

Sara Ugolini

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Professional Experience

October 2020 - ongoing

Marie Skłodowska-Curie Individual Fellowship
H2020-MSCA-IF-2019 - Project PROREAL
(*Probability of real-valued events: a logico-algebraic investigation*)
Hosting Institution: IIIA - CSIC Bellaterra, Barcelona, Spain.

September 2018 - June 2020

Visiting Assistant Professor
University of Denver, Department of Mathematics

Education

November 2014 - April 2018

Ph.D., Department of Computer Science, University of Pisa.
Thesis: Varieties of residuated lattices with an MV-retract
and an investigation into state theory
Advisor: Prof. Andrea Sorbi, Co-advisor: Dr. Tommaso Flaminio.

October 2011 - December 2013

Master's degree in mathematics, University of Siena.
Grade: 110/110 cum laude.
Thesis: A categorical equivalence for product algebras.
Advisor: Prof. Franco Montagna.

October 2008 - December 2011

Bachelor's degree in mathematics, University of Siena.
Grade: 110/110 cum laude.
Thesis: Qual è la logica dei matematici?
(Which is the logic of mathematicians?).
Advisor: Prof. Franco Montagna.

Publications

1. P. Aglianò, S. Ugolini, *Rotation Logics*, Fuzzy Sets and Systems, 388, pp. 1–25, 2020.
2. T. Flaminio, S. Ugolini, *Hyperstates of involutive MTL-algebras that satisfy $(2x)^2 = 2(x^2)$* , S. Ju, A. Palmigiano, M. Ma (Eds.), Nonclassical Logics and Their Applications. Logic in Asia: Studia Logica Library. Springer, Singapore, 2020.
3. W. Fussner, S. Ugolini, *A topological approach to MTL-algebras*, Algebra Universalis, 80: 38, 2019.

4. P. Aglianò, S. Ugolini, *MTL-algebras as rotations of basic hoops*, Journal of Logic and Computation, vol. 29(5), pp. 763-784.
5. M. Busaniche, M. Marcos, S. Ugolini, *Representation by triples of algebras with an MV-retract*, Fuzzy Sets and Systems, vol. 369, pp. 82-102, 2018.
6. T. Flaminio, L. Godo, S. Ugolini, *Corrigendum to “Towards a probability theory for product logic: States, integral representation and reasoning”*, International Journal of Approximate Reasoning, 103: 267–269, 2018.
7. T. Flaminio, L. Godo, S. Ugolini, *Towards a probability theory for product logic: States, integral representation and reasoning*, International Journal of Approximate Reasoning, 93: 199–218, 2018.
8. S. Aguzzoli, T. Flaminio, S. Ugolini, *Equivalences between subcategories of MTL-algebras via Boolean algebras and prelinear semihoops*, Journal of Logic and Computation, 27(8): 2525–2549, 2017.
9. F. Montagna, S. Ugolini, *A categorical equivalence for product algebras*, Studia Logica, 103(2): 345–373, 2015.

Extended
abstracts

1. Gluing residuated lattices (with Nick Galatos), TACL2019, Nice (France), June 2019.
2. Gluing residuated lattices (with Nick Galatos) BLAST 2018, Boulder (Colorado), May 2019.
3. A duality theoretic approach to MTL-algebras (with Wesley Fussner), BLAST 2018, Denver (Colorado), August 2018.
4. A duality theoretic approach to MTL-algebras (with Wesley Fussner), AsubL (Algebra & Substructural Logics), Cagliari (Italy), June 2018.
5. On some varieties generated by generalized rotations of residuated lattices (with Manuela Busaniche and Miguel Marcos), ManyVal 2017, Toulouse (France), November 2017.
6. On some varieties generated by generalized rotations of residuated lattices, AILA2017 (XXVI incontro dell’Associazione Italiana di Logica e sue Applicazioni), Padova (Italy), September 2017.
7. States of free product algebras and their integral representation (with Tommaso Flaminio and Lluís Godo), TACL2017 (Topology, Algebra, and Categories in Logic), Prague (Czech Republic), June 2017.

8. States of free product algebras, XIV Congreso Dr. Antonio Monteiro 2017, Bahia Blanca (Argentina), June 2017.
9. States of free product algebras and their integral representation (with Lluís Godó and Tommaso Flaminio). Linz Seminar 2017 Enriched Category Theory and Related Topics, Linz, Austria.
10. Hyperstates on involutive bipartite MTL-algebras: a preliminary investigation (with Tommaso Flaminio). Non classical logics and their applications: International Workshop on Logic and Cognition, 2016, Guangzhou, China.
11. A uniform way to build DL-algebras via Boolean algebras and prelinear semihoops (with Stefano Aguzzoli and Tommaso Flaminio). Logic Algebras and Truth Degrees 2016, Phalaborwa, South Africa.
12. A uniform way to build strongly perfect MTL-algebras via Boolean algebras and prelinear semihoops (with Stefano Aguzzoli and Tommaso Flaminio). Sysmics 2016, Barcelona, Spain.
13. Hyperstates on strongly perfect MTL-algebras with cancellative radical (with Lluís Godó and Tommaso Flaminio). Sysmics 2016, Barcelona, Spain.

