

## Mario Verdicchio

### Personal data

Born in Milano, Italy, December 23rd, 1975

Nationality: Italian

### Office address

Università degli Studi di Bergamo

Dipartimento di Ingegneria Gestionale, dell'Informazione e della Produzione

Via Marconi 5

20044 Dalmine (BG)

Phone +39-035-2052-358

Email [mario.verdicchio@unibg.it](mailto:mario.verdicchio@unibg.it)

### Education

PhD in Information and Communication Technologies, Politecnico di Milano

Thesis: "A Formal Model for Agent Communication Languages" (2004)

MSc in Computer Science Engineering (with honors), Politecnico di Milano

Thesis: "E-commerce technologies for Web-based Supply Chain Management" (in Italian, 2000)

### Foreign Languages

English (fluent, both written and spoken)

Japanese (fluent spoken, good written)

German (good, both written and spoken)

French (good both written and spoken)

Spanish (fair, both written and spoken)

### Research interests

Artificial Intelligence

Computer Art

Ethics and Philosophy of Computer Science

### Research activity

MIUR (Ministry of University and Research) Researcher

Università degli Studi di Bergamo (2005 - present)

Post-doc researcher

Anemone project (co-financed by MIUR 2003/04), Politecnico di Milano (2004 - 2005)

PhD Student (Information and Communication Technologies, 16th cycle) Politecnico di Milano

Major research theme: A Logical Model for the Semantics of Agent Communication Languages

Supervisor: Prof. Marco Colombetti

Minor research theme: Model Checking Secure Electronic Commerce Protocols

Supervisor: Prof. Pierluigi San Pietro

## Research projects

“In search for feasible technological support of people in rural India” (2018)  
Global Challenges Research Fund: 2,300£

“PoSecCo” - Policy and Security Configuration Management (2010 - 2013)  
EU 7th Framework Programme project on future Internet services  
Total EU funding: 11,919,812€ (consortium), 888,100€ (University of Bergamo)

“PrimeLife” - Privacy and Identity Management in Europe for Life (2008 - 2011)  
EU 7th Framework Programme project on sustainable digital identity  
Total EU funding: 10,200,000€ (consortium), 554,100€ (University of Bergamo)

“GateCom” - Gateway-based architecture for content-centric community networking (2011 - 2013)  
MIUR (Ministry of University and Research) project on network-based content sharing

“Anemone” - A Network of Multi-Agent Platforms for Academic Communities (2003 - 2004)  
MIUR project on agent-based cooperative systems for academic communities

## Teaching activity

*Lecturer, School of Media, Culture and Society, University of the West of Scotland*  
Cross-media Collaborative Project (10 credits, 2017-2018)  
Digital Media Practice A (10 credits, 2017-2018)  
Digital Media Practice B (10 credits, 2017-2018)

*Lecturer, Faculty of Engineering, Università degli Studi di Bergamo*  
Theoretical Computer Science (6 credits, 2005 - 2017)  
Computer Science (6 credits, 2009 - 2017)  
Operating Systems (6 credits, 2005 - 2008)  
Computer Science Projects 3 (5 credits, 2004 - 2005)

*Lecturer, Faculty of Foreign Languages and Literatures, Università degli Studi di Bergamo*  
Web Systems for Tourism (5 credits, 2013 - 2017)  
Computer Science for Communication Sciences (5 credits, 2012 - 2017)  
Computer Science for Humanities 2 (5 credits, 2011 - 2012)

*Teaching Assistant, Faculty of Engineering, Università degli Studi di Bergamo*  
Computer Science 1 (2007 - 2008)  
Computer Science 3 (2007 - 2008)  
Computer Science Projects 3 (2005 - 2007)

*Lecturer, Politecnico di Milano*  
Computer Science (10 credits, Faculty I, 2004 - 2007)  
Computer Science 2 (6 credits, Faculty V, 2004 - 2005)

*Teaching Assistant, Politecnico di Milano*  
Artificial Intelligence (Prof. Colombetti, Faculty V, 2003 - 2017)  
Computer Science 2 (Prof. Baresi, Faculty V, 2001 - 2004)

## Invited lectures

“Can digital technology help anthropology, geography and sociology?” (2018)  
King’s College, London, UK

