture promoting interoperability and collaboration.”
- T17** *16th International Workshop on Foundations of Coordination Languages and Self-Adaptative Systems*. Toulouse, France, 26/06/2018. Mariani, Stefano: “Coordination of Complex Socio-technical Systems: Challenges and Opportunities.”
- T16** *20th International Conference on Coordination Models and Languages*. Madrid, Spain, 18–22/06/2018. Mariani, Stefano: “Twenty Years of Coordination Technologies: State-of-the-Art and Perspectives.”
- T15** *11th International Symposium on Intelligent Distributed Computing*. Belgrade, Serbia, 12/10/2017. Mariani, Stefano: “Programming the Interaction Space Effectively with ReSpecTX.”
- T14** *2017 IEEE/WIC/ACM International Conference on Web Intelligence*. Leipzig, Germany, 23–26/08/2017. Mariani, Stefano: “Nature-inspired Coordination: Current Status and Research Trends.”
- T13** *XIV Conference of the Italian Association for Artificial Intelligence*. Ferrara, Italy, 23–25/09/2015. Mariani, Stefano: “Anticipatory Coordination in Socio-technical Knowledge-intensive Environments: Behavioural Implicit Communication in MoK.”
- T12** *17th International Conference on Coordination Models and Languages*. Grenoble, France, 02–05/06/2015. Mariani, Stefano: “Blending Event-Based and Multi-Agent Systems around Coordination Abstractions.”
- T11** *Collective Adaptive Systems: Qualitative and Quantitative Modelling and Analysis*. Dagstuhl, Germany, 14–19/12/2014. Mariani, Stefano: “Stochastic Coordination in CAS: Expressiveness & Predictability.”
- T10** *Fundamentals of Collective Adaptive Systems*. London, UK, 08/09/2014. Mariani, Stefano: “On the “Local-to-Global” Issue in Self-Organisation: Chemical Reactions with Custom Kinetic Rates.”
- T9** *8th International Symposium on Intelligent Distributed Computing*. Madrid, Spain, 03–05/09/2014. Mariani, Stefano: “Models of Autonomy and Coordination: Integrating Subjective & Objective Approaches in Agent Development Frameworks.”
- T8** *14th Workshop “From Objects to Agents”*. Torino, Italy, 02–03/12/2013. Mariani, Stefano: “Parameter Engineering vs. Parameter Tuning: the Case of Biochemical Coordination in MoK.”
- T7** *Workshop on Agent Based Computing: From Model to Implementation X*. Koblenz, Germany, 16–17/09/2013. Mariani, Stefano: “Event-driven Programming for Situated MAS with ReSpecT Tuple Centres.”

- T6** *15th International Conference on Coordination Models and Languages.* Florence, Italy, 03–06/06/2013. Mariani, Stefano: “Probabilistic Modular Embedding for Stochastic Coordinated Systems.”
- T5** *Spatial Computing Workshop.* Saint Paul, Minnesota, USA, 06/05/2013. Mariani, Stefano: “Promoting Space-Aware Coordination: ReSpecT as a Spatial-Computing Virtual Machine.”
- T4** *Social Coordination: Principles, Artifacts and Theories Symposium at the AISB Annual Convention.* Exeter, UK, 03–05/04/2013. Mariani, Stefano: “MoK: Stigmergy Meets Chemistry to Exploit Social Actions for Coordination Purposes.”
- T3** *28th ACM Symposium on Applied Computing .* Coimbra, Portugal, 21/03/2013. Mariani, Stefano: “Probabilistic Embedding: Experiments with Tuple-based Probabilistic Languages.”
- T2** *6th International Symposium on Intelligent Distributed Computing.* Calabria, Italy, 25/09/2012. Mariani, Stefano: “Molecules of Knowledge: Self-Organisation in Knowledge-Intensive Environments.”
- T1** *1st International Workshop on Adaptive Service Ecosystems: Natural and Socially Inspired Solutions.* Lyon, France, 10/09/2012. Mariani, Stefano: “Self-Organising News Management: The Molecules of Knowledge Approach.”

5.8 Sviluppo software

Software contribuito / creato:

- Client Java per il toolkit “Open Network Edge Services Software APIs” sviluppato da Intel per accesso a risorse computazionali su infrastruttura MEC in reti 5G: <https://github.com/openness-4-java>
- Pipeline di Machine Learning per sistema di supporto alle decisioni per la predizione del rischio clinico, e per il suggerimento di interventi medici personalizzati, WP 3 del progetto europeo H2020 “CONNECARE”: <https://gitlab.com/SteMore/umcg-data-exploration>
- Sistema di supporto alle decisioni per il monitoraggio di pazienti su mappa, WP 3 del progetto europeo H2020 “CONNECARE”: <https://github.com/s-mariani/settimo-tentativo-ufficiale>
- Sistema di supporto alle decisioni per la predizione del rischio clinico, WP 3 del progetto europeo H2020 “CONNECARE”:
 - “learning mode”: <https://github.com/AgentGroup/Connecare-Learning>
 - “plugin mode”: <https://bitbucket.org/agentgroup/cdss-scala/>
- Recommender System per WP 4 del progetto europeo H2020 “CONNECARE”: <https://bitbucket.org/agentgroup/rs-physical-activity/>
- Middleware di coordinazione *MoK*: <http://apice.unibo.it/xwiki/bin/view/MoK/WebHome> (repository codice sorgente: <https://bitbucket.org/smariani/mok-projects/src/master/>)

