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Giulio Manzonetto Curriculum Vitae

April 5, 2023

# **Curriculum Vitae**

### **Personal Information**

First name/Surname: Giulio Manzonetto, Place and date of birth: Conegliano Veneto (Italy), 18th March 1980, Nationality: Italian, Professional Address: Laboratoire LIPN, IUT de Villetaneuse, University Sorbonne Paris-Nord (USPN). 99, av. Jean-Baptiste Clément, 93430 Villetaneuse, France. **Telephone:** +33 1 49 40 44 43, **Fax:** +33 1 48 26 07 12, Email Address: giulio.manzonetto@lipn.univ-paris13.fr Web page: http://lipn.univ-paris13.fr/~manzonetto/ Known languages: Italian (mother tongue), French (fluent), English (fluent).

## **Research experience**

Giulio Manzonetto obtained Bachelor and Master degrees in Computer Science at Ca'Foscari University of Venice. In both cases he wrote a thesis on Logic and Mathematical Foundations of Computer Science under the supervision of Antonino Salibra. During the last year of his Master, he spent five months at the Vrije University of Amsterdam, participating in the activities of Jan Willem Klop's research team. In 2008 he received a joint European doctoral degree in Computer Science from the University Ca'Foscari of Venice and the University Paris Cité (Paris 7) under Chantal Berline and Antonino Salibra. From September 2007 to December 2008 he worked as a post-doc (ATER) at the University Paris Cité. From January 2009 to October 2009 he worked under Jean-Jacques Lévy as a post-doc at INRIA-Rocquencourt in the MOSCOVA team. From November 2010 to April 2010 he worked as a post-doc at University Sorbonne Paris-Nord (USPN). From May 2010 to August 2011 he held a postdoctoral position at Radboud University of Nijmegen under Henk Barendregt. Since September 2011 he is "Maître de Conférences" (roughly equivalent to the US Associate Professor position) at University Sorbonne Paris-Nord, Laboratory LIPN.

He received the Habilitation à diriger des recherches on March the 7th, 2017.

## Education

03/2017	Habilitation à diriger des recherches. Institut Galilée, USPN. Thesis: Lambda calcu-
	lus, linear logic and symbolic computation. Defense: 3rd March 2017.
11/2004-10/2007	Co-tutored European PhD in Computer Science. Ca'Foscari University of Venice and
	University Paris Cité. Advisors: Antonino Salibra and Chantal Berline. Thesis: Mod-
	els and theories of $\lambda$ -calculus. Defense Date: 18 <sup>th</sup> February 2008.
09/2002-10/2004	Laurea Magistrale [M.Sc.] in Computer Science. Ca'Foscari University of Venice,
	Italy. Graduated with full marks: 110/110 cum laude. Advisor: Antonino Salibra.
	Master Thesis: Topologies and $\lambda$ -calculus. (In italian)
09/1999-10/2002	Laurea Triennale [B.Sc.] in Computer Science. Ca'Foscari University of Venice, Italy.
	Level in national classification: 108/110. Advisor: Antonino Salibra. Bachelor Thesis:
	About the approaches on the abstract theory of computability. (In italian)

#### Attended Phd Schools

01/2021	<i>Linear Logic Winter School — 1<sup>st</sup> week</i> , Marseille, France.
07/2015	Summer School in Logic, Helsinki, Finland.
02/2012	Logic and Interactions 2012 — 3 <sup>rd</sup> week Proofs and Programs, Marseille, France.
07/2010	5 <sup>th</sup> International School on Rewriting (Advanced Track), Utrecht, The Netherlands.
05-06/2006	EPIT 2006: Games in semantics and verification, Ile de Ré, France.
01-02/2006	Geometry of Computation 2006 (Geocal06), Marseille, Luminy, France.
07/2005	Lipari School. Formal Methods: Theory And Practice 17th, International School for
	Computer Science Researchers, Lipari Island, Italy.
03/2005	International School for Graduate Studies in Computer Science, Bertinoro, Italy.

## **Employments**

09/2011-To Date	University Sorbonne Paris-Nord. Maître de Conférences.
	2020–21 Délégation CNRS (1 year) at the University Sorbonne Paris Nord, LIPN.
	2020 CRCT (1 semester) at the University Sorbonne Paris Nord, LIPN.
	2016–17 Délégation CNRS (1 year) at the University Paris Cité, IRIF.
05/2010-08/2011	Radboud University. Postdoctoral position, Calmoc project.
11/2009-04/2010	University Sorbonne Paris-Nord. Postdoctoral position at LIPN, Collodi project.
01/2009-10/2009	INRIA-Rocquencourt. Postdoctoral position in the MOSCOVA team, ParSec project.
09/2007-12/2008	University Paris Cité, France. Post-doc (ATER).
09/1999-09/2003	<i>i.SenSE society</i> . Developer and Project Manager.

## **Teaching Activities (see Figure 1)**

2011-To Date	Teaching at University Sorbonne Paris-Nord, France.
2010	Teaching assistant at Radboud University, The Netherlands.
2007-2008	Post-doc with teaching duties (ATER) at University Paris Cité, France.
2007	Teaching assistant at Paris-Saclay University, France.
2002-2004	Teaching assistant at Ca'Foscari University, Italy.

Since September 2011 Manzonetto is *maître de conférences* at the IUT of Villetaneuse, within the Department R&T (Computer networks and telecommunications). In this context, he has been responsible for several courses, he gave CM's (plenary lectures), TD's (theoretical exercises) and TP's (practical exercises) of computer networks, operating systems and programming in Python. He also taught the course of advanced functional programming at the Master 2 "Programmation et Logiciels Sûrs" of the Institut Galilée. The programming language used in this course was Ocaml. For all the courses mentioned above, he participated in the preparation of the lecture notes, the exercises and the exams as well as in their evaluation. He acted as tutor for several students during their internship of DUT and Licence Professionnelle. He supervised groups of students for the programming language project known as *projet tutoré*.

In 2010 Manzonetto has taught some lessons of advanced lambda calculus (level Master 2) at the Radboud University. From September 2007 to December 2008, Manzonetto worked as an ATER at the University Paris Cité, where he taught the TD's and TP's of several courses of level L3 and M1. The programming languages that were used are Ocaml and Java.

