



# Silvio Ghilardi

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**Sesso:** Maschile **Data di nascita:** 12/05/1958 **Nazionalità:** Italiana

## ESPERIENZA LAVORATIVA

[ 01/03/2003 – Attuale ] **Professore Ordinario, SSD MAT/01 "Logica Matematica"**

*Università degli Studi di Milano, Dipartimento di Matematica*

**Città:** Milano

**Paese:** Italia

## ISTRUZIONE E FORMAZIONE

**Laurea in Filosofia**

*Università degli Studi di Milano*

**Dottore di Ricerca in Matematica**

*Università degli Studi di Milano*

## COMPETENZE LINGUISTICHE

**Lingua madre:** italiano

**Altre lingue:** Inglese, Francese

## SETTORI DI RICERCA

### Settori di ricerca

Logica algebrica e categoriale, logiche modali e descrittive, ragionamento automatico, model checking a stati infiniti.

Si riportano di seguito le pubblicazioni degli ultimi tre anni, l'elenco completo è disponibile al link sotto indicato.

<http://users.mat.unimi.it/users/ghilardi/allegati/research.html>

## PUBBLICAZIONI

[ 2022 ]

**S. Ghilardi, A. Gianola, D. Kapur Uniform Interpolants in EUF: Algorithms using DAG-representations, Logical Methods in Computer Science, 18 (2022), no. 2, Paper No. 2, 24 pp.**

[ 2022 ]

**S. Ghilardi, A. Gianola, M. Montali, A. Rivkin Petri Net-Based Object-Centric Processes with Read-Only Data, Information Systems, Information Systems, 2022, 107, 102011**

[ 2022 ]

**S. Ghilardi, A. Gianola Interpolations and Uniform Interpolation in Quantifier-Free Fragments of Combined First Order Theories, Mathematica, 10(3), 461, Special Issue on "Decidability of Logics and Their Theories and Combinations", (invited contribution)**

[ 2022 ]

**S. Ghilardi, G. Lenzi Unification in Lax Logic, J. of Algebraic Hyperstructures and Logical Algebras, Special issue for 75th Birthday of A. di Nola, vol.3, n.1, pp. 61-76,**

[ 2021 ]

**D. Bruschi, A. Di Pasquale, S. Ghilardi, A. Lanzi, E. Pagani A formal verification of ARPON – a tool for avoiding Man-in-the-Middle attacks in Ethernet networks, Transactions on Dependable and Secure Computing,**

[ 2021 ]

**D. Calvanese, S. Ghilardi, A. Gianola, M. Montali, A. Rivkin Model Completeness, Uniform Interpolants and Superposition Calculus (with Applications to Verification of Data-Aware Processes), Journal of Automated Reasoning, 65(7), pp. 941–969,**

[ 2021 ]

**G. Bezhanishvili, N. Bezhanishvili, L. Carai, D. Gabelaia, S. Ghilardi, M. Jibladze Diego's Theorem for nuclear implicative semilattices, Indagationes Mathematicae, 32(2), pp. 498-535,**

[ 2021 ]

**S. Ghilardi, E. Pagani Higher-Order Quantifier Elimination, Counter Simulations and Fault-Tolerant Systems, Journal of Automated Reasoning, 65(3), pp. 425–460**

[ 2021 ]

**S. Ghilardi, A. Gianola, M. Montali, A. Rivkin Delta-BPMN: a Concrete Language and Verifier for Data-aware BPMN, Proc. of BPM 2021, 12875 Springer LNCS, pp. 179–196,**

[ 2021 ]

**S. Ghilardi, A. Gianola, D. Kapur Interpolation and Amalgamation for Arrays with MaxDiff, Proc. of FoSSaCS 2021, Springer LNCS 12650, pp. 268–288**

[ 2020 ]

**D. Calvanese, S. Ghilardi, A. Gianola, M. Montali, A. Rivkin SMT-based Verification of Data-Aware Processes: a Model-Theoretic Approach, Mathematical Structures in Computer Science, 30(3): 271-313**

[ 2020 ]

**S. Ghilardi, L. Santocanale Free Heyting Algebra Endomorphisms: Ruitenburg's Theorem and Beyond, Mathematical Structures in Computer Science, 30(6), pp. 572-596,**

[ 2020 ]

**N. Bezhanishvili, S. Ghilardi, L. Landi Model Completeness and  $\Pi_2$ -rules: the case of Contact Algebras, Proc. of AiML 2020, College Publications, pp. 115-132,**