- Middleware di coordinazione TuCSoN: <http://apice.unibo.it/xwiki/bin/view/TuCSoN/WebHome>
- Linguaggio di coordinazione ReSpecT, distribuito (open source) come parte del middleware TuCSoN: <http://apice.unibo.it/xwiki/bin/view/ReSpecT/WebHome>

6 Attività didattica

Corsi di dottorato:

- “Emerging IT Technologies: Autonomous Systems and Blockchains” (12 ore) nell’ambito del corso di Dottorato in Ingegneria dell’Innovazione Industriale presso l’Università di Modena e Reggio Emilia, 2023 (<https://www.iii.unimore.it/site/home/courses/year-2023.html>)
- “Introduction to Autonomous Systems” (12 ore) nell’ambito del corso di Dottorato in Ingegneria dell’Innovazione Industriale presso l’Università di Modena e Reggio Emilia, 2022 (<https://www.iii.unimore.it/site/home/courses/year-2022.html>)
- “Emerging Software Technologies: Blockchains and Autonomous Systems” (12 ore) nell’ambito del corso di Dottorato in Ingegneria dell’Innovazione Industriale presso l’Università di Modena e Reggio Emilia, 2021 (<https://www.iii.unimore.it/site/home/courses/year-2021.html>)
- “Emerging IT Technologies: Blockchains and Autonomous Systems” (12 ore) nell’ambito del corso di Dottorato in Ingegneria dell’Innovazione Industriale presso l’Università di Modena e Reggio Emilia, 2020 (<https://www.iii.unimore.it/site/home/courses/year-2020.html>)

Titolarità insegnamenti:

- “Fondamenti di Informatica” (3 CFU) presso il corso di laurea triennale in Ingegneria Meccatronica (D.M.270/04) dell’Università degli Studi di Modena e Reggio Emilia per l’anno accademico 2023/2024
- “Fondamenti di Programmazione” (6 CFU) presso il corso di laurea triennale in Ingegneria Gestionale (D.M.270/04) dell’Università degli Studi di Modena e Reggio Emilia per gli anni accademici 2019/2020, 2020/2021, 2021/2022, 2022/2023, 2023/2024
- “Fondamenti di Informatica” (9 CFU) presso il corso di laurea triennale in Ingegneria Gestionale (D.M.270/04) dell’Università degli Studi di Modena e Reggio Emilia per gli anni accademici 2016/2017, 2017/2018 e 2018/2019
- “Sistemi Distribuiti” (3 CFU) presso il corso di laurea magistrale in Ingegneria e Scienze Informatiche dell’ALMA MATER STUDIORUM–Università di Bologna per l’anno accademico 2012/2013
- “Programmazione Concorrente e Distribuita” (3 CFU) presso il corso di laurea magistrale in Ingegneria Informatica dell’ALMA MATER STUDIORUM–Università di Bologna per l’anno accademico 2011/2012

Altre attività didattiche:

- Corsi di Istruzione e Formazione Tecnica Superiore:
 - IFTS “Tecnico del disegno e progettazione industriale specializzato in smart manufacturing” (2018/2019): moduli “Internet of Things” (8 ore) e “Cloud computing” (8 ore)
 - IFTS “Tecniche per la progettazione e lo sviluppo di applicazioni informatiche” (2015/2016): modulo “Sistemi Informatici e loro Gestione” (20 ore)
- Relatore e co-relatore di svariate tesi magistrali e triennali (<https://smarianimore.github.io/students/>)

7 Attività istituzionale

- Membro del Collegio dei docenti dal XXXVI° ciclo del corso di Dottorato in Ingegneria dell’Innovazione Industriale presso l’Università di Modena e Reggio Emilia (<https://www.iii.unimore.it/site/home/teaching-board.html>)
- Commissario TOLC (Test online per l’ingresso all’università) per l’Università di Modena e Reggio Emilia, presso la sede di Reggio Emilia, dall’a.a. 2016/2017 ad oggi
- Commissario per l’accertamento della conoscenza della lingua italiana per gli studenti stranieri per l’Università di Modena e Reggio Emilia, presso la sede di Reggio Emilia, dall’a.a. 2016/2017 ad oggi

8 Pubblicazioni

Pubblicazioni divise per categoria e ordinate dalla più recente alla meno recente.

8.1 Monografie

- M1** Mariani, Stefano. 2016. “Coordination of Complex Sociotechnical Systems: Self-organisation of Knowledge in MoK.” *Artificial Intelligence: Foundations, Theory, and Algorithms*, Springer International Publishing. Hardcover ISBN: 978-3-319-47108-2 (234 pagine).

8.2 Pubblicazioni su riviste internazionali con peer-review

- R24** Casadei, Roberto; Mariani, Stefano; Pianini, Danilo; Viroli, Mirko; Zambonelli, Franco. 2023. “Space-Fluid Adaptive Sampling by Self-Organisation”. *EPIsciences Logical Methods in Computer Science*. Volume 19, Issue 4 (pagine 1–33).
- R23** Francia, Alberto; Mariani, Stefano; Adduce, Giuseppe; Vecchiarelli, Sandro ; Zambonelli, Franco. 2023. “Digital Management of Competencies in Web 3.0: The C-Box Approach”. *MDPI Future Internet* 15, no. 11: 350 (pagine 1–28).

