CURRICULUM VITAE
Jorge A. Pérez

October 2023

Bernoulli Institute for Mathematics, Computer Science, and AI
University of Groningen
The Netherlands

URL: http://www.jperez.nl
Email: j.a.perez[at]rug.nl
ORCID: 0000-0002-1452-6180

Academic Positions

Current Position:

Associate Professor of Software Foundations
(Dutch: *Universitair Hoofddocent 1 / Adjunct Hoogleraar, Grondslagen van Software*).
University of Groningen, The Netherlands. Tenured position (with *ius promovendi*) since July 2019.

Previous Positions:

Assistant Professor (Tenure Track), University of Groningen, The Netherlands. April 2014 – June 2019.

PostDoc Researcher, NOVA University of Lisbon, Portugal. 2010–2014.

Ph.D. Student, University of Bologna, Italy. 2007–2009.

Research Assistant, Universidad Javeriana Cali, Colombia. 2002–2006.

Current Research Interests

Concurrency Theory, Logical Foundations of Concurrency, Semantics of Programming Languages

Education

Ph.D. in Computer Science, University of Bologna, Italy, 2010.

Thesis: *Higher-Order Concurrency: Expressiveness and Decidability Results*.

Supervisor: Prof. Davide Sangiorgi.

Reviewers: Prof. Uwe Nestmann (Berlin) and Prof. Nobuko Yoshida (London).

Engineering Degree in Computer Science, Universidad Javeriana Cali, Colombia, 2006.

(Spanish: *Ingeniería de Sistemas y Computación*).

Thesis: *Soft Constraints in Concurrent Constraint Programming* (with A. Delgado).

Grants, Recognition, and Awards

(2022) Our iFM'22 paper "Scalable Typestate Analysis for Low-Latency Environments" (with Arslanagić and Subotić) received the *Best Artifact Award*.

(2021) Our ESOP'21 paper "Session Coalgebras: A Coalgebraic View on Session Types and Communication Protocols" (with Keizer and Basold) was selected among the *best papers* of the conference, and invited to the special issue that appeared in *ACM TOPLAS*.

(2019) Selected as member of the Young Academy Groningen, a club for the University's "most talented, enthusiastic, and ambitious young researchers".

(2019-2023) VIDI Career Grant from the Dutch Research Council (NWO).
Principal Investigator. Project: *Unifying Correctness for Communicating Software*.
Total amount granted: 895543€.

(2018-2021) TOP Grant 2017 from the Dutch Research Council (NWO).
Principal Investigator. Project: *ACCESS: Advanced Structures for Correct Communicating Software*.
Total amount granted: 234563€.
(Declined due to overlap with my VIDI grant.)

(2016-2018) Joint CNRS Project France - The Netherlands (PICS program)
Project: *SUCCESS: Security, adaptability, and time in Communication-Centric Software Systems*
Co-Investigator. Principal Investigator: Dr Cinzia Di Giusto (Université de Nice, France).
Total amount granted: 12000€.

(2015) Our CONCUR'15 paper "Characteristic Bisimulation for Higher-Order Session Processes" (with Kouzapas and Yoshida) was selected among the *best papers* of the conference, and invited to the special issue that appeared in Springer's *Acta Informatica*.

(2015) Grant from the University of Groningen (Science Without Borders) to visit the Theory of Computation Group, University of Brasilia. Brasilia, Brazil
Total amount granted: 1500€.

(2014) Travel and accommodation grant to attend and present paper at Mathematical Structures of Computation, week on Concurrency, Logic and Types. Lyon, France
Total amount granted: ~1000€.

(2013-2015) Seven grants for Short-Term Scientific Missions (STSMs) from the COST Action IC1201 BETTY (Behavioral Types for Reliable Large-Scale Software Systems). Both as participant and as scientific host.
Total amount granted: ~1000€ per grant.

(2013-2015) Research Postdoctoral Fellowship from the Portuguese Foundation for Science & Technology.
Project title: *"Logic-Based Behavioral Types for Secure, Reliable & Extensible Global Infrastructures"*.
Ranked 2nd (shared) among 117 applications.
Principal Investigator. Grant included monthly stipend (1495€, for 3 years) and travel support (750€).
Total amount granted: 54570€. (Resigned in 03/2014 to take up my current position.)

