

# TO MAGNIFICO RETTORE OF UNIVERSITA' DEGLI STUDI DI MILANO ODDE: 6000 I the undersigned asks to participate in the public selection, for qualifications and examinations, for the awarding of a type B fellowship at Dipartimento di Filosofia Scientist- in - charge: Prof. D'Agostino Marcello Soroush Rafiee Rad CURRICULUM VITAE

### **PERSONAL INFORMATION**

Surname	Rafiee Rad
Name	Soroush

### PRESENT OCCUPATION

Appointment	Structure
Research fellow Dec 2020-	University of Amsterdam, Institute for Logic, Language and Computation & Dutch Institute for Emergent Phenomena
Postdocoral Fellow Sep 2017- Nov 2020	University of Bayreuth, Logic Group, Deprtment of Philosophy
Research Fellow Feb 2017- August 2017	Ludwig Maximillian University of Munich, Munich Center for Mathematical Philosophy
Postdoctoral Fellow Sep 2014- January 2017	University of Amsterdam, Institute for Logic, Language, and Computation

### **EDUCATION AND TRAINING**

Degree	Course of studies	University	year of achievement of the degree
Degree	BSc Pure Math	Sharif University of Technology, Iran	2004
Specialization			



PhD	Mathematical Logic	Department of Mathematics, University of Manchester	2009
	Philosophy	Tilburg Institute for Logic and Philosophy of Science, Tilburg University	2014
Master			
Degree of medical specialization			
Degree of European specialization			
Other			

### **REGISTRATION IN PROFESSIONAL ASSOCIATIONS**

Date registration	of	Association	City
2016-		International Quantum Structures Association	

### **FOREIGN LANGUAGES**

Languages	level of knowledge
Persian	Native speaker
English	Fluent
Dutch	Basic Understanding

### AWARDS, ACKNOWLEDGEMENTS, SCHOLARSHIPS

	<u>,                                      </u>
Year	Description of award
2006	Marie Curie PhD Fellowship
2013	12-month Visiting Fellowship at Munich Center for Mathematical Philosophy
2020	University of Amsterdam, Emergence Fellowship Grant

### TRAINING OR RESEARCH ACTIVITY

My main research focus is on probabilistic reasoning, statistical inference, and logics for information dynamics. Currently I am working as a research fellow supported by the University of Amsterdam Emergence Fellowship Grant working on the intersection of mathematical logic, probabilistic entailment and statistical physics to study belief dynamics.

Please see the attached cover letter for a more detailed description of my research.



## **PROJECT ACTIVITY**

Year	Project
2014- 2017	Logical Structure of Correlated Information Change led by Prof. Sonja Smets at the University of Amsterdam
2017- 2020	Collective Attitude Formation led by Prof. Olivier Roy at University of Bayreuth
2020-	Emergence Research Fellowship University of Amsterdam

### **PATENTS**

Patent			

### **CONGRESSES AND SEMINARS**

Date	Title	Place
Presentation		
Nov 2023	Affective Polarization and Democracy Workshop	Amsterdam
Aug 2021	Progic 2021	Munich
Oct 2020	ColAForm workshop	Bayreuth
Oct 2019	Research Seminar, Cezch Academy of Science	Prague
July 2019	TARK workshop	Toulouse
Jun 2019	SEGA workshop	Bayreuth
Nov 2018	Workshop in Honor of Johan van Benthem	Aachen
Oct 2018	Trends in Logic, Keynote Speaker	Milan
Oct 2018	Research Seminar, Cezch Academy of Science	Prague
May 2018	Research Seminar: Tsinghua University	Beijing
Oct 2017	SEGA workshop	Paris
Dec 2016	Indian Mathematics Consortium	Varanasi



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Nov 2016	LogiCIC Workshop	Amsterdam
Jun 2016	International Workshop on Topological Methods in Logic	Tbilisi
Nov 2015	Workshop on Reasoning in Social Context	Amsterdam
Oct 2015	Research Seminar: Tsinghua University	Beijing
Sep 2015	Research Seminar Rutgers University	New Jersey
Nov 2014	LogiCIC workshop	Amsterdam
Jul 2013	Research Seminar Graduate Center, CUNY	New York
Nov 2012	Reserach Seminar University of Manchester	Manchester
Nov 2012	Reserach Seminar King's College	London
Oct 2012	Research Seminar LSE	London
Nov 2011	Research Seminar MCMP	Venice
Sep 2011	Workshop in Social Epistemology	Copenhagen
Jun 2008	Research Seminar Universite Claude Bernard	Paris
Organization		
2022	Logic for Peace	Amsterdam
2021	Probabilistic Inference and Logical Models	Amsterdam
2020	ColaForm Workshop	Bayreuth
2019	Bayreuth-LSE Student Conference	London
2018	Congress of the German Association for Mathematical Logic and Foundations of Science	Bayreuth
2016	Workshop on Logical Structure of Correlated Information Change	Amsterdam
2015	Workshop on Reasoning in Social Context	Amsterdam