[ 2020 ]

**S. Ghilardi, A. Gianola, M. Montali, A. Rivkin Petri Nets with Parameterised Data: Modelling and Verification, Proc. of BPM 2020, Springer LNCS n.12168, pp. 55-74**

[ 2020 ]

**D. Calvanese, S. Ghilardi, A. Gianola, M. Montali, A. Rivkin Combined Covers and Beth Definability, Proc. of IJCAR 2020, Springer LNAI n. 12166, pp. 181-200**

## CONFERENZE E SEMI-NARI

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### Membro di comitato di programma di conferenze e workshop internazionali

AAAI Conference on Artificial Intelligence 2020,2021 and 2022; ADDCT ( `Automated Deduction, Decidability, Complexity, Tractability), 2007, 2009, 2013, 2014 (co-chair); AIML ( `Advances in Modal Logic'), 2006, 2008, 2010, 2012 (co-chair), 2014, 2016, 2018 and 2020; ARCADE ( `Workshop on Automated Reasoning: Challenges, Applications, Directions, Exemplary Achievements') 2017, 2019; CADE ( `Conference on Automated Deduction'), 2009, 2011, 2017, 2019 and 2021; CILC ( `Italian Conference in Computational Logic) 2018, 2019, 2020, 2021 and 2022; CONCUR ( `International Conference on Concurrency Theory') 2020; CSL ( `Computer Science logic') 2016; DL ( `Description Logics Workshop') 2015, 2016, 2017, 2018 and 2020; FroCoS ( `Frontiers of Combining Systems'), 2007, 2009 (co-chair), 2011, 2013, 2015, 2017, 2019 and 2021; IFIP-TCS ( `Theoretical Computer Science Conference') 2014; IJCAI ( `International Joint Conference on Artificial Intelligence') 2018, 2019 and 2020; IJCAR ( `International Joint Conference on Automated Reasoning'), 2008, 2010, 2012, 2014, 2016, 2018, 2020 and 2022; LPAR ( `Logic for Programming, Artificial Intelligence and Reasoning') 2017; MOD\* ( `MODEL-checking for self-\* systems') 2014; MSE ( `International Workshop on Microservices: Science and Engineering') 2018; M4M ( `Methods for Modalities'), 2009; RAMICS ( `Relational and Algebraic Methods in Computer Science'), 2021; RTA ( `Rewriting Techniques and Applications'), 2012; SOAP ( `Service-Oriented Architectures and Programming Conference') 2015; SOQE ( `SEcondo Order Quantifier Elimination'), 2021; TABLEAUX 2015 and 2021; TACL ( `Topology, Algebra and categories in Logic") 2019 (co-chair), 2022; TANCL ( `Algebraic and Topological Methods in Non Classical Logics'), 2007 and 2011; UNIF ( `International Workshop on Unification'), 2012, 2013, 2015, 2016 (co-chair), 2017, 2018, 2020 and 2021; VPT ( `Verification and Program Transformation') 2015; VSTTE ( `Verified Software: Theories, Tools, and Experiments') 2013; WoMO ( `Workshop on Modular Ontologies), 2006, 2010, 2011, 2012; WOLLIC ( `Workshop on Logic, Language, Information and Computation), 2009.

### Editore associato di riviste internazionali

Journal of Automated Reasoning

Review of Symbolic Logic

## ATTIVITÀ DIDATTICA CORRENTE

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### Corsi

Logica Matematica I (cdl magistrale in Matematica)

Metodi per il Ragionamento Automatico (cdl magistrale in Matematica)

Computational Logic (cdl triennale interateneo in Artificial Intelligence)

<http://users.mat.unimi.it/users/ghilardi/teaching.html>

## COMPETENZE DI GE- STIONE E DIRETTIVE

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### Associazioni Scientifiche

Presidente dell'Associazione Italiana di Logica e Applicazioni (AILA)

Direttore della Scuola Italiana di Logica

<https://www.ailalogica.it/>

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*Autorizzo il trattamento dei miei dati personali presenti nel CV ai sensi dell'art. 13 d. lgs. 30 giugno 2003 n. 196 - "Codice in materia di protezione dei dati personali" e dell'art. 13 GDPR 679/16 - "Regolamento europeo sulla protezione dei dati personali".*

*Milano, 13/05/2022*