- R22** Mariani, Stefano; Picone, Marco; Ricci, Alessandro. 2023. “Agents and Digital Twins for the engineering of Cyber-Physical Systems: opportunities, and challenges”. Springer *Annals of Mathematics and Artificial Intelligence*. DOI: 10.1007/s10472-023-09884-9 (pagine 1–22).
- R21** Sulis, Emilio; Mariani, Stefano; Montagna, Sara. 2023. “A survey on agents applications in healthcare: Opportunities, challenges and trends”. Elsevier *Computer Methods and Programs Biomedicine*. Volume 236: 107525 (pagine 1–18).
- R20** Ricci, Alessandro; Croatti, Angelo; Mariani, Stefano; Montagna, Sara; Picone, Marco. 2021. “Web of Digital Twins”. *ACM Transactions on Internet Technology*, Volume 22, Issue 4 (pagine 1–30).
- R19** Pianini, Danilo; Casadei, Roberto; Viroli, Mirko; Mariani, Stefano; Zambonelli, Franco. 2021. “Time-Fluid Field-Based Coordination through Programmable Distributed Schedulers” *EPIsciences Logical Methods in Computer Science* Volume 17, Issue 4 (pagine 1–48).
- R18** Montagna, Sara; Mariani, Stefano; Gamberini, Emiliano. 2021. “Augmenting BDI Agency with a Cognitive Service: Architecture and Validation in Healthcare Domain.” Springer *Journal of Medical Systems* 45, 103 (pagine 1–10).
- R17** Mariani, Stefano; Metting, Esther; Lahr, Maarten M. H.; Vargiu, Eloisa; Zambonelli, Franco. 2021. “Developing an ML pipeline for asthma and COPD: The case of a Dutch primary care service.” Wiley *International Journal of Intelligent Systems* 36 (pagine 6763–6790).
- R16** Mariani, Stefano; Cabri, Giacomo; Zambonelli, Franco. 2021. “Coordination of Autonomous Vehicles: Taxonomy and Survey.” *ACM Computing Surveys* 54, no. 1: 19 (pagine 1–33).
- R15** Ciatto, Giovanni; Mariani, Stefano; Omicini, Andrea; Zambonelli, Franco. 2020. “From Agents to Blockchain: Stairway to Integration.” *MDPI Applied Sciences* 10, no. 21: 7460 (pagine 1–22).
- R14** Ciatto, Giovanni; Mariani, Stefano; Di Marzo Serugendo, Giovanna; Louvel, Maxime; Omicini, Andrea; Zambonelli, Franco. 2020. “Twenty years of coordination technologies: COORDINATION contribution to the state of art.” Elsevier *Journal of Logical and Algebraic Methods in Programming* 113, no. 100531 (pagine 1–25).
- R13** Montagna, Sara; Mariani, Stefano; Gamberini, Emiliano; Ricci, Alessandro; Zambonelli, Franco. 2020. “Complementing Agents with Cognitive Services: A Case Study in Healthcare.” Springer *Journal of Medical Systems* 44, no. 188 (pagine 1–10).
- R12** Ciatto, Giovanni; Mariani, Stefano; Maffi, Alfredo; Omicini, Andrea. 2020. “Blockchain-Based Coordination: Assessing the Expressive Power of Smart Contracts.” *MDPI Information* 11, no. 1: 52 (pagine 1–20).

- R11** Mamei, Marco; Bicocchi, Nicola; Lippi, Marco; Mariani, Stefano; Zambonelli, Franco. 2019. “Evaluating Origin–Destination Matrices Obtained from CDR Data.” *MDPI Sensors* 19, no. 20: 4470 (page 1–17).
- R10** Mariani, Stefano. 2019. “Coordination in Socio-technical Systems: Where are we now? Where do we go next?” Elsevier *Science of Computer Programming* 184: 102317 (page 1–15).
- R9** Calegari, Roberta; Denti, Enrico; Mariani, Stefano; Omicini, Andrea. 2019. “Logic programming as a service in multi-agent systems for the Internet of Things.” *Inderscience International Journal of Grid and Utility Computing* 10, no. 4 (page 344–360).
- R8** Calegari, Roberta; Ciatto, Giovanni; Mariani, Stefano; Denti, Enrico; Omicini, Andrea. 2018. “LPaaS as Micro-Intelligence: Enhancing IoT with Symbolic Reasoning.” *MDPI Big Data & Cognitive Computing* 2, no. 3: 23 (page 1–26).
- R7** Ricci, Alessandro; Viroli, Mirko; Omicini, Andrea; Mariani, Stefano; Croatti, Angelo; Pianini, Danilo. 2018. “Spatial Tuples: Augmenting Reality with Tuples.” *Wiley Expert Systems* 35: e12273 (page 1–31).
- R6** Calegari, Roberta; Denti, Enrico; Mariani, Stefano; Omicini, Andrea. 2018. “Logic Programming as a Service.” Cambridge University Press *Theory and Practice of Logic Programming* 18, no. 5-6 (page 846–873).
- R5** Ciatto, Giovanni; Mariani, Stefano; Omicini, Andrea. 2018. “ReSpecTX: Programming interaction made easy.” *ComSIS Consortium Computer Science and Information Systems* 15, 3 (page 655–682).
- R4** Lippi, Marco; Mamei, Marco; Mariani, Stefano; Zambonelli, Franco. 2017. “An Argumentation-Based Perspective Over the Social IoT.” *IEEE Internet of Things Journal* 5, no. 4 (page 2537–2547).
- R3** Zambonelli, Franco; Omicini, Andrea; Anzengruber, Bernhard; Castelli, Gabriella; De Angelis, Francesco L.; Di Marzo Serugendo, Giovanna; Dobson, Simon; Fernandez-Marquez, Jose Luis; Ferscha, Alois; Mamei, Marco; Mariani, Stefano; Molesini, Ambra; Montagna, Sara; Nieminen, Jussi; Pianini, Danilo; Risoldi, Matteo; Rosi, Alberto; Stevenson, Graeme; Viroli, Mirko; Yee, Juan. 2015. “Developing pervasive multi-agent systems with nature-inspired coordination.” Elsevier *Pervasive and Mobile Computing* 17: Part B (page 236–252).
- R2** Mariani, Stefano; Omicini, Andrea. 2015. “Coordinating activities and change: An event-driven architecture for situated MAS.” Elsevier *Engineering Applications of Artificial Intelligence* 41, C (page 298–309).
- R1** Mariani, Stefano; Omicini, Andrea. 2014. “Coordination Mechanisms for the Modelling and Simulation of Stochastic Systems: The Case of Uniform Primitives.” Society for Modeling & Simulation International *Modeling & Simulation Magazine* IV, no. 3 (page 6–25).