In January 2007 he has been teaching assistant at the University Paris Sud, where he gave TD's on advanced databases (level L3). During his Master studies and his first year of PhD, he taught at Ca'Foscari University the TD's of computer architecture and computability (level equivalent to L1 and L3).

We refer to Figure 1 for a detailed list of Manzonetto's teaching activities. The starred titles correspond to courses including a project: for these courses he also participated in the preparation of the project and in the evaluation of the outcomes.

### Pedagogical Tutoring.

Supervision of internships at industries

2021-2023	Inès Alitou: BUT2-FAP. apprenticeship at Lottechnology (smart working).
2021-2023	Killian Morand: BUT2-FAP, apprenticeship at Groupe Hospitalier Paul Guiraud.
2021-2023	Nicolas Skorupa: BUT2-FAP, apprenticeship at DIRISI.
2020-2021	Kolie Léopol Jules: DUT2-FAP, apprenticeship at Marck & Balsan.
2020-2021	Hamitouche Josiane: DUT2-FAP, apprenticeship at Marck & Balsan.
2019-2020	Amin Ouraghene: DUT-R&T, internship at Orange (smart working).
2018-2019	Amine Ben Meddah: DUT-R&T, internship at Aigle Azur
	Subject: Configuration of software for network supervision.
2017-2018	Emmanuel Ilunga Wa Ilunga: LP-ASUR, internship à HILT Technology.
	Subject: Configure a server NAS.
2015-2016	Axel Ducoron: LP-ASUR, internship at OGEC La Salle Notre-Dame de la Gare.
	Subject: Network administration for the institute.

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	39 26
BUT1 BUT-RT Introduction to computer networks FI CM/TD/TP	26
BUT1 BUT-RT Network principles and architectures FI CM/TD/TP	10
BUT1 BUT-RT Local Area Networks FI TD/TP	18
BUT1 BUT-RT Operating Systems FI CM/TP	39
BUT1 BUT-RT Programming principles FI TP	27
M2 MPRI Lin. Log. and paradigms of calculi FI CM	4.5
2021 M2 MPRI Linear Logic and calculi FI CM	4.5
2020 DUT1 DUT-RT Introduction to computer networks FI CM/TP	40
DUT1 DUT-RT Network principles and architectures FI CM/TD/TP	30
DUT1 DUT-RT Operating Systems FI CM/TD/TP	26
DUT1 DUT.RT Local Area Networks FL CM/TP	33
2019 DUT1 DUTRT Methodology 1&2 FI TD	$\frac{33}{20}$
DUT1 DUT PT Programming principles FI TP	20
DUT1 DUT-RT Introduction to computer networks EL CM/TD/TP	50
DUT1 DUT-KI Influencin to computer networks FI CM/TD/TP	20
DUTI DUT-KI Network principles and architectures FI CM/TD/TF DUTI DUT DT Operating Systems	20
DUTI DUT-KI Operating Systems FI CW/TP	32 12
DUTI DUT-KI Local Area Networks FI IP	12
2018 DUTI DUT-KI Introduction to computer networks FI CM/1D/1P	34
DUTI DUT-RI Operating Systems FI CM/TP	32
DUTI DUT-RI Network principles and architectures FI CM/TD/TP	38
DUTI DUT-KI Programming principles FI CM/1D/1P	27
DUTI DUT-RI Local Area Networks FI TP	12
2017 DUT1 DUT-RT Introduction to computer networks FI CM/TD/TP	74
DUT1 DUT-RT Network principles and architectures FI TD/TP	26
DUT1 DUT-RT Programming principles FI TP	35
DUT1 DUT-RT Operating Systems FI TP	7
2016 M2 Master Advanced functional programming FI CM/TD	22
DUT1 DUT-RT Local Area Networks FI TD/TP	30
2015 M2 Master Advanced functional programming FI CM/TD	22
DUT1 DUT-RT Introduction to computer networks FI CM/TD/TP	37
DUT1 DUT-RT Network principles and architectures FI CM/TD	42
DUT1 DUT-RT Operating Systems FI CM/TP	47
2014 M2 Master Advanced functional programming FI CM	22
DUT1 DUT-RT Introduction to computer networks FI TD/TP	30
DUT1 DUT-RT Operating Systems FI CM/TP	32
DUT1 DUT-RT Local Area Networks FI TD/TP	24
2013 DUT1 DUT-RT Network principles and architectures FI CM/TD	40
DUT1 DUT-RT Introduction to computer networks FI TD/TP	27
DUT1 DUT-RT Operating Systems FI CM/TP	32
DUT1 DUT-RT Computer Networks 4 FI TD/TP	39
2012 DUT1 DUT-RT Operating Systems FI TP	21
DUT1 DUT-RT Computer Networks 1 FI CM/TD	43
DUT1 DUT-RT Computer Networks 2 FI TD/TP	24
DUT1 DUT-RT Computer Networks 4 FI TD/TP	39
2011 DUT-RT Operating Systems FI TP	24
DUT1 DUT-RT Computer Networks 1 FI TD	24
DUT1 DUT-RT Computer Networks 1 FC CM/TD	20
DUT1 DUT-RT Computer Networks 2 FI TD/TP	24

Figure 1: Legend: CM = Plenary lectures, TD = Theoretical exercises, TP = Practical exercises. FI = Bachelor, FC = Formation continue, FAP = apprenticeship.

2015-2016	Mehdi Zaraba: LP-ASUR, internship at Orange.
	Subject: Technical support for telecommunications.
2015-2016	Stephan Rosse: DUT-R&T, internship at LIPN.
	Subject: System administration.
2014-2015	Dorian Sassatelli: LP-ASUR, internship at Orange.
	Subject: technical education and conception.
2014-2015	Hegel Clervil: LP-ASUR, internship at Air Liquide.
	Subject: Security of industrial networks.
2014-2015	Florian Grémiaux: DUT-R&T, internship at LIPN.
	Subject: Implementation of 802.1x and Kerberos protocols.
2013-2014	Hamdane Hamada: DUT-R&T, internship at SFR Business team
	Subject: Technical support for telecommunications.
2013-2014	Yapo Seka: DUT-R&T, internship at Coriolis Telecom
	Subject: Technical support for telecommunications.
Computer Science	ce Project / Projet Tutoré (DUT-R&T)

2015-2016 Stephan Rosse, Breandan Lesueur.