(2013) Invited as one of the 200 young researchers to the 1st Heidelberg Laureate Forum. Competitive selection among 600 applicants. Heidelberg, Germany.

(2013-2014) Selected for an ERCIM Alain Bensoussan Fellowship (12 month postdoctoral fellowship), after an open call with 155 applications.
Total amount granted: ~ 24000€. (Declined for personal reasons.)

(2010-2012) Postdoc scholarship within the Carnegie Mellon Portugal.
Project: *INTERFACES (Certified Interfaces for Integrity and Security of Extensible Web Applications)*. Principal Investigators: Prof. Luís Caires and Prof. Frank Pfenning.
Grant included monthly stipend (1495€, for 2010-2012) plus installation subsidy (1000€).
Total amount granted: 54840€.

(2007-2009) PhD Scholarship from MIUR (Italian Ministry of Education, Universities and Research).
Scholarship covered monthly stipend (980€, for 2007-2009).
Total amount granted: 35280€.

(2006) Laureate thesis distinction (outstanding research work) by the Council of the Engineering School, Universidad Javeriana Cali (CO).

Peer-Reviewed Publications

Summary

October 2023: 1 book chapter, 21 journal papers, and 58 conference/workshop papers.
A detailed list of publications appears at the end.

For further information, please consult my web site, DBLP entry, and Google Scholar.

Teaching

Qualifications

University Teaching Qualification (UTQ/BKO), the certificate of didactic competence in Dutch universities. Awarded by the University of Groningen on October 23, 2015.

Courses

At the University of Groningen, I am main responsible for the courses:

Languages and Machines (Since 2017). BSc Computing Science (∼150 students).

Models and Semantics of Computation (Since 2022). MSc Computing Science (∼30 students).

In the past, I have been main responsible for the courses:

Program Correctness (2021-2023). BSc Computing Science.

Discrete Structures (2014-2019). BSc Computing Science.

Formal Modelling of Communicating Systems (2014-2022). MSc Computing Science.

Mini-Courses in International Schools and Conferences

2021	*Session Types for Message-Passing Concurrency: Basic Concepts and Logical Foundations* 12th International School on Rewriting (ISR 2021, Virtual Event)
2018	*Type-based Communication Correctness in Multi-agent Systems* 20th European Agent Systems Summer School (EASSS 2018)
2016	*Session Types for Concurrent and Distributed Programming: Principles and Practice* (with R. Hu and N. Yoshida) 21st Symposium on Formal Methods (FM'16).
2012	*Formal Models of Concurrency* School of Computing Sciences (ECI'12), University of Buenos Aires, Argentina.

International activities

Current International Collaborations

Dr. Claudio Mezzina, University of Urbino, Italy: *Reversibility in (session-based) concurrency*.

Dr. Daniele Nantes-Sobrinho, Imperial College, UK: *Session-based concurrency*.

Prof. Jovanka Pantović, University of Novi Sad, Serbia: *Semantics of adaptation in concurrency*.

Prof. Nobuko Yoshida, Oxford University, UK: *Expressiveness of session-based concurrency*.

Involvement in European Initiatives

2014–2018	Management committee member (NL representative) COST Action IC1405 Reversible Computation – Extending Horizons of Computing
2014–2018	Management committee member (NL representative) COST Action IC1402 ARVI (Runtime Verification Beyond Monitoring)
2012–2016	Management committee member (NL representative) COST Action IC1201 BETTY (Behavioral Types for Reliable Large-Scale Software Systems)

Academic Activities

Steering Committee Member for International Conferences and Workshops

Since 2019   IFIP WG 6.1 Conference on Formal Techniques for Distributed Objects, Components, and Systems (FORTE)

Since 2015   Combined International Workshop on Expressiveness in Concurrency and on Structural Operational Semantics (EXPRESS/SOS)

General Chair of International Conferences

2024   19th International Federated Conference on Distributed Computing Techniques (DisCoTec 2024)

Co-Chair of International Conferences

2019   39th IFIP WG 6.1 Conference on Formal Techniques for Distributed Objects, Components, and Systems (FORTE'19)
Co-chair: Nobuko Yoshida (Imperial College).