8.3 Atti di convegno / workshop internazionali con peer review

- C55** Ricci, Alessandro; Mariani, Stefano; Zambonelli, Franco; Burattini, Samuele; Castelfranchi, Cristiano. 2024. “The Cognitive Hourglass: Agent Abstractions in the Large Models Era.” 23rd International Conference on Autonomous Agents and Multiagent Systems (AAMAS), Auckland, New Zealand, 6–10/05/2024. *International Foundation for Autonomous Agents and Multiagent Systems*, Proceedings (pagine 2706–2711).
- C54** Mariani, Stefano; Zambonelli, Franco. 2024. “Distributed Discovery of Causal Networks in Pervasive Environments.” IEEE International Conference on Pervasive Computing and Communications Workshops and other Affiliated Events (PerCom Workshops), Biarritz, Francia, 11–15/03/2024. *IEEE Proceedings* (pagine 1–6).
- C53** Picone, Marco; Mariani, Stefano; Cavicchioli, Roberto; Burgio, Paolo; Hamza Cherif, Arslane. 2024. “The Degree of Entanglement: Cyber-Physical Awareness in Digital Twin Applications.” 21st IEEE Consumer Communications & Networking Conference (CCNC), Las Vegas, USA, 6–9/01/2024. *IEEE Proceedings* (pagine 736–744).
- C52** Mariani, Stefano; Zambonelli, Franco. 2023. “Learning Stigmergic Communication for Self-organising Coordination.” IEEE International Conference on Autonomic Computing and Self-Organizing Systems (ACSOS), Toronto, Canada, 25–29/09/2023. *IEEE Proceedings* (pagine 47–56).
- C51** Mariani, Stefano; Picone, Marco; Ricci, Alessandro. 2023. “Towards Developing Digital Twin Enabled Multi-Agent Systems.” International Workshop on Engineering Multi-Agent Systems (EMAS), London, United Kingdom, 29/05/2023. *Springer Lecture Notes in Computer Science (LNAI)* 14378 (pagine 178–187).
- C50** Picone, Marco; Mariani, Stefano; Viridis, Antonio; Castagnetti, Paolo. 2023. “Digital Twin & Blockchain: Technology Enablers for Metaverse Computing.” IEEE International Conference on Metaverse Computing, Networking and Applications (MetaCom), Kyoto, Japan, 26–28/06/2023. *IEEE Proceedings* (pagine 1–8).
- C49** Montagna, Sara; Mariani, Stefano; Pengo, Martino Francesco. 2023. “A Chatbot-based Recommendation Framework for Hypertensive Patients.” IEEE 36th International Symposium on Computer-Based Medical Systems (CBMS), L’Aquila, Italy, 22–24/06/2023. *IEEE Proceedings* (pagine 730–733).
- C48** Mariani, Stefano; Roseti, Pasquale; Zambonelli, Franco. 2023. “Multi-agent Learning of Causal Networks in the Internet of Things.” International Conference on Practical Applications of Agents and Multi-Agent Systems (PAAMS), Guimaraes, Portugal, 12–14/07/2023. *Advances in Practical Applications of Agents, Multi-Agent Systems, and Cognitive Mimetics, The PAAMS Collection. Springer Lecture Notes in Computer Science (LNAI)* 13955 (pagine 163–174).