2013-2010	Stephan Rosse, Dreandan Lesdedi.
	Subject: Creating virtual machines with MAGEIA OS for the software Marionnet.
2014-2015	Mamadou Diao Bah, Hicham Haiba, Ismail Moumni, Vivek Sivaneswaran.
	Subject: Integrating CISCO components in the software Marionnet.

### Administrative Responsibilities

At the IUT of Vil	letaneuse, Manzonetto currently has responsibilities at Department level:
2021-To Date	Director of the 2 <sup>nd</sup> year of FAP-BUT2 (directeur de la formation), IUT of Villetaneuse,
	Department R&T. Duties: students selection, help the students finding an internship,
	organize periodical evaluations joint between academy and industries, organize the
	internship defense and final jury.
2019-To Date	Responsible R&T for the International Exchange Program.

Previous responsibilities:

2019-2020	Director of the 2 <sup>nd</sup> year of DUT (directeur des études), IUT of Villetaneuse, Depart- ment R&T. Duties: prepare the schedule of the courses, coordinate the professors.
	handle the students, supervise the research of an internship, organize the final jury.
2019-2020	Responsible of the validation of internship offers.
2019-2020	Representative R&T for the Classroom Committee.
2017-2021	Member of the Department R&T Council of the IUT of Villetaneuse.
2017-2019	Director of the 1 <sup>st</sup> year of DUT (directeur des études), IUT of Villetaneuse, Department
	R&T. Duties: prepare the schedule of the courses, coordinate the professors, handle the
	students, organize additional pedagogical support for weak students (Tutorat).
2013-2016	Director of the 2 <sup>nd</sup> year of DUT (directeur des études), IUT of Villetaneuse, Depart-
	ment R&T. Duties: prepare the schedule of the courses, coordinate the professors,
	handle the students, supervise the research of an internship, organize the final jury.
2011-2016	Elected member of the Department R&T Council of the IUT of Villetaneuse.

# **Research experience**

The research worked out by Manzonetto during his PhD thesis has concerned models and theories of the untyped  $\lambda$ -calculus. In collaboration with Berline, Bucciarelli, Ehrhard, and Salibra, his research achievements have included: a general construction of  $\lambda$ -models from reflexive objects in (possibly non-well-pointed) categories; a Stone-style representation theorem for combinatory algebras; and a proof that no effective  $\lambda$ -model can have  $\lambda\beta$  or  $\lambda\beta\eta$  as its equational theory (this can be seen as a partial answer to an open problem introduced by Honsell in 1984). During his post-doc at INRIA, Manzonetto worked on second-order functional programming languages and proved, together with Tranquilli, that ML<sup>F</sup> is strongly

normalizable. In the context of his postdocs at University Sorbonne Paris-Nord and Radboud University, Manzonetto developed an abstract model theory for both typed and untyped resource sensitive  $\lambda$ -calculi. In 2013, he worked with Jim Laird, Guy McCusker and Michele Pagani on quantitative models of linear logic and non-deterministic extensions of PCF. In 2016, together with Salibra and Favro, he proposed a method for algebraising multi-valued propositional logics. He also worked with Breuvart, Intrigila, Polonsky and Ruoppolo on the observational theory  $\mathcal{H}^+$  and refuted a conjecture due to Sallé that dates back to 1979.

The results mentioned above, and others, have been published in twenty-one conference papers, twelve journal papers and five workshop papers. A journal paper has been recently accepted for publication in Logical Methods in Computer Science.

**Book** In his book "The Lambda Calculus — Its syntax and semantics", Barendregt described the state of the art of research in  $\lambda$ -calculus at the moment of his publication (1981). This book became an international standard on  $\lambda$ -calculus (with more than 11000 copies sold) and contained a series of interesting open problems and conjectures. In the last 40 years, many of these problems have been solved: some by Manzonetto and his coauthors, some by other researchers (several of these solutions are highly non-trivial and some occupied an entire PhD thesis). The interest on the subject is still widespread in the community, but many researchers are not aware of the progresses that have been done because they are sparse in the literature. For this reason, in 2017, Manzonetto started writing, in collaboration with Barendregt, a monograph collecting all these results in a uniform and accessible presentation.

The book has been published in October 2022 by the no-profit Editor College Publications (Nuffield College Oxford University) in the series "Studies in Logic", volume 94, 602 pages.

### Student supervision.

PhD students:	
2020-To Date	Nicolas Münnich (with Breuvart).
	Subject: Weighted relational models for PCF languages.
2019–To Date	Axel (formerly known as Emma) Kerinec.
	Subject: Models of call-by-value $\lambda$ -calculus based on the Böhm tree semantics.
2018-2021	Davide Barbarossa (with Tortora de Falco).
	Subject: Semantic of program approximation based on Taylor expansion.
	Thesis defended on December, 10, 2021.
2012-2016	Domenico Ruoppolo (with Guerrini).
	Subject: relational graph models and the representability of the corresponding equa-
	tional theories.
	Thesis defended on December, 13, 2016.
Post-docs:	
2019-2020	Federico Olimpieri (with Breuvart).
	Subject: bicategorical semantics of $\lambda$ -calculus.
2012-2013	Alejandro Dìaz-Caro (with Pagani).
	Subject: models of non-deterministic call-by-value $\lambda$ -calculi.
2014-2015	Andrew Polonsky.
	Subject: syntactic and semantic properties of untyped $\lambda$ -calculus.
Supervision Master	· Internship:
01–04 2018	Emma Kerinec (with Pagani): student from ENS-Lyon (Master 2), internship at the laboratory IRIF.
	Subject: Böhm trees and Taylor expansion in the Call-By-Value setting.
03-08 2016	Ikram Cherigui (with Guerrini): student from MPRI (Master 2), internship at the labo-
	ratory LIPN.
	Subject: combinatorial proofs for strong normalization in the typed setting.
03-08 2012	Domenico Ruoppolo (with Guerrini): student from MPRI (Master 2), internship at the
	laboratory LIPN.
	Subject: duality underlying models of call-by-name and call-by-value extensions of
	the $\lambda\mu$ -calculus.