“The black box inside the black box: The problem with deep learning” (2018)  
Politecnico di Milano, Italy

“Artificial Personhood or What makes an artifact a person” (2017)  
University of Virginia, Charlottesville, USA

“The story of Maeve in Westworld and the concept of personhood” (2017)  
Chukyo University, Nagoya, Japan

### **Experience as a visiting scholar and summer schools**

University of Virginia, Charlottesville, USA (2016 - present)  
Science, Technology & Society, Department of Engineering & Society  
Research on the ethics of new technology with Prof. Deborah G. Johnson

School of Machines, Making and Make-Believe, Berlin (2018)  
“Reality?” – Art, Technology and Augmented Reality

School of Machines, Making and Make-Believe, Berlin (2014)  
“Let’s Get Physical!” – Physical Computing, Arduino, 3D Printing and Laser Cutting

IBM Zurich Research Laboratory, Zurich (2008 - 2010)  
for EU FP7 Project “PrimeLife”

Department of Computing, Imperial College, London (2002)  
for the British 2001/2002 program (England-Italy collaboration for research and higher education)

The Thirteenth European Summer School in Logic Language and Information (ESSLLI), Helsinki (2001)

The Third European Agent Systems Summer School (EASSS), Prague (2001)

### **Conference activity**

The 6th International Conference on Computation, Communication, Aesthetics and X (xCoAx 2018, Madrid) - *Organiser*

The 5th International Conference on Computation, Communication, Aesthetics and X (xCoAx 2017, Lisbon) - *Organiser*

The 4th International Conference on Computation, Communication, Aesthetics and X (xCoAx 2016, Bergamo) - *Chair*

The 3rd International Conference on Computation, Communication, Aesthetics and X (xCoAx 2015, Glasgow) - *Organiser*

The 2nd International Conference on Computation, Communication, Aesthetics and X (xCoAx 2014, Porto) - *Organiser*

The 1st International Conference on Computation, Communication, Aesthetics and X (xCoAx 2013, Bergamo) - *Chair*

### **Publications**

#### **Journals**

D. Johnson, *M. Verdicchio*  
“Why robots should not be treated like animals”  
*Ethics and Information Technology*, <https://doi.org/10.1007/s10676-018-9481-5> (2018)

D. Johnson, *M. Verdicchio*  
“AI, agency and responsibility: the VW fraud case and beyond”  
*AI & Society*, <https://doi.org/10.1007/s00146-017-0781-9> (2018)

*M. Verdicchio*  
“Saremo padroni o schiavi dell’informatica del futuro?”  
*Mondo Digitale* 72, 26 p., (2017)

Available in English as “Will we be masters or slaves of the Information Technology of the future?” at:  
[https://www.researchgate.net/publication/322567814\\_Will\\_we\\_be\\_masters\\_or\\_slaves\\_of\\_the\\_Information\\_Technology\\_of\\_the\\_future](https://www.researchgate.net/publication/322567814_Will_we_be_masters_or_slaves_of_the_Information_Technology_of_the_future)

D. Johnson, *M. Verdicchio*  
“Reframing AI Discourse”  
*Minds and Machines* 27(4): 575-590 (2017)

D. Johnson, *M. Verdicchio*  
“AI Anxiety”  
*Journal of the Association for Information Science and Technology* 68: 2267-2270 (2017)

V. Schiaffonati, *M. Verdicchio*  
“Rethinking Experiments in a Socio-Technical Perspective: The Case of Software Engineering”  
*Philosophies*, 1(1):87-101 (2015)

*M. Verdicchio*  
“Informatica e arte: contraddizione, rivoluzione, evoluzione”  
*Mondo Digitale*, 57:1-20 (2015)

V. Schiaffonati, *M. Verdicchio*  
“Computing and Experiments”  
*Philosophy & Technology* 27(3): 359-376 (2014) ISSN: 2210-5441

C. A. Ardagna, S. De Capitani di Vimercati, S. Paraboschi, E. Pedrini, P. Samarati, *M. Verdicchio*  
“Expressive and Deployable Access Control in Open Web Service Applications”  
*IEEE Transactions on Services Computing*, 4(2): 96-109 (2011) ISSN: 1939-1374