Co-Chair of National Conferences

2020   SEN Symposium 2020: Sixth Dutch national symposium on software engineering
Co-chairs: Yanja Dajsuren (Eindhoven) and Wouter Swierstra (Utrecht).

Co-Chair of International Workshops

2023   Workshop on Recent Advances on Concurrency and Logic (RADICAL), co-located with CONCUR.
Co-Chair: Giuseppe Perelli (Sapienza University of Rome).

2019   26th International Workshop on Expressiveness in Concurrency / 16th Workshop on Structural Operational Semantics (EXPRESS/SOS'19), co-located with CONCUR.
Co-chair: Jurriaan Rot (Nijmegen).

2019   5th International Workshop on Behavioral Types (BEAT'19), co-located with POPL.
Co-chair: António Ravara (NOVA Lisboa).

2018   25th International Workshop on Expressiveness in Concurrency / 15th Workshop on Structural Operational Semantics (EXPRESS/SOS'18), co-located with CONCUR.
Co-chair: Simone Tini (Insubria).

2017   Workshop on Recent Advances on Concurrency and Logic (RADICAL), co-located with CONCUR.
Co-Chair: Julian Gutierrez (Oxford).

2015   11th Workshop on Developments in Computational Models (DCM), co-located with ICTAC.
Co-chair: César Muñoz (NASA Langley).

Program Committee Member for International Conferences and Workshops

2023   32nd European Symposium on Programming (ESOP'23)
44th ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI 2023)
Combined 30th International Workshop on Expressiveness in Concurrency and 20th Workshop on Structural Operational Semantics (EXPRESS/SOS 2023)
First International Workshop on Formal Methods for Business Process Management (FM-BPM 2023)
30 Years of Session Types (ST30)

2022   13th International Workshop on Programming Language Approaches to Concurrency and Communication-cEntric Software (PLACES'22)

2021   23rd International Symposium on Principles and Practice of Declarative Programming (PPDP'21)

	17th International Conference on Formal Aspects of Component Software (FACS'21)
	27th International Conference on Types for Proofs and Programs (TYPES'21)
	41st IFIP WG 6.1 Conference on Formal Techniques for Distributed Objects, Components, and Systems (FORTE'21)
	ACM SIGPLAN Workshop on Reactive and Event-based Languages & Systems 2021 (REBLS'21)
	16th International Workshop on Logical and Semantic Framework with Applications (LSFA'21)
2020	31st International Conference on Concurrency Theory (CONCUR'20)
	12th Workshop on Programming Language Approaches to Concurrency- & Communication-cEntric Software (PLACES'20)
	19th International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS'20)
2019	19th International Conference on Runtime Verification (RV'19)
	16th International Conference on Formal Aspects of Component Software (FACS'19)
	Workshop on Recent Advances on Concurrency and Logic (RADICAL).
	18th International Conference on Autonomous Agents and Multiagent Systems (AAMAS'19)
2018	18th International Conference on Runtime Verification (RV'18)
	20th ACM International Symposium on Principles and Practice of Declarative Programming (PPDP'18)
	38th IFIP WG 6.1 Conference on Formal Techniques for Distributed Objects, Components, and Systems (FORTE'18)
	11th Interaction and Concurrency Experience (ICE'18)
	33rd ACM Symposium on Applied Computing (SAC'18, Track: Service-Oriented Architectures and Programming).
2017	12th International Workshop on Logical and Semantic Frameworks, with Applications (LSFA'17).
	32nd ACM Symposium on Applied Computing (SAC'17, Track: Service-Oriented Architectures and Programming).
2016	43rd International Colloquium on Automata, Languages, and Programming (ICALP'16).
	23rd International Workshop on Expressiveness in Concurrency / 13th Workshop on Structural Operational Semantics (EXPRESS/SOS'16).
	31st ACM Symposium on Applied Computing (SAC'16, Track: Service-Oriented Architectures and Programming).
	1st International Workshop on Pre- and Post-deployment verification techniques (PrePost'16).
	9th Interaction and Concurrency Experience, (ICE'16).
2015	12th International Colloquium on Theoretical Aspects of Computing (ICTAC'15).
2014	3rd Workshop in Behavioral Types, co-located with CONCUR'14 (BEAT'14).
	40th Latin-American Conference on Informatics (CLEI - Theory of Computation symposium)
2013	39th Latin-American Conference on Informatics (CLEI - Theory of Computation symposium)