### **Participations in Research Projects**

2022 – To Date	LambdaComb: "A cartographic quest between $\lambda$ -calculus, logic, and combinatorics"
	Projet PRC ANR-21-CE48-0017.
2020 – To Date	PPS: "Probabilistic Programming Semantics". ANR PRC project. Local coordinator.
2019 – To Date	CoGITARe: "Combining Graded and Intersection Types for the Analyses of Resources".
	ANR JCJC project.
2013 - 2016	CoQuas: "Computing with quantitative semantics". ANR JCJC project.
2011 - 2013	Complice: "Implicit Computational Complexity, Concurrency and Extraction". ANR
	Research Project ANR-08-BLANC-0211-01.
2010 - 2011	Calmoc: "Categorical and algebraic models of computation". Principal Investigator.
	NWO Research Project.
2009 - 2010	Collodi: "Complexity and concurrency through ludics and differential linear logic".
	Île-de-France/Digiteo Research Project.
2009	ParSec: "Parallelism and security". ANR Research Project ANR-06-SETI-010-02.
2008 - 2010	Concerto: "Control and certification of resources usage". Research Project. Partially
	funded by MIUR (Ministero dell'Istruzione, Università e Ricerca).
2005 - 2006	Follia: "Logical foundations of abstract programming languages". Research Project.
	Partially funded by MIUR (Ministero dell'Istruzione, Università e Ricerca).

Manzonetto proved to be able acquiring external funding from various sources. In 2010 he wrote a research proposal for the Dutch "Open Competition" that has been funded by NWO. In 2011 he wrote together with Mazza, Pagani, Vaux and Tasson a proposal for the French JCJC competition that has been funded by ANR. He is now local coordinator of the ANR project PPS, started in 2020.

#### **Awards and Bonus**

- 2020 Paolo Gentilini Award for Mathematical Logic and its Applications to Computer Science. By the Italian Association of Logic and its Applications (AILA).
- 2020 The paper "Taylor Subsumes Scott, Berry, Kahn and Plotkin" written with Barbarossa received a Distinguished Paper Award at POPL'20. This award highlights papers that the program committee thinks should be read by a broad audience due to their relevance, originality, significance and clarity.

2014 PEDR: Prime d'Encadrement Doctorale et de Recherche (4 years, renewed for 4 years).

2008 Manzonetto's PhD thesis was awarded the Prix EADS de la Meilleure Thèse 2008, category: "Sciences et technologies de l'information et de la communication" (Best PhD thesis award 2008).

Manzonetto is a contributor of the book "Alan Turing — his work and impact", Elsevier Science, winner in 2013 of the R.R. Hawkins Award from the Association of American Publishers (AAP), as well as the 2013 PROSE Awards for Mathematics and Best in Physical Sciences & Mathematics, also from the AAP.

### Qualifications

2018 Qualified as "Professeur des universités", Section: 27 (Computer Science).

2017 Habilitation à diriger des recherches.

### Grants

- Post-doctoral fellowship Calmoc Project. Duration: 1 year and 4 months. Started 1/5/2010.
- Post-doctoral fellowship Collodi Project. Duration: 6 months. Started 1/11/2009.
- Post-doctoral fellowship ParSec grant ANR-06-SETI-010-02. Duration: 10 months. Started 1/1/2009.
- PhD fellowship from Ca'Foscari University of Venice, Italy. Duration: 3 years. Started 1/11/2004.
- "Erasmus" fellowship from *Ca'Foscari University of Venice, Italy*. Duration: 5 months. Spent at *Vrije Universiteit, Amsterdam, Holland* from February 2004 to June 2004.

# **Referee Activities**

Manzonetto acted a	s a reviewer for many international journals, conferences and workshops:
NDJFL	Notre Dame Journal of Formal Logic, Duke University Press.
JFP	Journal of Functional Programming, Cambridge University Press.
TCS	Journal "Theoretical Computer Science", Elsevier.
TOCL	Journal "Transactions on Computational Logic", ACM.
LMCS	Journal "Logical Methods in Computer Science".
JSL	Journal of Symbolic Logic, Association for Symbolic Logic.
IPL	Information Processing Letters.
MSCS	Mathematical Structures in Computer Science.
PPDP2006	8 <sup>th</sup> International Symposium on Principles and Practice of Declarative Programming.
CSL2006	15th EACSL Annual Conference on Computer Science Logic.
ICTCS2007	10 <sup>th</sup> Italian Conference on Theoretical Computer Science.
CSL2008	17th EACSL Annual Conference on Computer Science Logic.
LSFA2008	3 <sup>rd</sup> Workshop on Logical and Semantic Frameworks, with Applications.
FOSSACS2009	12 <sup>th</sup> Conference on Foundations of Software Science and Computation Structures.
ESOP2010	19 <sup>th</sup> European Symposium On Programming.
ICALP2010	37 <sup>th</sup> International Colloquium on Automata, Languages and Programming.
PPDP2010	12 <sup>th</sup> International Symposium on Principles and Practice of Declarative Programming.
HOR2010	5 <sup>th</sup> International Workshop on Higher-Order Rewriting.
FOSSACS2011	14 <sup>th</sup> Conference on Foundations of Software Science and Computation Structures.
RTA2011	22 <sup>nd</sup> Rewriting Techniques and Applications.
WoLLIC2011	18 <sup>th</sup> Workshop on Logic, Language, Information and Computation.
ICALP2011	38 <sup>th</sup> International Colloquium on Automata, Languages and Programming.
LATIN2012	10 <sup>th</sup> Latin American Symposium on Theoretical Informatics 2012.
TLCA2013	Typed Lambda Calculi and Applications 2013.
LICS2013	28 <sup>th</sup> Annual ACM/IEEE Symposium on Logic in Computer Science 2013.
CSL-LICS2014	Joint meeting of the 23 <sup>th</sup> EACSL Annual Conference on Computer Science Logic and
	29th Annual ACM/IEEE Symposium on Logic in Computer Science.
FOSSACS2017	19th Conference on Foundations of Software Science and Computation Structures.
LICS2017	32 <sup>nd</sup> Annual ACM/IEEE Symposium on Logic in Computer Science.
FSCD2017	2 <sup>nd</sup> International Conference on Formal Structures for Computation and Deduction
LICS2018	33rd Annual ACM/IEEE Symposium on Logic in Computer Science.
LICS2019	34 <sup>th</sup> Annual ACM/IEEE Symposium on Logic in Computer Science.
CSL2020	28 <sup>th</sup> International Conference on Computer Science Logic.
FOSSACS2020	22 <sup>nd</sup> Conference on Foundations of Software Science and Computation Structures.
CSL2021	29th International Conference on Computer Science Logic.
LICS2021	36th Annual ACM/IEEE Symposium on Logic in Computer Science.
FSCD2022	7 <sup>th</sup> International Conference on Formal Structures for Computation and Deduction.
FSCD2023	8 <sup>th</sup> International Conference on Formal Structures for Computation and Deduction.

