

Nicola Angius

Curriculum Vitae

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Informazioni Personali

Nome Nicola Angius
Data di Nascita 04 Novembre 1980
Luogo di Nascita Sassari, SS

Istruzione e Formazione

- 2017 **Abilitazione Scientifica Nazionale, Professore di II fascia, settore scientifico-disciplinare M-Fil/02.**
- 2013 **TFA - Tirocinio Formativo Attivo. Abilitazione all'insegnamento nelle scuole superiori di secondo grado per la classe A037 Filosofia e Storia, Università degli studi di Sassari, Voto: 100/100 con lode.**
- 2010 **Dottorato di Ricerca in Discipline Filosofiche, Università degli Studi di Cagliari, Giudizio: OTTIMO.**
- 2005 **Diploma di Laurea Vecchio Ordinamento in Filosofia, Università Cattolica del Sacro Cuore di Milano, Voto: 110/110.**
- 1999 **Diploma di Maturità Scientifica presso Liceo Scientifico "G. Spano", Sassari, Voto: 100/100.**

Tesi di Dottorato

Titolo *MODEL VERIFICATION IN COMPUTER SCIENCE: SCIENTIFIC METHODOLOGY, ABSTRACTION, AND IDEALIZATION*
Supervisors Prof.ssa Elisabetta Cattanei (Università di Cagliari); prof. Alberto Mario Mura (Università di Sassari); prof. Guglielmo Tamburrini (Università di Napoli Federico II)

Abstract This work provides an epistemological and methodological analysis of model checking to advance the thesis that the conjectural knowledge of computer programs and hardware systems which formal methods in Computer Science enable one to attain involves the deployment of methodologies which, in their essential traits, are on a par with traditional methodologies one utilizes in physics and other natural sciences for predictive and explanatory purposes. This examination will drawn upon reflective work carried out in the philosophy of science and chiefly concern the philosophy of models on one hand and distortive idealizations in scientific practice on the other. This work is divided into two parts, the first one dealing with the notion of theoretical models in empirical sciences and model checking, and the second part examining the practice of idealization within empirical models and drawing some relative reflections on the issue of abstraction in model checking.

Interessi di Ricerca

Filosofia dell'Informatica; Logica Computazionale; Etica del Computer; Filosofia delle Simulazioni al Computer.

Esperienza Lavorativa

- A.A. **Docente a contratto del corso 'Progettazione di Applicazioni Interattive'**,
2018–2019 *Dipartimento di Storia, Scienze dell'Uomo e della Formazione, Università degli Studi di Sassari.*
- A.A. **Docente a contratto del corso 'Filosofia della Psicologia'**, *Dipartimento di Scienze Biomediche, Università degli Studi di Sassari.*
2017–2018
- Maggio 2016 - **Assegnista di ricerca**, *Dipartimento di Storia, Scienze dell'Uomo e della For-*
Ottobre 2017 *mazione, Università degli Studi di Sassari.*
- 2011–2015 **Titolare a contratto delle 'Esercitazioni di Logica'**, *Dipartimento di Storia, Scienze dell'Uomo e della Formazione, Università degli Studi di Sassari.*
- Gennaio - **Visting Scholar**, *School of Computer Science and Electronic Engineering, Uni-*
Giugno 2011 *versity of Essex, UK.*
- 2010–2012 **Borsista di Ricerca RAS**, *Dipartimento di Teorie e Ricerche dei Sistemi Culturali, Università degli Studi di Sassari.*

Attività Accademiche

- Revisore di - Synthese; Minds & Machines; Journal of Logic and Computation; Philosophy &
Riviste peer Technology; Foundations of Science; International Studies in the Philosophy of
review Science; Oxford Bibliographies; Techné: Research in Philosophy and Technology.
- Gruppi di - Collaboratore esterno del Logic and Formal Methods Research Group ($\lambda - ForM$).
ricerca Department of Mathematics, School of Applied Mathematical and Physical Sciences,
National Technical University of Athens

Invited talks - *Summer School On Computer Simulation Methods*, presso HLRS, University of Stuttgart, 25-29 settembre, 2017, Stoccarda, Germania. Titolo intervento: Qualitative Models in Computational Systems Biology. Representation, confirmation, experimentation.

- *3th Séminaire Histoire et philosophie de l'informatique*, 23 febbraio 2017, presso IHPST, Parigi. Titolo intervento: From Simulative Programs as Theories to Theories of Simulative Programs.

- Workshop su *Algebraic Modelling of Topological and Computational Structures*, National Technical University of Athens; 3 luglio 2015, Atene, Grecia. Titolo Intervento: Syntactic and Semantic Presentations of Scientific Theories in Abstract Model Theory.

- *HaPoC 2015 : 3rd International CONFERENCE on the HISTORY and PHILOSOPHY of COMPUTING*, 8-11 ottobre 2015, Pisa.

- Workshop on *Induction, abduction, belief revision, and realism*. National Technical University of Athens; School of Applied Mathematics and Physics; Department of Humanities, Social Sciences and Law. Research Funding Program: THALIS - UoA, 15-16 dicembre 2014, Atene, Grecia.

Organizzazione - Co-organizzatore del simposio 'Identity in Computational Formal and Applied Systems', presso *CLMPST2019, 16th International Congress on Logic, Methodology and Philosophy of Science and Technology*, 5-10 Agosto 2019, Praga.

- Membro del Program Committee di HaPoC 2019, 5th International Conference on the History and Philosophy of Computing, 28-30 ottobre 2019, Università di Bergamo.

- Membro del Program Committee di HaPoP 2018, Fourth Symposium on the History and Philosophy of Programming, 23 March 2018, Mathematical Institute, University of Oxford, United Kingdom.