Invitations to Scientific Meetings

2024	Invited participant to Dagstuhl Seminar "Next Generation Protocols for Heterogeneous Systems".
	Dagstuhl (Germany), January 28 – February 2.
	Organizers: Stephanie Balzer, Marco Carbone, Roland Kuhn, and Peter Thiemann.
2022	Invited participant and presenter to the Workshop on "New challenges in programming language semantics".
	Lorentz Center (the Netherlands), November 28–December 2.
	Organizers: Andrzej Murawski, Marcello Bonsangue, and Nikos Tzevelekos.
2019	Invited speaker to the 8th Conference on "Logic and Applications" (LAP 2019).
	Dubrovnik (Croatia), September 23–27, 2019.
	Organizers: Zvonimir Sikić, Andre Scedrov, Silvia Ghilezan, Zoran Ognjanović, and Thomas Studer.
2017	Invited presenter to the Workshop on "Open Problems in Concurrency Theory II".
	Vienna (Austria), June 26–29.
	Organizers: Ilaria Castellani, Pedro R. D'Argenio, Mohammad Reza Mousavi, and Ana Sokolova.
2017	Invited participant to Dagstuhl Seminar "Theory and Applications of Behavioural Types".
	Dagstuhl (Germany), January 29 – February 3 (Declined).
	Organizers: Simon Gay, Vasco T. Vasconcelos, Philip Wadler, and Nobuko Yoshida.

2016	Invited speaker in the Fall Days on Communication, Safety and Privacy in IoT.
	Hoog Soeren (The Netherlands), November 7-11.
	Organized by the Institute for Programming research and Algorithmics (IPA).

Editorial Activity

2022	Co-editor (with O. Dardha and J. Rot) of the special issue with best papers from EX-PRESS/SOS'20.
	Information and Computation, to appear.
2021	Co-editor (with N. Yoshida) of the special issue with best papers from FORTE'19.
	Logical Methods in Computer Science.
2021	Co-editor (with S. Tini) of the special issue with best papers from EXPRESS/SOS'18.
	Information and Computation, 281, 2021.
2019	Co-editor (with M. Leucker, C. Rueda, and F. Valencia) of the special issue with best papers from ICTAC'15.
	Mathematical Structures in Computer Science, 29(1), 2019.
2016	Co-editor (with C. Muñoz) of the post-proceedings of DCM'15.
	Electronic Proceedings in Theoretical Computer Science (EPTCS), Volume 204.
2015 – 2022	Editor for the section on "Conference Reports" in SIGLOG news, the quarterly newsletter of the ACM Special Interest Group on Logic and Computation (SIGLOG) – http://siglog.acm.org.

Expert Referee and Panel Member for Research Proposals

2020, 2022	Dutch Organization for Scientific Research (NWO). Panel member VIDI grant - Science domain, cluster "Informatica+". Reviewer of 16 research proposals; committee member at interviews.
2018	Italian Ministry of Education, Universities and Research (MIUR) - Reviewer of five research proposals.
2017	American University of Beirut (AUB) - Reviewer of one research proposal.

Participation in Award Evaluation Committees

2020 – 2022	Evaluation committee member for the VERSEN PhD and MSc Thesis Awards.
2016	Evaluation committee member for the Best Dutch Cybersecurity Master Thesis Award. This award is sponsored by the 4TU.NIRICT Cybersecurity theme (https://www.4tu.nl/nirict).