## **Reviewer of Research Projects**

2011 — 2013 Evaluation of several research proposals of the Kazakhstan scientific community for the "National Center of Science and Technology Evaluation".

# **Thesis Jury**

Dec. 2021	Member of the jury evaluating Barbarossa's PhD defense.
Dec. 2016	Member of the jury evaluating Ruoppolo's PhD defense.
Oct. 2015	Member of the jury evaluating Breuvart's PhD defense.

### **Steering Committees**

Sep. 2022 Steering committee member of the International Conference on Microservices.

### Program Committees

Microservices'22	General chair of the International Conference on Microservices 2022.
MFCS 2021	Member of the program committee of Mathematical Foundations of Computer Science
	2021.
FoSSaCS'21	Member of the program committee of International Conference on Foundations of Soft-
	ware Science and Computation Structures 2021.
TLLA 2017	Member of the program committee of Trends in Linear Logic and Applications 2017.

## **Organization of International Conferences**

Microservices'22	International conference on microservices, MSH-Paris Nord, 2022.
TLCA-IJCAR'20	Workshops Chair, Virtual Conferences, 2020.
CiE 2016	Member of the organizing committee of Computability in Europe, Paris, 2016.
QSLC 2016	Member of the organizing committee of Quantitative Semantics of Logic and Compu-
	tation, workshop affiliated to CSL, Marseille, 2016.
BLT 2013	Member of the organizing committee of the meeting Bounded Linear Types, rencontre
	du projet Coquas ANR JCJC, Institut Henri Poincaré, Paris, 2013.
TMLC 2013	Member of the organizing committee of the International Workshop "Theories and
	Models of the Lambda-Calculus" organized in honour of Prof. Salibra's 60th birthday,
	Paris.
ICALP 2006	Manzonetto participated in the organization of the 33 <sup>rd</sup> conference "International Col-
	loquium on Automata, Languages and Programming", San Servolo, Venice.

## **Talks in Conferences**

- Taylor Subsumes Scott, Berry, Kahn and Plotkin. POPL 2020, New Orleans, Louisiana, USA.
- Refutation of Sallé's longstanding conjecture. FSCD 2017, Oxford, United Kingdom.
- Factor algebras and symbolic computations. LICS 2016, New York, NY, USA.
- Semantics and syntactic characterizations of Morris's equivalence. Domains XI, Paris, France.
- Weighted relational models of typed lambda calculi. LICS 2013, New Orleans, Louisiana, USA.
- Böhm's Theorem for resource  $\lambda$ -calculus through Taylor expansion. TLCA 2011, Novi Sad, Serbia.
- Harnessing ML<sup>F</sup> with the power of System F. MFCS 2010, Brno, Czech Republic.
- A general class of models of  $\mathcal{H}^*$ . MFCS 2009, Novy Smokovec, Slovakia.
- A relational model of a parallel and non-deterministic  $\lambda$ -calculus. LFCS 2009, Boca Raton, Florida.
- From lambda calculus to universal algebra, and back. MFCS 2008, Torun, Poland.
- Lambda theories of effective lambda models. CSL 2007, Lausanne, Switzerland.
- Not enough points is enough. CSL 2007, Lausanne, Switzerland.

## **Invited Talks**

- The Lambda Calculus, its Syntax and Semantics 40 years later. LambdaComb Meeting, January 11<sup>th</sup> 2023, École Polytechnique (LIX), Plateau de Saclay, France.
- The Lambda Calculus, its Syntax and Semantics 40 years later. Realizability Workshop 2022, October 27<sup>th</sup> 2022, Fontainebleau, France.
- Profunctors what are they useful for? Meeting celebrating Thomas Ehrhard 60th birthday, September 28<sup>th</sup>, 2022, Paris, France.
- The Lambda Calculus, its Syntax and Semantics 40 years later. *XXVII Incontro AILA*, September 15<sup>th</sup>, 2022, Caserta, Italy.
- Taylor expansion, at work. *Linear Logic Winter School 2021 1<sup>st</sup> week*, Marseille, France.

- Classical realizability, Realizability Workshop 2019, September 29th 2019, Marseille, France.
- Degrees of extensionality in the theory of Böhm trees, satellite workshop of FSCD'19, Dortmund, Germany, June 28<sup>th</sup> 2019.
- The resource calculus. Quantitative Semantics of Logic and Computation, satellite workshop of CSL'16, Marseille, France, September 3<sup>rd</sup> 2016.
- Weighted relational differential categories. Association of Symbolic Logic. *University of Waterloo*, Ontario, Canada, May 9<sup>th</sup> 2013.
- Loader and Urzyczyn are logically related. Workshop Curry-Howard pour la concurrence. *ENS-Lyon, France*. February 14<sup>th</sup>, 2013.
- A differential model theory for resource λ-calculi. Foundational Methods in Computer Science 2011. University of Calgary, Canada, June 11<sup>th</sup> 2011.
- A resource conscious Böhm's Theorem. Workshop Curry-Howard pour la concurrence. *ENS-Lyon, France*. April 5<sup>th</sup>, 2011.