Conference
talks

1. **(invited)** Shanks Workshop on Ordered Algebras and Logic, Vanderbilt University (USA), March 2020.
2. TACL2019, Nice (France), June 2019.
3. BLAST 2018, Boulder (Colorado), May 2019.
4. BLAST 2018, Denver (Colorado), August 2018.
5. **(invited)** First Algebra Week, Siena (Italy), June 2018.
6. ASubL (Algebra & Substructural Logics), Cagliari (Italy), June 2018.
7. ManyVal 2017, Toulouse (France), November 2017.
8. AILA2017 (XXVI incontro dell'Associazione Italiana di Logica e sue Applicazioni), Padova (Italy), September 2017.
9. TACL2017 (Topology, Algebra, and Categories in Logic), Prague (Czech Republic), June 2017.
10. XIV Congreso Dr. Antonio Monteiro 2017, Bahia Blanca (Argentina), June 2017.
11. International Workshop on Logic and Cognition, 2016, Guangzhou, China.

12. LATD 2016, Phalaborwa, South Africa.

13. Sysmics 2016, Barcelona, Spain.

Seminars

June-September 2017 *Algebraic semantics of many-valued logics*, talks at the Universal Algebra Seminar at the University of Siena, Italy.

May 2017 *Uncertainty, Vagueness and Probability of many-valued events*, invited talk at the IMAL Seminar Carlos Segovia Fernandez In Santa Fe, Argentina.

January 2017 *Prelinear semihoop based triples*, talk at the Logic Seminar at the University of Denver, Colorado.

April 2016 *Equivalences between subcategories of MTL-algebras via Boolean algebras and prelinear semihoops*, invited talk at the University of Barcelona, Spain.

March 2016 *Algebraic semantics of many-valued logics*, talks at the Universal Algebra Seminar at the University of Siena, Italy.

February 2016 *Semihoop-Triples and subcategories of MTL-algebras*, invited talk at the Logic Seminar at the University of Milan, Italy.

Organizing

1. Nonclassical Logic Webinar (weekly online seminar), April 2020 – ongoing.
<https://sites.google.com/view/nonclassicallogicwebinar>

2. Second Algebra Week Workshop 2019 at the University of Siena.

3. Principles and Practice of Declarative Programming (PPDP) 2015, at the University of Siena;

4. Logic-Based Program Synthesis and Transformation (LOPSTR) 2015, at the University of Siena;

Visiting

January - February 2018 (2 months) and **January 2017** (1 month) University of Denver (Colorado), Department of Mathematics. (Prof. Nikolaos Galatos)

April-May 2017 (2 months) IMAL (Institute of Applied Mathematics of Litoral) of CONICET (National Council of Scientific and Technological Research), Santa Fe (Argentina). (Prof. Manuela Busaniche)

April - June 2016 (3 months) IIIA (Institute of Research in Artificial Intelligence) of the CSIC (Spanish Scientific Council of Research), Bellaterra (Spain). (Prof. Lluís Godo)

February 2016 (1 week) University of Milan, Department of Mathematics. (Prof. Vincenzo Marra).

Prizes and
Awards

Best master's thesis in Mathematical Logic

AILA (Italian Association of Logic and its Applications) award 2014.

Travel grant

AWM (Association for Women in Mathematics) - NSF
(National Science Foundation)

Conference TACL 2019, Nice (France) June 2019

Travel grant

ASL (Association of Symbolic Logic)

Conference TACL 2017, Prague (Czech Republic) June 2017

Travel grant

ASL (Association of Symbolic Logic)

Conference LATD 2016, South Africa, June 2016

Membership
and
reviewing

AILA (Italian Association of Logic and its Applications),
member from 2014.

ASL (Association of Symbolic Logic), member from 2016.

GNSAGA (Gruppo Nazionale per le Strutture Algebriche, Geometriche
e le loro Applicazioni), INDAM (Istituto Nazionale di Alta Matematica),
for the section Mathematical Logic and its Applications.
Member from 2016.

AWM (Association for Women in Mathematics) member from 2019.

I have been a reviewer for the journals: Archive for Mathematical Logic,
Fuzzy Sets and Systems, International Journal of Approximate Reasoning,
Journal of Logic and Computation, Journal of Pure and Applied Algebra,
Order, Soft Computing, Studia Logica.