Referee for Journals and Conferences

Transactions on Programming Languages and Systems (ACM)
Transactions on Computational Logic (ACM)
Distributed Computing (Springer)
Information and Computation (Elsevier)
Mathematical Structures in Computer Science (CUP)
Acta Informatica (Springer)
Logical Methods in Computer Science
Science of Computer Programming (Elsevier)
Theoretical Computer Science (Elsevier)
Journal of Logical and Algebraic Methods in Programming (Elsevier)
Information Processing Letters (Elsevier)
Journal of Computer Science and Technology (Springer)
Journal of Computer and System Sciences (Elsevier)

Referee for International Conferences

LICS (Logic in Computer Science)
POPL (Principles of Programming Languages)
ICALP (Automata, Languages and Programming)

ESOP (European Symposium on Programming)
CONCUR (Concurrency Theory)
FoSSaCS (Foundations of Software Science and Computation Structures)
FORTE (Formal Techniques for Distributed Systems)
APLAS (Asian Symposium on Programming Languages and Systems)
FSCD (Formal Structures for Computation and Deduction)
TLCA (Typed Lambda Calculi and Applications)
PPDP (Principles and Practice of Declarative Programming)
ICLP (Logic Programming)
PADL (Practical Aspects of Declarative Languages
FSTTCS (Foundations of Software Technology and Theoretical Computer Science)
IFM (Integrated Formal Methods)
LATA (Language and Automata Theory and Applications)
CALCO (Algebra and Coalgebra in Computer Science)
TASE (Theoretical Aspects of Software Engineering)

PhD Examiner

Alexander Fedotov: *Verification Techniques for xMAS*.
TU Eindhoven, January 11, 2022.

Arjen Rouvoet: *Correct by Construction Language Implementations*.
TU Delft, October 13, 2021.

George Digkas: *Reducing Technical Debt Density: Refactoring vs. Writing Clean New Code*.
University of Groningen, October 8, 2021.

Ahmad Alsahaf: *Feature selection and intelligent livestock management*.
University of Groningen, December 4, 2020.

Ang Sha: *Optimization of Energy Distribution in Smart Grids*.
University of Groningen, March 9, 2020.

Estefanía Talavera Martínez: *Lifestyle understanding through the analysis of egocentric photo-streams*.
University of Groningen, February 14, 2020.

Joshua Moerman: *Nominal Techniques and Black Box Testing for Automata Learning*.
Radboud University Nijmegen, July 1, 2019.

Jan Salvador van der Ven: *Preserving and Reusing Architectural Design Decisions*.
University of Groningen, April 8, 2019.

Mandy Lange-Geisler: *Hebbian Learning Approaches based on General Inner Products and Distance Measures in Non-Euclidean Spaces*.
University of Groningen, April 1, 2019.

Daniel Feitosa: *Applying Patterns in Embedded Systems Design for managing Quality Attributes and their Trade-offs*.
University of Groningen, January 25, 2019.

Elvira Arvanitou: *Proposing and empirically validating change impact analysis metrics*.
University of Groningen, July 13, 2018.

Heerko Groefsema: *Business Process Variability: A Study into Process Management and Verification*.
University of Groningen, December 23, 2016.

Viktoriya Degeler: *Dynamic Rule-Based Reasoning in Smart Environments*.
University of Groningen, September 29, 2014.

Service to University and Research Institute

University of Groningen, The Netherlands

Group Leader, *Fundamental Computing* group
(five research staff members, one postdoc, and 8 PhD students)

Bernoulli Institute for Mathematics, Computer Science, and AI.
Since October 2019.

Member, *Board of Admissions*, MSc in Computer Science.
Since 2018.

Member (YAG representative), University Committee for Academic Practice
(Dutch: *Universitaire Commissie Wetenschapsbeoefening*, UCW).
December 2020 – November 2022.

Co-organizer, *Opening Symposium* of the Bernoulli Institute for Mathematics, Computer Science, and AI.
November 1st, 2018.

Member, Programme Committee (Dutch: *Opleidingscommissie*) for Computing Science.
2017-2018.

Member, Hiring Committee (BAC), Tenure-track Assistant Professor in Computer Science (2020, 2021, 2023).

Member, Hiring Committee, Fixed-Term Lecturers in Computer Science (2021).

Advising

Postdocs

Dan Frumin. October 2020 – February 2023 (NWO VIDI).

Graduated Ph.D. Students

Alen Arslanagić: *Minimal Structures for Program Analysis and Verification.*
University of Groningen.

    Graduation date: September 12, 2023.