## **Recent Talks**

- The Lambda Calculus, its Syntax and Semantics 40 years later. *POPV Seminar, University of Boston, MA, USA.* Invited by Assef Kfoury. January 20<sup>th</sup> 2023.
- The Profunctorial Semantics. University of Bath, United Kingdom. June 16th, 2022.
- The Relational Semantics, and Beyond. LMF Seminar. *Paris-Saclay University, Gif-sur-Yvette, France.* April 19th, 2022.
- Addressing Machines for Higher-Order Computations. *University Paris Est Créteil, France*. Invited by Daniele Varacca. December 13th, 2021
- About the power of Taylor expansion. (Virtual) Chocola Meeting, ENS, Lyon, France. Invited by Damien Pous. January 14<sup>th</sup> 2021.
- Addressing Machines for Higher-Order Computations. *University Paris-Est Créteil, France*. Invited by Florent Madelaine. December 13<sup>th</sup>, 2021.
- About the power of Taylor expansion. (*Virtual*) LoReL seminar, Buenos-Aires, Argentina. Invited by Alejandro Díaz-Caro. December 3<sup>rd</sup> 2020.
- Taylor Subsumes Scott, Berry, Kahn and Plotkin. VALS, Paris-Saclay University, Gif-sur-Yvette, France. Invited by Chantal Keller. March 6 <sup>th</sup> 2020.
- A syntactic and semantic analysis of program equivalences. *LSV, ENS-Cachan, Cachan, France.* Invited by Stephane Le Roux. February 14<sup>th</sup> 2020.
- About the power of Taylor expansion. *IRIF, University Paris Cité, Paris, France.* Invited by Adrien Guatto. November 21<sup>st</sup> 2019.
- Several degrees of extensionality in the Böhm tree semantics. *ICIS, Radboud University, Nijmegen, The Netherlands.* Invited by Hermann Geuvers. February 26<sup>th</sup> 2019.
- Call-by-value Böhm trees, and all that. *I2M, Université Aix-Marseille, Marseille, France.* Invited by Lionel Vaux. October 4<sup>th</sup> 2018.
- Refutation of Sallé Longstanding Conjecture, *I2M, Université Aix-Marseille, Marseille, France.* Invited by Lionel Vaux. February 15<sup>th</sup> 2018.
- Refutation of Sallé Longstanding Conjecture, *LAMA*, *Université Savoie Mont Blanc*, *Chambéry*, *France*. Invited by Tom Hirschowitz. November 23<sup>rd</sup> 2017.
- New results on Morris's observational theory: the benefits of separating the inseparable. *University of Copenhagen, Denmark.* Invited by Jakob Grue Simonsen. June 8<sup>th</sup>, 2016.
- New results on Morris's observational theory: the benefits of separating the inseparable. *University of Bath, United Kingdom.* Invited by Guy McCusker. May 10<sup>th</sup>, 2016.
- New results on Morris's observational theory: the benefits of separating the inseparable. *Università di Torino*, Italy. Invited by Simona Ronchi della Rocca. February 12<sup>th</sup>, 2016.
- Loader and Urzyczyn are logically related. *ENS-Lyon, France*. Invited by the organizers of the Choco meeting. February 14<sup>th</sup>, 2013.
- Loader and Urzyczyn are logically related. *University of Bath, United Kingdom*. Invited by Guy McCusker. June 29<sup>th</sup>, 2012.
- The differential lambda calculus. LaBRI, INRIA, Bordeaux, France.

Invited by Sylvain Salvati. February 7th, 2012.

- The resource lambda calculus. *Vrije University, Amsterdam, The Netherlands*. Invited by Jan Willem Klop. March 11<sup>th</sup>, 2011.
- The Relational Model is Fully Abstract for the Resource Calculus with Tests. *University of Bath, UK*. Invited by Guy McCusker. February 9<sup>th</sup>, 2011.
- Harnessing ML<sup>F</sup> with the power of System F. *Vrije Universiteit, Amsterdam, Holland.* Invited by Femke van Raamdonk. December 10<sup>th</sup>, 2010.
- Full abstraction for resource calculus with tests. *ENS-Lyon, France*. Invited by Colin Riba. October 21<sup>st</sup>, 2010.
- A relational model of a parallel and non-deterministic calculus. *University Paris-Est Créteil, France*. Invited by Frédéric Gava. March 15<sup>th</sup>, 2010.

## **Short Visits**

23/10/21-30/10/21	Research in Paris (with H.P. Barendregt), Institut Henri Pointcaré. Paris, France.
12/06/21-19/06/21	Visiting H.P. Barendregt at Radboud University of Nijmegen (NL).
21/07/19-03/08/19	Research in Pairs (with H.P. Barendregt), Oberwolfach Mathematical Institute.
	Oberwolfach, Germany.
23/02/19-03/03/19	Visiting H.P. Barendregt at Radboud University of Nijmegen (NL).
19/01/18-01/06/18	Visiting L. Vaux at Université d'Aix-Marseille (FR).
06/06/16-10/06/16	Visiting J. Simonsen at University of Copenhagen (DK).
08/05/16-15/05/16	Visiting G. McCusker and J. Laird at University of Bath (UK).
08/02/16-13/02/16	Visiting S. Ronchi della Rocca at University of Turin (IT).
20/07/14-26/07/14	Visiting J. Simonsen at University of Copenhagen (DK).
25/06/12-01/07/12	Visiting G. McCusker and J. Laird at University of Bath (UK).
05/02/12-05/02/12	Visiting S. Salvati at LaBRI, Bordeaux (FR).
03/02/11-13/02/11	Visiting G. McCusker and J. Laird at University of Bath (UK).
20/11/10-28/11/10	Visiting M. Pagani at LIPN, USPN (FR).
19/10/10-24/10/10	Visiting P. Tranquilli at ENS-Lyon (FR).
14/02/10-19/02/10	Visiting G. McCusker and J. Laird at University of Bath (UK).
29/08/09-05/09/09	Visiting J.R. Longley at Informatics Forum of Edinburgh (UK).
06/05/09-08/05/09	Visiting H.P. Barendregt at Radboud University of Nijmegen (NL).
01/05/09-05/05/09	Visiting J.W. Klop at Vrije Universiteit of Amsterdam (NL).