2014	Logical Structure of Correlated Information Change	Amsterdam
2014	Synthese Conference on Qualitative and Quantitative Methods in Formal Epistemology	Amsterdam
2012	Munich-Tilburg-Sydney conference	Tilburg
2009	Mathlogapp workshop	Manchester

### **PUBLICATIONS**

### **Books**

Inductive Logic: A Bayesian Approach - with Jurgen Landes and Jon Williamson -

Under Contract with Oxford University Press

	es in reviews
	Probabilistic Entailment and Reasoning with Inconsistencies, Review of Symbolic Logic, 16(2), 35 368, 2023.
	Determining maximal entropy functions for objective Bayesian inductive logic (with J. Landes and Williamson), Journal of Philosophical Logic, 52: 555-608, 2023.
	Probabilities with Gaps and Gluts (with D. Klein and O. Majer), Journal of Philosophical Logic 1107–1141, 2021.
	Tracking Probabilistic Truths: a logic for statistical knowledge (with A. Baltag and S. Smets), Syn 199: 9041–9087, 2021.
	Deliberation, Single-Peakedness, and Coherent Aggregation (with O. Roy), American Political Screwiew, 115(2): 629-648, 2021.
	Towards Limit Entropy Conjecture (with J. Landes and J. Williamson), Annals of Pure and ApLogic, 172(2), 2021.
	Probabilistic Characterization of Models of First Order Theories, Annals of Pure and Applied I 172(1), 2021.
	Learning From Conditionals (with S. Hartmann and B. Eva), Mind, 129(514): 461–508, 2020.
	Non-Classical Probabilities for Decision Making in Situations of Uncertainty (with D. Klein a Majer), Roczniki Filozoficzne, 68(4): 315343, 2020.
	Anchoring in Deliberation (with S. Hartmann), Erkenntnis, 85:10411069, 2020.
-	A Complete Axiomatisation for the Logic of Lattice Effect Algebras (with A. Sharafi and S. Smets J. Theoretical Physics, 60: 696–709, 2019.
	Maximum Entropy Models of \$\Sigma_1\$ Sentences, Journal of Applied Logic, 5(1): 287300, 20
-	Voting, Deliberation and Truth (with S. Hartmann), Synthese, 195:12731293, 2018.



Categorical Equivalence Between Orthomodular Algebras and Orthomodular Lattices (with J. Sacks, K. Kishida and S. Zhong), Int. Journal of Theoretical Physics, 56(12):3991-4003, 2017.

Logical Analysis of Quantum Voting Protocols (with S. Smets and E. Shirinkalam), Int. Journal of Theoretical Physics, 56(12): 4060--4072, 2017.

Equivocation Axiom for First Order Languages, Studia Logica, 105(21), 2017.

### **Congress proceedings**

Learning Probabilities: Logic of Statistical Learning (with A. Baltag and S. Smets), proceedings of TARK XVII, EPTCS, 297: 35--49, 2019.

A Note On The Least Informative Model of A Theory (with J. Paris), in Programs, Proofs, Processes, CiE, Eds. F. Ferreira, B. Löwe, E. Mayordomo, & L. Mendes Gomes, Springer LNCS 6158, pp. 342-351, 2010.

Inference Processes for Quantified Predicate Knowledge (with J. Paris), in Logic, Language, Information and Computation, WoLLIC, Edinburgh, Eds. W. Hodges and R. de Queiroz, Springer LNAI, 5110, pp. 249-25, 2009.

### **OTHER INFORMATION**

### **Journal/Conference Reviewing**

I have reviewed papers for Studia Logica, Synthese, Erkenntnis, Review of Symbolic Logic, Journal of Philosophical Logic, Journal of Symbolic Logic, Journal of Applied Logic, Journal of Logic and Computation, the Logic Journal of IGPL and Fundamenta Mathematica, as well as international workshops including IJCAI, LORI, TARK and WOLLIC. I have also been part of the program committee for several conferences including LORI 2017, LogiCIC 2015, 2016, LORI 2019 and LORI 2021.

### **Graduate Supervision**

1. Fei Xue, PhD Thesis (co-supervising with Alexandru Baltag)

Topic: Quantum Logic, ILLC, in progress.

2. Xinning Zhao, MSc Thesis (co-supervising with Sonja Smets)

Topic: Paradoxes in Quantum Logic, ILLC, in progress.

3. Uddalok Sardar, Research Project (co-supervised with Sujata Gosh)

Topic: Quantum Machine Learning, Indian Statistical Institute, finalized December 2022.