C.A. Ardagna, J. Camenisch, M. Kohlweiss, R. Leened, G. Neven, B. Priem, P. Samarati, D. Sommer, *M. Verdicchio*  
“Exploiting cryptography for privacy-enhanced access control: A result of the PRIME Project”  
*Journal of Computer Security*, 18(1): 123-160 (2010) ISSN: 0926-227X

*M. Verdicchio*, M. Colombetti  
“Communication Languages for Multiagent Systems”  
*Computational Intelligence*, 25(2): 136-159 (2009) ISSN: 0364-0213

N. Fornara, F. Viganò, *M. Verdicchio*, M. Colombetti  
“Artificial institutions: a model of institutional reality for open multiagent systems”  
*Artificial Intelligence and Law*, 16(1): 89-105 (2008) ISSN: 0924-8463

M. Colombetti, N. Fornara, *M. Verdicchio*  
“Linguaggio e realtà sociale nei sistemi di agenti artificiali”  
*Networks: a journal of the philosophy of artificial intelligence and cognitive sciences*, 3(1): p.20 (2003) ISSN: 1126-4780

*M. Verdicchio*, M. Colombetti  
“Commitments for Agent-Based Supply Chain Management”  
*ACM SIGecom Exchanges*, 3(1): p.11 (2002) EISSN: 1551-9031

### **Journals as editor**

L. Ribas, A. Rangel, *M. Verdicchio*, M. Carvalhais  
“CITAR Journal, Volume 9, No. 3—Special Issue: xCoAx 2017”  
*CITAR: Journal of Science and Technology of the Arts* 9(3): 1-2 (2017)

A. Clifford, A. Rangel, *M. Verdicchio*, M. Carvalhais  
“CITAR Journal, Volume 8, No. 1—Special Issue: xCoAx 2016”  
*Journal of Science and Technology of the Arts* 8(1): 1-2 (2016)

A. Clifford, A. Rangel, M. Verdicchio  
“CITAR Journal, Volume 7, No. 1 –Special Issue: xCoAx 2015”  
*Journal of Science and Technology of the Arts* 7(1): 1-1 (2015)

M. Carvalhais, A. Rangel, M. Verdicchio  
“CITAR Journal, Volume 6, No. 1 –Special Issue: xCoAx 2014”  
*Journal of Science and Technology of the Arts* 6(1): 1-2 (2014)

## Books

M. Verdicchio  
“L’informatica per la comunicazione”, Seconda edizione  
Ed. Franco Angeli, Milano, pp. 266 (2016)

## Books as editor

L. Ribas, A. Rangel, M. Verdicchio, M. Carvalhais  
“xCoAx 2017: Proceedings of the Fifth Conference on Computation, Communication, Aesthetics & X”  
Universidade do Porto, Porto, pp. 389 (2017)

M. Verdicchio, A. Clifford, A. Rangel, M. Carvalhais  
“xCoAx 2016: Proceedings of the Fourth Conference on Computation, Communication, Aesthetics & X”  
Universidade do Porto, Porto, pp. 412 (2016)

A. Clifford, M. Verdicchio, M. Carvalhais  
“xCoAx 2015: Proceedings of the Third Conference on Computation, Communication, Aesthetics & X”  
Universidade do Porto, Porto, pp. 403 (2015)

M. Verdicchio, M. Carvalhais  
“xCoAx 2014: Proceedings of the Second Conference on Computation, Communication, Aesthetics & X”  
Universidade do Porto, Porto, pp. 561 (2014)

M. Verdicchio, M. Carvalhais  
“xCoAx 2013: Proceedings of the First Conference on Computation, Communication, Aesthetics & X”  
Universidade do Porto, Porto, pp. 354 (2013)

## Book chapters

V. Schiaffonati, M. Verdicchio  
“What do bridges and software tell us about the philosophy of engineering?”  
In C. Mitcham, B. Li, B. Newberry, and B. Zhang (eds.), *Philosophy of Engineering, East and West*  
Boston Studies in the Philosophy and History of Science vol. 330, 137-148,  
Springer International Publishing AG (2018) ISBN 978-3-319-62448-8