# **Publications**

### Books

[1] Henk Barendregt and Giulio Manzonetto. A Lambda Calculus Satellite. College Publications, 2022.

### **Journal Papers**

- [2] A. Kerinec, G. Manzonetto, and F. Olimpieri. Why are proofs relevant in proof-relevant models? *PACMPL*, 7(POPL):8:1–8:31, 2023.
- [3] G. Della Penna, B. Intrigila, and G. Manzonetto. Addressing machines as models of lambda-calculus. *Log. Methods Comp. Sci*, 18(3), 2022.
- [4] D. Barbarossa and G. Manzonetto. Taylor subsumes Scott, Berry, Kahn and Plotkin. *PACMPL*, 4(POPL):1:1–1:23, 2020. Distinguished Paper Award.
- [5] E. Kerinec, G. Manzonetto, and M. Pagani. Revisiting call-by-value Böhm trees in light of their Taylor expansion. *Logical Methods in Computer Science*, Volume 16, Issue 3, 2020.
- [6] B. Intrigila, G. Manzonetto, and A. Polonsky. Degrees of extensionality in the theory of Böhm trees and Sallé's conjecture. *Logical Methods in Computer Science*, Volume 15, Issue 1, 2019.

- [7] G. Manzonetto, M. Pagani, and S. Ronchi Della Rocca. New semantical insights into call-by-value λ-calculus. *Fundam. Inform.*, 170(1-3):241–265, 2019.
- [8] G. Manzonetto, A. Polonsky, A. Saurin, and J. Simonsen. The fixed point property and a technique to harness double fixed point combinators. *Journal of Logic and Computation*, 29(5):831–880, 2019.
- [9] F. Breuvart, G. Manzonetto, and D. Ruoppolo. Relational graph models at work. *Logical Methods in Computer Science*, Volume 14, Issue 3, 2018.
- [10] J. Laird, G. Manzonetto, and G. McCusker. Constructing differential categories and deconstructing categories of games. *Inf. Comput.*, 222:247–264, 2013.
- [11] A. Bucciarelli, A. Carraro, T. Ehrhard, and G. Manzonetto. Full abstraction for the resource lambda calculus with tests, through Taylor expansion. *Logical Methods in Computer Science*, 8(4):1–44, 2012.
- [12] A. Bucciarelli, T. Ehrhard, and G. Manzonetto. A relational semantics for parallelism and nondeterminism in a functional setting. *Annals of Pure and Applied Logic*, 163(7):918–934, 2012.
- [13] G. Manzonetto. What is a categorical model of the differential and the resource  $\lambda$ -calculi? *Mathematical Structures in Computer Science*, 22(3):451–520, 2012.
- [14] G. Manzonetto and P. Tranquilli. Strong normalization of ML<sup>F</sup> via a calculus of coercions. *Theor. Comput. Sci.*, 417:74–94, 2012.
- [15] G. Manzonetto and A. Salibra. Applying universal algebra to lambda calculus. *Journal of Logic and Computation*, 20(4):877–915, 2010.
- [16] C. Berline, G. Manzonetto, and A. Salibra. Effective lambda models versus recursively enumerable lambda theories. *Mathematical Structures in Computer Science*, 19(5):897–942, October 2009.

#### **Conference Papers**

- [17] Benedetto Intrigila, Giulio Manzonetto, and Nicolas Münnich. Extended addressing machines for PCF, with explicit substitutions, 2022. To appear in Proc. of Mathematical Foundations of Programming Semantics 2022.
- [18] A. Kerinec, G. Manzonetto, and S. Ronchi Della Rocca. Call-by-value, again! In Naoki Kobayashi, editor, 6th International Conference on Formal Structures for Computation and Deduction, FSCD 2021, July 17-24, 2021, Buenos Aires, Argentina (Virtual Conference), volume 195 of LIPIcs, pages 7:1–7:18. Schloss Dagstuhl - Leibniz-Zentrum für Informatik, 2021.
- [19] G. Guerrieri and G. Manzonetto. The bang calculus and the two Girard's translations. In T. Ehrhard, M. Fernández, V. de Paiva, and Tortora de Falco L, editors, *Proceedings Joint International Workshop* on Linearity & Trends in Linear Logic and Applications, Linearity-TLLA@FLoC 2018, Oxford, UK, 7-8 July 2018., volume 292 of EPTCS, pages 15–30, 2018.
- [20] B. Intrigila, G. Manzonetto, and A. Polonsky. Refutation of Sallé's Longstanding Conjecture. In Dale Miller, editor, 2nd International Conference on Formal Structures for Computation and Deduction (FSCD 2017), volume 84 of Leibniz International Proceedings in Informatics (LIPIcs), pages 20:1– 20:18, Dagstuhl, Germany, 2017. Schloss Dagstuhl–Leibniz-Zentrum fuer Informatik.
- [21] F. Breuvart, G. Manzonetto, A. Polonsky, and D. Ruoppolo. New results on Morris's observational theory: The benefits of separating the inseparable. In Delia Kesner and Brigitte Pientka, editors, *1st International Conference on Formal Structures for Computation and Deduction, FSCD 2016*, volume 52 of *LIPIcs*, pages 15:1–15:18. Schloss Dagstuhl - Leibniz-Zentrum fuer Informatik, 2016.
- [22] A. Salibra, G. Manzonetto, and G. Favro. Factor varieties and symbolic computation. In 30th Annual ACM/IEEE Symposium on Logic in Computer Science, LICS, pages 738–747. IEEE Computer Society, 2016.
- [23] G. Manzonetto and D. Ruoppolo. Relational graph models, Taylor expansion and extensionality. *Electr. Notes Theor. Comput. Sci.*, 308:245–272, 2014.
- [24] A. Díaz-Caro, G. Manzonetto, and M. Pagani. Call-by-value non-determinism in a linear logic type discipline. In Symposium on Logical Foundations of Computer Science (LFCS'13), volume 7734 of Lecture Notes in Computer Science, pages 164–178, 2013.