- C47** Mariani, Stefano; Roseti, Pasquale; Zambonelli, Franco. 2023. “Towards Multi-Agent Learning of Causal Networks.” 22nd International Conference on Autonomous Agents and Multiagent Systems (AAMAS), London, United Kingdom, May 29 – June 2, 2023. *International Foundation for Autonomous Agents and Multiagent Systems*, Proceedings (page 1–3).
- C46** Mariani, Stefano; Ferrari, Dario; Zambonelli, Franco. 2022. “Cooperative Driving at Intersections Through Agent-Based Argumentation.” Proceedings of the 24th International Conference on Principles and Practice of Multi-Agent Systems (PRIMA), Valencia, Spain, 16–18/11/2022. *Springer*, Lecture Notes in Computer Science 13753 (page 37–53).
- C45** Mariani, Stefano; Picone, Marco; Ricci, Alessandro. 2022. “About Digital Twins, Agents, and Multiagent Systems: A Cross-Fertilisation Journey.” Autonomous Agents and Multiagent Systems. Best and Visionary Papers (AAMAS 2022 Workshops), Online, 9–13/05/2022. *Springer*, Lecture Notes in Computer Science 13441 (page 114–129).
- C44** Lippi, Marco; Mariani, Stefano; Martinelli, Matteo; Zambonelli, Franco. 2022. “Individual and Collective Self-Development: Concepts and Challenges.” Proceedings of the 17th Conference on Computer Science and Intelligence Systems (FedCSIS), Sofia, Bulgaria, 4–7/09/2022. *Annals of Computer Science and Information Systems* (page 15–21).
- C43** Martinelli, Matteo; Mariani, Stefano; Lippi, Marco; Zambonelli, Franco. 2022. “Self-Development and Causality in Intelligent Environments.” Workshops at 18th International Conference on Intelligent Environments (IE2022), Biarritz, France, 20–23/06/2022. *IOS Press*, Ambient Intelligence and Smart Environments (page 248–257).
- C42** Casadei, Roberto; Mariani, Stefano; Pianini, Danilo; Viroli, Mirko; Zambonelli, Franco. 2022. “Space-Fluid Adaptive Sampling: A Field-Based, Self-organising Approach.” 17th International Federated Conference on Distributed Computing Techniques (DisCoTec), Lucca, Italy, 13–17/06/2022. *Springer*, Lecture Notes in Computer Science 13271 (page 99–117).
- C41** Gambelli, Marco; Mariani, Stefano; Cabri, Giacomo; Zambonelli, Franco. 2022. “Combining Coordination Strategies for Autonomous Vehicles in Intersections Networks.” 14th International Symposium on Intelligent Distributed Computing (IDC), Online, 16–18/09/2021. *Springer Studies in Computational Intelligence* 1026 (page 147–157).
- C40** Glorio, Nicholas; Mariani, Stefano; Cabri, Giacomo; Zambonelli, Franco. 2021. “An Adaptive Approach for the Coordination of Autonomous Vehicles at Intersections.” IEEE 30th International Conference on Enabling Technologies: Infrastructure for Collaborative Enterprises (WETICE), Bayonne, France, 27–29/10/2021. *IEEE Proceedings* (page 1–6).
- C39** Picone, Marco; Mariani, Stefano; Mamei, Marco; Zambonelli, Franco; Berlier, Mirko. 2021. “WIP: Preliminary Evaluation of Digital Twins on MEC Software Architecture.” 22nd IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM), Online, 7–11/06/2021. *IEEE*, Proceedings (page 256–259).

- C38** Lippi, Marco; Mariani, Stefano; Zambonelli, Franco. 2021. “Developing a “Sense of Agency” in IoT Systems: Preliminary Experiments in a Smart Home Scenario.” 17th Workshop on Context and Activity Modeling and Recognition (CoMoReA), Online, 22/03/2021. *IEEE PerCom Workshops 2021*: 44-49 (pagine 44–49).
- C37** Mariani, Stefano; Zambonelli, Franco. 2020. “Degrees of Autonomy in Coordinating Collectives of Self-Driving Vehicles.” International Symposium on Leveraging Applications of Formal Methods, Rhodes, Greece, 20–30/10/2020. *Leveraging Applications of Formal Methods, Verification and Validation: Engineering Principles, Springer Lecture Notes in Computer Science 12477* (pagine 189–204).
- C36** Pianini, Danilo; Mariani, Stefano; Viroli, Mirko; Zambonelli, Franco. 2020. “Time-Fluid Field-Based Coordination.” International Conference on Coordination Languages and Models, Valletta, Malta, 15–19/06/2020. *Coordination Models and Languages, Springer Lecture Notes in Computer Science 12134* (pagine 193–210).
- C35** Ciatto, Giovanni; Maffi, Alfredo; Mariani, Stefano; Omicini, Andrea. 2019. “Smart Contracts are More than Objects: Pro-activeness on the Blockchain.” International Congress on Blockchain and Applications, Avila, Spain, 26–28/06/2019. *Blockchain and Applications, Springer Advances in Intelligent Systems and Computing 1010* (pagine 45–53).
- C34** Mariani, Stefano; Croatti, Angelo; Ricci, Alessandro; Prati, Andrea; Vizari, Giuseppe. 2019. “ViTALiSE: Virtual to Augmented Loop in Smart Environments.” 18th International Conference on Autonomous Agents and MultiAgent Systems, Montreal, Canada, 13–17/05/2019. *International Foundation for Autonomous Agents and Multiagent Systems, Proceedings* (pagine 2114–2116).
- C33** Mariani, Stefano; Casadei, Roberto; Fornari, Fabrizio; Fortino, Giancarlo; Pianini, Danilo; Re, Barbara; Russo, Wilma; Savaglio, Claudio; Viroli, Mirko; Zambonelli, Franco. 2019. “Case studies for a new IoT programming paradigm: Fluidware.” 1st Workshop on Artificial Intelligence and Internet of Things, Rende, Italy, 22/11/2019. *Sun SITE Central Europe, RWTH Aachen University, CEUR Workshop Proceedings 2502* (pagine 82–96).
- C32** Ciatto, Giovanni; Bosello, Michael; Mariani, Stefano; Omicini, Andrea. 2019. “Comparative Analysis of Blockchain Technologies under a Coordination Perspective.” International Conference on Practical Applications of Agents and Multi-Agent Systems, Avila, Spain, 26–28/06/2019. *Highlights of Practical Applications of Survivable Agents and Multi-Agent Systems, The PAAMS Collection. Springer Communications in Computer and Information Science 1047* (pagine 80–91).
- C31** Ciatto, Giovanni; Rizzato, Lorenzo; Omicini, Andrea; Mariani, Stefano. 2019. “TuSoW: Tuple Spaces for Edge Computing.” 28th International Conference on Computer Communication and Networks, Valencia, Spain, 29/97–01/08/2019. *IEEE, Proceedings* (pagine 1–6).