4. Nikki Weststeijn, MSc Thesis (co-supervised with Sonja Smets)

Topic: Information Theory, ILLC, Defended July 2022.

5. Laura Bizhou van Pol, MSc Thesis (co-supervised with Sonja Smets)

Topic: Quantum Theory and Logic of Questions, ILLC, Defended July 2017.



6. Christian Tueschel, MSc Thesis (co-supervised with Sonja Smets)

Topic: Adoption of IPV6 on Internet Routing Network, ILLC, Defended October 2017

7. Ko Hung Kuan, MSc Thesis (co-supervised with Sonja Smets)

Title: Coherence Preservation: A Threat to Probabilistic Measures of Coherence, ILLC, August 2015

8. Amirhossein Sharafi (co-supervised with Sonja Smets)

Topic: Effect Algebras and Quantum Logic, Visiting PhD Student, ILLC, Jan 2017- May 2017

9. Elaheh Shirinkalam, (co-supervised with Sonja Smets)

Topic: Verification of Quantum Voting Protocols, Visiting PhD Student, ILLC, Sep 2015- March 2016

10. Andres Occhipinti Liberman, Master of Logic Individual Project

Topic: Principles of Uncertain Reasoning, ILLC, June-November 2016

11. Melina Mendoza, Master of Logic individual Project,

Topic: Interpretations of Quantum Mechanics, ILLC, March-August 2016

12. Anna Franchini, Master of Logic Individual Project

Topic: Introduction to Category Theory, ILLC, January-July 2016

### **Undergraduate Supervision**

1. Marit Bijma, BSc Thesis

Topic: Polarization in Groups, University of Amsterdam, in progress.

2. Koen Leijnse, BSc Thesis (co-supervised with Dora Achourioti)

Topic: Conditional Statements in Quantum Logic, Amsterdam University College, May 2018.

3. Nicolò Maresca di Serracapriola, BSc Thesis (co-supervised with Dora Achourioti)

Topic: Reassessing the Empirical Status of Logic, Amsterdam University College, May 2018.

### **Thesis Committee**

- 1. Marcus Beriet, MSc Thesis: The Arrow algebra: a more general structure to obtain Realizability Toposes, ILLC 2023
- 2. Noortje ten Wolde, MSc Thesis: The Nature of Quantum Information, ILLC, 2023
- 3. Illiana Gioulatou, MSc Thesis: Yablo's Absoluteness, Fine Truthmaking Semantics and Hyperintentionality, ILLC 2016
- 4. Benjamin Sparkes, MSc Thesis: Completeness Results for an Inquisitive Doxastic Logic, ILLC 2016
- 5. Roosmarijn Goldbach, MScThesis: Modeling Democratic Deliberation, ILLC 2015

### **Teaching**

- 1. Mathematical Proof Methods for Logic (Msc level), UvA 2021, 2022
- 2. Emergence (collaboration with Phys, Philo, and Chem.), UvA 2021, 2022, 2023

- 3. Logic and Theory of Argumentation, Bayreuth 2019
- 4. Philosophy of Probability, Bayreuth 2019 (MSc seminar)
- 5. Decision Making and Collective Rationality, (advance seminar) Bayreuth 2019
- 6. Logic and theory of Argumentation, Bayreuth 2018 (with Olivier Roy)
- 7. Epistemic Logic, Bayreuth 2018 (with Marcel Kiel)
- 8. Decision Theory and Collective Rationality, Bayreuth 2018
- 9. Probabilistic Reasoning, ILLC 2016 (MSc level)
- 10. Quantum Logic, ILLC 2016 (MSc level)
- 11. Uncertain Reasoning, ILLC 2015 (MSc level)
- 12. Introduction to Political Philosophy, MCMP, Munich 2014
- 13. Rationality, Tilburg University, 2010, 2011 (with Stephan Hartmann)
- 14. Philosophy of Science, Tilburg University, 2011 (with Stephan Hartmann)
- 15. Experts in Complex Society, Tilburg University, 2010 (with Stephan Hartmann)
- 16. Teaching computer-programming languages, Computing Centre, Sharif University of Technology 2002-2005 (C, C++, JAVA, PHP, SQL)

Declarations given in the present curriculum must be considered released according to art. 46 and 47 of DPR n. 445/2000.

The present curriculum does not contain confidential and legal information according to art. 4, paragraph 1, points d) and e) of D.Lgs. 30.06.2003 n. 196.

Please note that CV WILL BE PUBLISHED on the University website and It is recommended that personal and sensitive data should not be included. This template is realized to satisfy the need of publication without personal and sensitive data.

Place and date:	_Rotterdam,	_25/11/2023	

Please DO NOT SIGN this form.