M. Verdicchio  
“The Past and the Future of Computer Science and Art”  
In U. Persi, A. V. Polonsky (eds.), *The Artistic Text: Cultural Tradition and Multimedial Reality*, 34-52,  
Belgorod Publishing House (2017)

M. Verdicchio  
“An analysis of machine ethics from the perspective of autonomy”  
In T. Powers (ed.), *Philosophy and Computing: Essays in Epistemology, Philosophy of Mind, Logic, and Ethics*  
Philosophical Studies vol. 128, 179-191,  
Springer International Publishing AG (2017) ISBN 978-3-319-61042-9

*M. Verdicchio*

“The role of computers in visual art”

In F. Gadducci and M. Tivosanis (eds.), *History and Philosophy of Computing: Third International Conference, HaPoC 2015, Pisa, Italy, October 8-11, 2015, Revised Selected Papers* IFIP Advances in Information and Communication Technology vol. 487, 287-299, Springer International Publishing AG (2015) ISBN 978-3-319-47285-0

V. Schiaffonati, *M. Verdicchio*

“The Influence of Engineering Theory and Practice on Philosophy of Artificial Intelligence”

In V.C. Müller (ed.), *Philosophy and Theory of Artificial Intelligence*, 375-388, Springer (2013) ISBN 978-3-642-31673-9

C. A. Ardagna, S. De Capitani di Vimercati, G. Neven, S. Paraboschi, E. Pedrini, F. S. Preiss, P. Samarati, *M. Verdicchio*,

“Advances in Access Control Policies” In J. Camenisch, S. Fischer-Huebner, K. Rannenberg (a cura di), *Privacy and Identity Management for Life*, 327-341, Springer (2011) ISBN 978-3-642-20316-9

M. Colombetti, N. Fornara, *M. Verdicchio*

“Speech Acts in Artificial Agent Communication” *Linguistica e Nuove Professioni*, 70-92,

Franco Angeli (2003) ISBN 9788846450104

## Conference proceedings

*M. Verdicchio*, V. Paris

“Random Sculptures”

in L. Ribas, A. Rangel, M. Verdicchio, M. Carvalhais (eds.),

*xCoAx 2017: Proceedings of the Fifth Conference on Computation, Communication, Aesthetics & X*, 302-305,

Universidade do Porto (2017)

*M. Verdicchio*

“Glitcher”

in M. Verdicchio, M. Carvalhais (eds.),

*xCoAx 2014: Proceedings of the Second Conference on Computation, Communication, Aesthetics & X*, 487-489,

Universidade do Porto (2014)

J. Bach, *M. Verdicchio*

“What Kind of Machine is the Mind?”

*Turing 100*, A. Voronkov (ed.), 16-19, EpiC (2012)

Patrik Bichsel, Jan Camenisch, *Mario Verdicchio*

“Recognizing Your Digital Friends”

*Proceedings of SocialCom/PASSAT 2011*, 1310-1313, IEEE Computer Society (2011) ISBN: 978-1-4577-1931-8

G. Singh, M. Arrigoni Neri, *M. Verdicchio*

“A Web-based Survey to Evaluate the Aesthetic Impact of the Golden Ratio”

*Proceedings of the 14th Generative Art International Conference*, 207-217, Argenia (2011) ISBN: 978-88-9610-145

C.A. Ardagna, S. De Capitani di Vimercati, G. Neven, S. Paraboschi, F.S. Preiss, P. Samarati, *M. Verdicchio*

“Enabling Privacy-preserving Credential-based Access Control with XACML and SAML” *Proceedings of the 10th International Conference on Computer and Information Technology (CIT 2010)*, 1090-1095, IEEE Computer Society (2010)

ISBN: 978-0-7695-4108-2

C.A. Ardagna, S. De Capitani di Vimercati, S. Foresti, G. Neven, S. Paraboschi, F.S. Preiss, P. Samarati, *M. Verdicchio*

“Fine-Grained Disclosure of Access Policies” *Proceedings of the 12th International Conference on Information and Communications Security (ICICS 2010)*, Lecture Notes in Computer Science 6476: 16-30, Springer (2010)