- C30** Mariani, Stefano; Zambonelli, Franco; Tenyi, Akos; Cano, Isaac; Roca, Josep. 2019. “Risk Prediction as a Service: a DSS architecture promoting interoperability and collaboration.” 32nd International Symposium on Computer-Based Medical Systems, Cordoba, Spain, 05–07/06/2019. *IEEE, Proceedings* (pagine 300–305).
- C29** Mariani, Stefano; Bicego, Andrea; Lippi, Marco; Mamei, Marco; Zambonelli, Franco. 2019. “Argumentation-Based Coordination in IoT: A Speaking Objects Proof-of-Concept.” International Conference on Internet and Distributed Computing Systems, Napoli, Italy, 10–12/10/2019. *Internet and Distributed Computing Systems, Springer Lecture Notes in Computer Science* 11874 (pagine 169–180).
- C28** Ciatto, Giovanni; Maffi, Alfredo; Mariani, Stefano; Omicini, Andrea. 2019. “Towards Agent-oriented Blockchains: Autonomous Smart Contracts.” International Conference on Practical Applications of Agents and Multi-Agent Systems, Avila, Spain, 26–28/06/2019. *Advances in Practical Applications of Survivable Agents and Multi-Agent Systems, The PAAMS Collection. Springer Lecture Notes in Computer Science* 11523 (pagine 29–41).
- C27** Pianini, Danilo; Ciatto, Giovanni; Casadei, Roberto; Mariani, Stefano; Viroli, Mirko; Omicini, Andrea. 2018. “Transparent Protection of Aggregate Computations from Byzantine Behaviours via Blockchain.” 4th EAI International Conference on Smart Objects and Technologies for Social Good, Bologna, Italy, 28–30/11/2018. *ACM, Proceedings* (pagine 271–276).
- C26** Ciatto, Giovanni; Mariani, Stefano; Omicini, Andrea. 2018. “Blockchain for Trustworthy Coordination: A First Study with Linda and Ethereum.” IEEE/WIC/ACM International Conference on Web Intelligence, Santiago, Chile, 03/12/2018. *IEEE, Proceedings* (pagine 696–703).
- C25** Lippi, Marco; Mamei, Marco; Mariani, Stefano; Zambonelli, Franco. 2018. “Distributed Speaking Objects: a Case for Massive Multiagent Systems.” International Workshop on Massively Multiagent Systems II, Stockholm, Sweden, 14/07/2018. *Massively Multi-Agent Systems II, Springer Lecture Notes in Computer Science* 11422 (pagine 3–20).
- C24** Ciatto, Giovanni; Mariani, Stefano; Omicini, Andrea; Zambonelli, Franco; Louvel, Maxime. 2018. “Twenty Years of Coordination Technologies: State-of-the-Art and Perspectives.” International Conference on Coordination Languages and Models, Madrid, Spain, 18–21/06/2019. *Coordination Models and Languages, Springer Lecture Notes in Computer Science* 10852 (pagine 51–80).
- C23** Mariani, Stefano. 2018. “Coordination of Complex Socio-technical Systems: Challenges and Opportunities.” Federation of International Conferences on Software Technologies: Applications and Foundations, Toulouse, France, 25–29/06/2018. *Software Technologies: Applications and Foundations, Springer Lecture Notes in Computer Science* 11176 (pagine 295–310).

- C22** Calegari, Roberta; Ciatto, Giovanni; Mariani, Stefano; Denti, Enrico; Omicini, Andrea. 2018. “Micro-intelligence for the IoT: SE Challenges and Practice in LPaaS.” International Conference on Cloud Engineering, Orlando, FL, USA, 17–20/04/2018. *IEEE*, Proceedings (pagine 292–297).
- C21** Fernandez, Juan Manuel; Mamei, Marco; Mariani, Stefano; Miralles, Felipe; Steblin, Alexander; Vargiu, Eloisa; Zambonelli, Franco. 2017. “Towards Argumentation-based Recommendations for Personalised Patient Empowerment.” 2nd International Workshop on Health Recommender Systems, Como, Italy, 27–31/08/2017. *ACM*, Proceedings (pagine 374–375).
- C20** Calegari, Roberta; Denti, Enrico; Mariani, Stefano; Omicini, Andrea. 2017. “Logic Programming as a Service (LPaaS): Intelligence for the IoT.” 14th International Conference on Networking, Sensing and Control, Calabria, Italy, 16–18/05/2017. *IEEE*, Proceedings (pagine 72–77).
- C19** Lippi, Marco; Mamei, Marco; Mariani, Stefano; Zambonelli, Franco. 2017. “Coordinating Distributed Speaking Objects.” 37th International Conference on Distributed Computing Systems, Atlanta, USA, 05–08/06/2017. *IEEE*, Proceedings (pagine 1949–1960).
- C18** Ricci, Alessandro; Viroli, Mirko; Omicini, Andrea; Mariani, Stefano; Croatti, Angelo; Pianini, Danilo. 2017. “Spatial Tuples: Augmenting Physical Reality with Tuple Spaces.” 10th International Symposium on Intelligent Distributed Computing, Paris, France, 10–12/10/2016. Intelligent Distributed Computing X, *Springer Studies in Computational Intelligence* 678 (pagine 121–130).
- C17** Ciatto, Giovanni; Mariani, Stefano; Omicini, Andrea. 2017. “Programming the Interaction Space Effectively with ReSpecTX.” International Symposium on Intelligent and Distributed Computing, Paris, France, 10–12/10/2017. Intelligent Distributed Computing XI, *Springer Studies in Computational Intelligence* 737 (pagine 89–101).
- C16** Mariani, Stefano; Omicini, Andrea. 2015. “Anticipatory Coordination in Socio-technical Knowledge-intensive Environments: Behavioural Implicit Communication in MoK.” XIVth International Conference of the Italian Association for Artificial Intelligence, Ferrara, Italy, 23–25/09/2015. Advances in Artificial Intelligence, *Springer Lecture Notes in Computer Science* 9336 (pagine 102–115).
- C15** Omicini, Andrea; Fortino, Giancarlo; Mariani, Stefano. 2015. “Blending Event-Based and Multi-Agent Systems around Coordination Abstractions.” International Conference on Coordination Languages and Models, Grenoble, France, 02–04/06/2015. Coordination Models and Languages, *Springer Lecture Notes in Computer Science* 9037 (pagine 186–193).
- C14** Omicini, Andrea; Mariani, Stefano. 2015. “Reconciling Event- and Agent-Based Paradigms in the Engineering of Complex Systems: The Role of Environment Abstractions.” 4th International Workshop E4MAS, Paris,