- [25] J. Laird, G. Manzonetto, G. McCusker, and M. Pagani. Weighted relational models of typed lambdacalculi. In 28th Annual ACM/IEEE Symposium on Logic in Computer Science (LICS 2013), 25-28 June 2013, New Orleans, USA, Proceedings, pages 301–310, 2013.
- [26] S. Salvati, G. Manzonetto, M. Gehrke, and H. Barendregt. Loader and Urzyczyn are logically related. In Automata, Languages and Programming - 39th International Colloquium (ICALP 2012), Proc., Part II, volume 7392 of Lecture Notes in Computer Science, pages 364–376. Springer, 2012.
- [27] A. Bucciarelli, A. Carraro, T. Ehrhard, and G. Manzonetto. Full Abstraction for Resource Calculus with Tests. In Marc Bezem, editor, *Computer Science Logic (CSL'11) - 25th International Work-shop/20th Annual Conference of the EACSL*, volume 12 of *Leibniz International Proceedings in In-formatics (LIPIcs)*, pages 97–111, Dagstuhl, Germany, 2011. Schloss Dagstuhl–Leibniz-Zentrum fuer Informatik.
- [28] J. Laird, G. Manzonetto, and G. McCusker. Constructing differential categories and deconstructing categories of games. In Luca Aceto, Monika Henzinger, and Jiri Sgall, editors, Automata, Languages and Programming - 38th International Colloquium, ICALP 2011, Zurich, Switzerland, July 4-8, 2011, Proc., Part II, volume 6756 of Lecture Notes in Computer Science, pages 186–197. Springer, 2011.
- [29] G. Manzonetto and M. Pagani. Böhm theorem for resource lambda calculus through Taylor expansion. In *Typed Lambda Calculi and Applications (TLCA'11)*, volume 6690 of *Lecture Notes in Computer Science*, pages 153–168, 2011.
- [30] A. Bucciarelli, T. Ehrhard, and G. Manzonetto. Categorical models for simply typed resource calculi. In MFPS'10: 26<sup>th</sup> Conference on the Mathematical Foundations of Programming Semantics, volume 265 of Electronic Notes in Theoretical Computer Science, pages 213–230, 2010.
- [31] G. Manzonetto and P. Tranquilli. Harnessing ML<sup>F</sup> with the power of System F. In *Mathematical Foundations of Computer Science 2010*, volume 6281 of *Lecture Notes in Computer Science*, pages 525–536. Springer, 2010.
- [32] A. Bucciarelli, T. Ehrhard, and G. Manzonetto. A relational model of a parallel and non-deterministic lambda-calculus. In *Logical Foundations of Computer Science 2009*, volume 5407 of *Lecture Notes in Computer Science*, pages 107–121, 2009.
- [33] G. Manzonetto. A general class of models of H\*. In Mathematical Foundations of Computer Science (MFCS'09), volume 5734 of Lecture Notes in Computer Science, pages 574–586. Springer, 2009.
- [34] G. Manzonetto and A. Salibra. Lattices of equational theories as Church algebras. In C. Drossos, P. Peppas, and C. Tsinakis, editors, *Proc.* 7<sup>th</sup> *Panhellenic Logic Symposium*, pages 117–121. Patras University Press, 2009.
- [35] G. Manzonetto and A. Salibra. From lambda calculus to universal algebra and back. In *Mathematical Foundations of Computer Science 2008 (MFCS'08)*, volume 5162 of *Lecture Notes in Computer Science*, pages 479–490. Springer, 2008.
- [36] C. Berline, G. Manzonetto, and A. Salibra. Lambda theories of effective lambda models. In Jacques Duparc and T. A. Henzinger, editors, *CSL'07: Proceedings of 16<sup>th</sup> Computer Science Logic*, volume 4646 of *Lecture Notes in Computer Science*, pages 298–312. Springer, 2007.
- [37] A. Bucciarelli, T. Ehrhard, and G. Manzonetto. Not enough points is enough. In Jacques Duparc and T. A. Henzinger, editors, CSL'07: Proceedings of 16<sup>th</sup> Computer Science Logic, volume 4646 of Lecture Notes in Computer Science, pages 268–282. Springer, 2007.
- [38] G. Manzonetto and A. Salibra. Boolean algebras for lambda calculus. In LICS'06: Proceedings of the 21<sup>st</sup> Annual IEEE Symposium on Logic in Computer Science, pages 317–326, 2006.

#### Workshop Papers

- [39] D. Barbarossa and G. Manzonetto. About the power of Taylor expansion. In *Linearity/TLLA 2019*, 2019.
- [40] G. Guerrieri and G. Manzonetto. The bang calculus and the two Girard's translations. In *Linear-ity/TLLA 2018*, 2018.

- [41] G. Manzonetto and A. Polonsky. On unification of lambda terms. In 22<sup>nd</sup> International Conference on Types for Proofs and Programs, TYPES, 2016.
- [42] G. Manzonetto and D. Ruoppolo. Semantic and syntactic characterizations of Morris's equivalence. In International workshop on domain theory and applications, Domains XI, Université Paris-Diderot, Paris, France, 2014.
- [43] G. Manzonetto and P. Tranquilli. A calculus of coercions proving the strong normalization of ML<sup>F</sup>. In Proc. of 5<sup>th</sup> International Workshop on Higher-Order Rewriting, pages 17–21, 2010.

#### **Invited Papers**

- [44] H.P. Barendregt and G. Manzonetto. Turing's contributions to lambda calculus. In B. Cooper and J. van Leeuwen, editors, *Alan Turing His Work and Impact*, pages 139–143. Elsevier, 2013.
- [45] H.P. Barendregt, G. Manzonetto, and M.J. Plasmeijer. The imperative and functional programming paradigm. In B. Cooper and J. van Leeuwen, editors, *Alan Turing - His Work and Impact*, pages 121–126. Elsevier, 2013.

#### Theses

- [46] G. Manzonetto. *Lambda Calculus, Linear Logic and Symbolic Computation*. Habilitation à diriger des recherches, University Paris-Nord, 2017.
- [47] G. Manzonetto. Models and theories of lambda calculus. PhD thesis, Univ. Ca'Foscari (Venice) and Univ. Paris Diderot (Paris 7), 2008.