ISBN: 3-642-17649-6 978-3-642-17649-4

*M. Verdicchio*

“Generative vs Non-Generative Art in the Verification of the Institutional Stance”

*Proceedings of the 13th Generative Art International Conference*, 313-318, Argenia (2010) ISBN: 978-88-96610-06-0

E. Lorini, *M. Verdicchio*

“Towards a Logical Model of Social Agreement for Agent Societies” *Coordination, Organizations, Institutions and Norms in Agent Systems V*, Lecture Notes in Computer Science 6069: 147-162, Springer (2009)  
ISBN: 3-642-14961-8 978-3-642-14961-0

P. Bichsel, S. Müller, F.S. Preiss, D. Sommer, *M. Verdicchio*

“Security and Trust through Electronic Social Network-based Interactions”  
*Proceedings of the 12th IEEE International Conference on Computational Science and Engineering (CSE '09)*, 1002-1007,  
IEEE Computer Society (2009) ISBN: 978-0-7695-3823-5

P. Spoletini, *M. Verdicchio*

“An Automata-based Monitoring Technique for Commitment-based Multi-Agent Systems”  
*Coordination, Organizations, Institutions and Norms in Agent Systems IV*, Lecture Notes in Computer Science 5428: 172-187,  
Springer (2009) ISBN: 978-3-642-00442-1

M. Celesti, *M. Verdicchio*

“Painting with Outliners and Fillers” *Proceedings of the 12th Generative Art International Conference*, 339-343, Argenia (2009)  
ISBN: 978-8-896-61000-8

P. Spoletini, *M. Verdicchio*

“Commitment Monitoring in a Multiagent System”  
*Multi-Agent Systems and Applications V, Proceedings of the 5th International Central and Eastern European Conference on Multi-Agent Systems (CEEMAS 2007)*, Lecture Notes in Computer Science 4696: 83-92, Springer (2007)  
ISBN: 978-3-540-75253-0

*M. Verdicchio*, M. Colombetti

“From Message Exchanges to Communicative Acts to Commitments”  
*Proceedings of the 3rd International Workshop on Logic and Communication in Multi-Agent Systems (LCMAS 2005)*,  
Electronic Notes in Theoretical Computer Science 157(4): 75-94, Elsevier (2006) ISSN: 1571-0661

G.Armano, P.Baroni, G.Cherchi, M.Colombetti, A.Gerevini, M.Mari, A.Poggi, C.Santoro, E.Tramontana, *M. Verdicchio*

“ANEMONE – A Network of Multi-Agent Platforms for Academic Communities”  
*Proceedings of WOA 2005: 6th AI\*LA/TABOO Joint Workshop "From Objects to Agents": Simulation and Formal Analysis of Complex Systems, 120-126*, Pitagora Editrice (2005)

*M. Verdicchio*, M. Colombetti

“A commitment-based communicative act library”  
*Proceedings of the 4th International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS 2005)*, 755-761,  
ACM Press (2005) ISBN:1-59593-093-0

*M. Verdicchio*, M. Colombetti

“A commitment-based communicative act library (Extended abstract)”  
*Proceedings of the 3rd European Workshop on Multi-Agent Systems (EUMAS 2005)*, 511-512 (2005)

*M. Verdicchio*, M. Colombetti

“Temporal Expressions for Content Languages”  
*Proceedings of the 2nd European Workshop on Multi-Agent Systems (EUMAS 2004)*, 749-758 (2004)

*M. Verdicchio*, M. Colombetti

“Dealing with Time in Content Language Expressions”  
*Developments in Agent Communication: Proceedings of AAMAS 2004 Workshop on Agent Communication*,  
Lecture Notes in Artificial Intelligence 3396: 99-114, Springer (2004)

*M. Verdicchio*, P. San Pietro

“Model Checking-Aided Design of Secure Distributed Systems”  
*Proceedings of the LASTED International Conference on Software Engineering (SE 2004)*, p.6, ACTA Press (2004)

M. Colombetti, N. Fornara, *M. Verdicchio*

“A Social Approach to Communication in Multiagent Systems”

*Declarative Agent Languages and Technologies, First International Workshop (DALT 2003)*

Lecture Notes in Computer Science 2990: 191-220, Springer (2004)