France, 06/05/2014. Agent Environments for Multi-Agent Systems IV, *Springer Lecture Notes in Computer Science* 9068 (pagine 117–130).

- C13** Mariani, Stefano; Omicini, Andrea; Sangiorgi, Luca. 2015. “Models of Autonomy and Coordination: Integrating Subjective & Objective Approaches in Agent Development Frameworks.” 8th International Symposium on Intelligent Distributed Computing, Madrid, Spain, 3–5/09/2014. *Intelligent Distributed Computing VIII, Springer Studies in Computational Intelligence* 570 (pagine 69–79).
- C12** Mariani, Stefano; Truong, Hong-Linh; Copil, Georgiana; Omicini, Andrea; Dustdar, Schahram. 2014. “Coordination-aware Elasticity.” IEEE/ACM 7th International Conference on Utility and Cloud Computing, London, UK, 8–11/12/2014. *IEEE, Proceedings* (pagine 465–472).
- C11** Mariani, Stefano; Omicini, Andrea. 2014. “Coordination in Situated Systems: Engineering MAS Environment in TuCSon.” 7th International Conference on Internet and Distributed Computing Systems, Calabria, Italy, 22–24/09/2014. *Internet and Distributed Computing Systems, Springer Lecture Notes in Computer Science* 8729 (pagine 99–110).
- C10** Mariani, Stefano. 2014. “On the “Local-to-Global” Issue in Self-Organisation: Chemical Reactions with Custom Kinetic Rates.” Eighth IEEE International Conference on Self-Adaptive and Self-Organizing Systems Workshops, London, UK, 08–12/09/2014. *IEEE, Proceedings* (pagine 61–67).
- C9** Mariani, Stefano; Omicini, Andrea. 2013. “Probabilistic Embedding: Experiments with Tuple-based Probabilistic Languages.” 28th ACM Symposium on Applied Computing, Coimbra, Portugal, 18–22/03/2013. *ACM, Proceedings* (pagine 1380–1382).
- C8** Mariani, Stefano; Omicini, Andrea. 2013. “Coordination for Situated MAS: Towards an Event-driven Architecture.” International Workshop on Petri Nets and Software Engineering, Milano, Italy, 24–25/06/2013. Sun SITE Central Europe, RWTH Aachen University, *CEUR Workshop Proceedings* 989 (pagine 17–22).
- C7** Mariani, Stefano; Omicini, Andrea. 2013. “Promoting Space-Aware Coordination: ReSpecT as a Spatial-Computing Virtual Machine.” 6th International Spatial Computing Workshop, Saint Paul, Minnesota, USA, 06/05/2013. *International Foundation for Autonomous Agents and Multiagent Systems, Proceedings* (pagine 29–34).
- C6** Mariani, Stefano; Omicini, Andrea. 2013. “Probabilistic Modular Embedding for Stochastic Coordinated Systems.” 15th International Conference on Coordination Languages and Models, Florence, Italy, 3–6/06/2013. *Coordination Models and Languages, Springer Lecture Notes in Computer Science* 7890 (pagine 151–165).
- C5** Mariani, Stefano; Omicini, Andrea. 2013. “MoK: Stigmergy Meets Chemistry to Exploit Social Actions for Coordination Purposes.” Social Coordination: Principles, Artifacts and Theories Symposium at the AISB Annual Convention, Exeter, UK, 03–05/04/2013. *The Society for the Study*

of *Artificial Intelligence and the Simulation of Behaviour*, Proceedings (pagine 50–57).