- Co-organizzatore del simposio 'Methodological issues in the Philosophy of Computer Science' presso *IACAP 2016: International Association for Computing and Philosophy*, Annual Meeting, 14-17 giugno 2016, Ferrara.

- Co-organizzatore del workshop 'Philosophy of Computer Science' al 5th congresso *UNILOG*, 20-30 giugno, Istanbul, Turchia.

- Membro del Program Committee del congresso *PHILOWEB GR*, 31 maggio 2014, Thessalonica, Grecia.

- Submitted talks - “Second Order Properties of Copied Computational Artefacts” (con Giuseppe Primiero). CLMPST2019, 16th International Congress on Logic, Methodology and Philosophy of Science and Technology, 5-10 Agosto 2019, Praga.
- “Model Checking and Models in Science. Models, Regularities, Prediction” (con Guglielmo Tamburrini). 7th European Conference on Philosophy and Computing (ECAP09) - 2-4 luglio 2009, Universitat Autònoma de Barcelona.
 - “Model Checking and scientific methodology: models, regularities, and idealizations.” International Conference of the Italian Society for Logic and Philosophy of Science (SILFS 2010), 15 - 17 dicembre 2010, Università degli Studi di Bergamo.
 - “Falsification and confirmation of hypotheses about computational systems in software testing”, 14th congress of logic, methodology and philosophy of science (CLMPS11), 19-26 luglio, University of Nancy.
 - “Model Based Abductive Reasoning in Software Verification”. MBR012 Model-Based Reasoning in Science and Technology. Theoretical and Cognitive Issues, 21-23 giugno 2012, Sestri Levante, Italy.
 - “Falsifiability and Probability of Hypotheses about Computational Systems, and Scientific Experiments in Software Testing”. The Answers of Philosophy: SIFA 20th Anniversary Conference. 12-15 September 2012, Alghero (Università degli Studi di Sassari).
 - “The Logical Structure of Modular Semantic Theories of Software Systems” (con Petros Stefanias). IACAP 2014, The Annual Meeting of the International Association for Computing and Philosophy, 2-4 luglio, Salonicco, Grecia.
 - “Defending the Semantic View of Theories. A Computer Science Perspective” (con Petros Stefanias). 15th Congress on Logic, Methodology and Philosophy of Science (CLMPS), Helsinki, 3-8 agosto 2015.
 - “From Simulative Programs as Theories to Theories of Simulative Programs” (con Guglielmo Tamburrini). IACAP 2016: International Association for Computing and Philosophy, Annual Meeting, 14-17 giugno 2016, Ferrara.

Publicazioni

Angius, N. Qualitative Models in Computational Simulative Sciences. Representation, Confirmation, Experimentation. Pending minor revisions in *Minds&Machines*.

Angius, N., & Stefanias, P. The Logical Structure of Modular Semantic Theories of Software Systems. Accepted paper in *Journal of Logic and Computation*.

Angius, N. & Primiero, G. (2018) The logic of identity and copy for computational artefacts. *Journal of Logic and Computation*, 28(6), 1293-322

Angius, N., Dimarogkona M., & Stefanias, P. (2017) Building and Integrating Semantic Theories over Institutions. In S. Lambropoulou, D. Theodorou, P. Stefanias & L. H. Kauffman (Eds), *Algebraic Modeling of Topological and Computational Structures and Applications*, Springer, PROMS series

Turner, R., & Angius, N. (2017) The Philosophy of Computer Science. *Stanford Encyclopedia of Philosophy* (Spring 2017 Edition), Edward N. Zalta (ed.)

- Angius, N. & Tamburrini, G. (2017) Explaining Engineered Computing Systems' Behaviour: the Role of Abstraction and Idealization. *Philosophy & Technology*, 30(2), 239-258.
- Angius, N. & Tamburrini, G. (2016) Dai Programmi Simulativi come Teorie alle Teorie dei Programmi Simulativi. *Sistemi Intelligenti.*, XXVIII(1), 153-168
- Angius, N., & Stefaneas, P. (2016) Discovering Empirical Theories of Modular Software Systems. An Algebraic Approach. In Muller, V. (ed.), *Computing and Philosophy: Selected Papers from IACAP 2014. (Synthese Library)* Berlin: Springer.
- Angius, N. (2015) Computer Simulations Without Simulative Programs in Executable Cell Biology. Hypothesis Discovery and Justification. *Paradigmi*, XXXIII(3), 67-82
- Angius, N. (2014) Computational Idealizations in Software Intensive Science: a Comment on Symons' and Horner's paper. *Philosophy and Technology*, 27(3), 479-484.
- Angius, N. (2014) The Problem of Justification of Empirical Hypotheses in Software Testing. *Philosophy and Technology*, 27(3), 423-439
- Angius, N. (2013) Model-based Abductive Reasoning in Automated Software Testing. *Logic Journal of the IGPL*, 21(6), 931-942.
- Angius, N. (2013) Abstraction and Idealization in the Formal Verification of Software Systems. *Minds and Machines*, 23(2), 211-226.
- Angius, N. (2011) Software Verification and Scientific Methodology: Models, Regularities, Idealizations. *L&PS - Logic & Philosophy of Science*, 9, 569-577.
- Angius, N., & Tamburrini, G. (2011) Scientific Theories of Computational Systems in Model Checking. *Minds and Machines*, 21(2), pp. 323-336.
- Angius, N., & Tamburrini, G. (2010) Epistemologia dell'Artificiale e Informatica Teorica. In P. Greco, S. Termini (a cura di), *Memoria e Progetto. Un Modello per il Mezzogiorno che Serva a Tutto il Paese*, Edizioni GEM.

Competenze Linguistiche

Italiano **Madrelingua**

Inglese **Parlato e scritto fluente**