*M. Verdicchio*, M. Colombetti

“A Logical Model of Social Commitment for Agent Communication”

*Advances in Agent Communication*, Lecture Notes in Artificial Intelligence 2922: 128-145, Springer (2004), extends (\*)

*M. Verdicchio*, M. Colombetti

“A Model of Artificial Institutions for Agent Communication”

*Proceedings of the 1st European Workshop on Multi-Agent Systems (EUMAS 2003)*, p.11 (2003), reprint of (\*\*)

*M. Verdicchio*, M. Colombetti

“A Logical Model of Social Commitment for Agent Communication”\*

*Proceedings of the 2nd International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS '03)*, 528-535, ACM Press (2003) ISBN:1-58113-683-8

*M. Verdicchio*, M. Colombetti

“A Model of Artificial Institutions for Agent Communication”\*\*

*Proceedings of the Workshop on Logic and Communication in Multi-Agent Systems (LCMAS '03)*,

Electronic Notes in Theoretical Computer Science 85(2): p.11, Elsevier (2003)

*M. Verdicchio*, P. San Pietro,

“Model Checking the Secure Electronic Transaction Protocol”

*Proceedings of the Conference on Design, Analysis, and Simulation of Distributed Systems 2003 (DASD 03)*, 165-171 (2003)

M. Colombetti, N. Fornara, *M. Verdicchio*

“The Role of Institutions in Multiagent Systems”

*Proceedings of the UK Workshop on Multiagent Systems (UKMAS-2002)*, p.11 (2002)

M. Colombetti, N. Fornara, *M. Verdicchio*

“The Role of Institutions in Multiagent Systems”

*Atti dell'VIII Convegno dell'Associazione Italiana per l'Intelligenza Artificiale*, p.11 (2002)

M. Colombetti, *M. Verdicchio*

“An Analysis of Agent Speech Acts as Institutional Actions”

*Proceedings of the 1st International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS '02)*, 1157-1164, ACM Press (2002) ISBN:1-58113-480-0

## Reviews

*M. Verdicchio*

“Funzioni, Macchine, Algoritmi: Introduzione alla Teoria della Computabilità di M. Frixione e D. Palladino”

*Intelligenza Artificiale*, Anno 1, N.4 (2004)

## Technical reports

*M. Verdicchio*

“Model Checking the Secure Electronic Transaction Protocol with SPIN”

*Rapporto interno*, Politecnico di Milano – Dipartimento di elettronica e informazione (2002)

R. Brambilla, S. Mainetti, *M. Verdicchio*

“Architetture e tecnologie per l'apertura dei sistemi informativi al mondo Internet”

*Sesto rapporto sul sistema finanziario italiano*, vol. 1, 79-112, Fondazione Rosselli (2001)

## Demos

T. Kawamoto, N. Liberati, *M. Verdicchio*  
“Perceptual 3D Vision with Video Byōbu”  
*Laval Virtual 2018*, Laval, France (2018)

T. Kawamoto, N. Liberati, *M. Verdicchio*  
“From Desktop Cave to Home Cave”  
*Immersive Italy 2017*, Lucca, Italy (2017)

## Artistic activity

*M. Verdicchio*  
“Nothingness isn’t nothing”  
ACUD, Berlin, Germany (2018)

*M. Verdicchio*, V. Paris  
“Random Sculptures”  
Museo do Chiado, Lisbon, Portugal (2017)

*M. Verdicchio*  
“Strata & Struktur” (solo exhibition with 20 works)  
Galleria Svettini, Milano, Italy (2015)

*M. Verdicchio*, T. O’Reilly  
“SBRTTH”  
Künstlerhaus Bethanien, Berlin, Germany (2014)

*M. Verdicchio*  
“Oblivion”  
Künstlerhaus Bethanien, Berlin, Germany (2014)

*M. Verdicchio*  
“2.5”  
Künstlerhaus Bethanien, Berlin, Germany (2014)

*M. Verdicchio*  
“Glitcher”  
AXA Building, Porto, Portugal (2014)

A selection of artworks is presented at  
[mariokun-st.tumblr.com](https://mariokun-st.tumblr.com) and  
[instagram.com/mariokun\\_](https://www.instagram.com/mariokun_)

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