- C4** Mariani, Stefano; Omicini, Andrea. 2013. “TuCSon on Cloud: An Event-driven Architecture for Embodied / Disembodied Coordination.” 13th International Conference on Algorithms and Architectures for Parallel Processing, Vietri sul Mare, Italy, 18–20/12/2013. *Algorithms and Architectures for Parallel Processing*, Springer Lecture Notes in Computer Science 8286 (pagine 285–294).
- C3** Mariani, Stefano; Omicini, Andrea. 2013. “Molecules of Knowledge: Self-Organisation in Knowledge-Intensive Environments.” 6th International Symposium on Intelligent Distributed Computing, Calabria, Italy, 24–26/09/2012. *Intelligent Distributed Computing VI*, Springer Studies in Computational Intelligence 446 (pagine 17–22).
- C2** Mariani, Stefano; Omicini, Andrea. 2013. “Event-driven Programming for Situated MAS with ReSpecT Tuple Centres.” 11th German Conference on Multi-Agent System Technologies, Koblenz, Germany, 16-20 September 2013. *Multiagent System Technologies*, Springer Lecture Notes in Computer Science 8076 (pagine 306–319).
- C1** Mariani, Stefano; Omicini, Andrea. 2012. “Self-Organising News Management: The Molecules of Knowledge Approach.” Sixth International Conference on Self-Adaptive and Self-Organizing Systems Workshops, Lyon, France, 10/09/2012. *IEEE, Proceedings* (pagine 11–16).

8.4 Atti di convegno / workshop nazionali con peer review

- CN12** Ciatto, Giovanni; Calegari, Roberta; Mariani, Giovanni; Denti, Enrico; Omicini, Andrea. 2018. “From the Blockchain to Logic Programming and Back: Research Perspectives.” 19th Workshop “From Objects to Agents”, Palermo, Italy, 28–29/06/2018. Sun SITE Central Europe, RWTH Aachen University, *CEUR Workshop Proceedings* 2215 (pagine 69–74).
- CN11** Calegari, Roberta; Ciatto, Giovanni; Mariani, Giovanni; Denti, Enrico; Omicini, Andrea. 2018. “Logic Programming in Space-Time: The Case of Situatedness in LPaaS.” 19th Workshop “From Objects to Agents”, Palermo, Italy, 28–29/06/2018. Sun SITE Central Europe, RWTH Aachen University, *CEUR Workshop Proceedings* 2215 (pagine 63–68).
- CN10** Mariani, Stefano; Omicini, Andrea; Ciatto, Giovanni. 2017. “Novel Opportunities for Tuple-based Coordination: XPath, the Blockchain, and Stream Processing.” 18th Workshop “From Objects to Agents”, Scilla (RC), Italy, 15–17/06/2017. Sun SITE Central Europe, RWTH Aachen University, *CEUR Workshop Proceedings* 1867 (pagine 61–64).
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- CN1** Mariani, Stefano; Omicini, Andrea. 2012. “Molecules of Knowledge: A Novel Perspective over Knowledge Management.” Doctoral Consortium of the 12th Symposium of the Italian Association for Artificial Intelligence, Roma, Italy, 15/06/2012. Sun SITE Central Europe, RWTH Aachen University, *CEUR Workshop Proceedings* 926 (pagine 23–27).

8.5 Articoli invitati ed editoriali

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- A8** Mariani, Stefano; Omicini, Andrea. 2023. “Special Issue “Advances in Multi-Agent Systems”: Editorial.” *MDPI Applied Sciences* 13(5) (pagine 1–4).
- A7** Mariani, Stefano; Omicini, Andrea. 2020. “Special Issue “Multi-Agent Systems”: Editorial.” *MDPI Applied Sciences* 9(5) (pagine 1–6).

- A6** Vaughan, Neil; Vargiu, Eloisa; Mariani, Stefano; Montagna, Sara; Schumacher, Michael I. 2020. “Guest Editorial: Healthcare Intelligent Multi Agent Systems.” *Journal of Medical Systems* 44(138) (pagine 1–2).
- A5** Mariani, Stefano; Vargiu, Eloisa; Mamei, Marco; Zambonelli, Franco; Miralles, Felip. 2019. “Deliver intelligence to integrate care: the ConneCare way.” *International Journal of Integrated Care* 19(4) (pagine 176).
- A4** Mariani, Stefano; Omicini, Andrea. 2019. “Special Issue “Multi-Agent Systems”: Editorial.” *MDPI Applied Sciences* 9(5) (pagine 1–9).
- A3** Garro, Alfredo; Mühlhäuser, Max; Tundis, Andrea; Mariani, Stefano; Omicini, Andrea; Vizzari, Giuseppe. 2019. “Intelligent Agents and Environment.” Reference Module in Life Sciences, *Encyclopedia of Bioinformatics and Computational Biology*, Volume 1 (pagine 309–314).
- A2** Mariani, Stefano; Omicini, Andrea. 2017. “State-of-the-Art and Trends in Nature-inspired Coordination Models.” *IEEE Intelligent Informatics Bulletin* 18(2) (pagine 35–40).
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9 Dichiarazione finale

Dichiarazione sostitutiva ai sensi dell’art. 46 del DPR n. 445 del 28/12/2000. Consapevole delle sanzioni penali, nel caso di dichiarazioni non veritiere, di formazione o uso di atti falsi, richiamate dall’art. 76 del D.P.R. 445/2000, dichiaro, ai sensi degli art. 46 e 47 del D.P.R. 445/2000, che quanto sopra corrisponde a verità. Ai sensi del D.Lgs n.196 del 30/06/2003 dichiaro, altresì, di essere informato che i dati personali raccolti saranno trattati, anche con strumenti informatici, esclusivamente nell’ambito del procedimento per il quale la presente dichiarazione viene resa e che al riguardo competono al sottoscritto tutti i diritti previsti all’art. 7 della medesima legge.

Forlì, 13/5/2024

Stefano Mariani