    Assessment committee: Prof. Marcello Bonsangue, Prof. Paola Giannini, Prof. Tijs van der Storm.

Jovana Dedeić: *Relative Expressiveness of Process Calculi with Dynamic Update and Runtime Adaptation.*
University of Novi Sad, Serbia. Co-supervised with Vanja Pantović.

    Graduation date: January 13, 2022.

    Assessment committee: Prof. Jelena Ivetić, Prof. Dusan Gajić, Dr. Ivan Prokić, Dr. Hugo Torres Vieira.

Mauricio Cano: *Session-based concurrency: between operational and declarative views.*
University of Groningen.

    Graduation date: January 7, 2020.

    Assessment committee: Prof. Mariangiola Dezani-Ciancaglini (University of Torino), Prof. Frank S. de Boer (CWI and Leiden University), Prof. Tijs van der Storm (CWI and University of Groningen).

    Third place, VERSEN Thesis Award 2020.

Current Ph.D. Students

Juan C. Jaramillo. Started in June 2022 (Colciencias scholarship).

Bas van den Heuvel. Started in October 2019 (NWO VIDI).

Joseph Paulus. Started in February 2019 (NWO VIDI).

Master Students

Bas van den Heuvel (University of Amsterdam). Completed in 2019 (joint with Alban Ponse).

Jeroen Brandsma. Completed in 2018 (main supervisor: Paris Avgeriou).

Firat Sertgoz. Completed in 2018 (co-supervised with Marco Aiello).

Undergraduate Students

Elton Antonis (2017-2018)

Alexandru Babeanu (2018, co-supervised with Mauricio Cano)

Barnabas Busa (2018, co-supervised with Vasilios Andrikopoulos)

Folkert de Vries (2018)

Daan Raatjes (2017-2018, Honours College)

Ana Roman (2017)

Bianca Udrescu (2019)

Jakob Vokac (2019)

Erik Voogd (2018)

Evi Xhelo (2019)

Alex Keizer (2020, main supervisor: Henning Basold)

Anda-Amelia Palamariuc (2020)

Luis Reyes (2020)

Bas Haaksema (2021)

Jens Hartsuiker (2021)

Antal Huisman (2021, main supervisor: Dan Frumin)

Kanghu Shi (2021, Honours College)

Andrei Dumitriu (2022, co-supervised with Oliver Lorscheid)

Lars Andringa (2022, main supervisor: Fadi Mohsen)

Attie Hendriks (2022)

Rares Dobre (2022, main supervisor: Bas van den Heuvel)

Eelke Landsaat (2022, main supervisor: Helle Hvid Hansen)

Laura-Andrea Schimbator (2022, main supervisor: Dan Frumin)

Miguel Bartelsman Mejía (2022, main supervisor: Dan Frumin)

Miriam Agafitei (2022)

Carmen Jica (2022, Honours College)

Channa Dias Perera (2023)

Public Engagement

September 2023: Short presentation at the European Researchers' Night, entitled "Can we rely on software?".

November 2022: Video Animation "Fundamental Computing: The Many Sides of Logic." Produced with Anne Mérat, Helle Hvid Hansen, and Revantha Ramanayake.

August 2022: Flash lecture ("flitslezing") at the Noorderzon Festival, entitled "Can we rely on software?".

April 2022: Interview in the I/O Magazine (Vol 19), a publication of the ICT Research Platform Nederland (IPN). The interview is part of an article, entitled "The Power of Logic in Computation", which presents the research of the Fundamental Computing group.

November 2021: Module in Knowlands, a project of the Scholierenacademie aimed at increasing scientific curiosity among high-school students.

October 2021: Video Animation "Fundamental computing: Mathematics and logic for software we can all rely on." Produced with Anne Mérat and Helle Hvid Hansen.

Februrary 2021: "Lespakket" (teaching package) that introduces program correctness to high-school stu-

dents and teachers. The package is freely available here (in Dutch). Developed in collaboration with the Scholierenacademie, which distributes the package across high-schools in the Northern Netherlands.

September 2019: Video "Research Minute on Software Correctness". Produced by the Young Academy Groningen.

Miscellaneous

Personal Data

Citizenship: Colombian and Italian.
Family status: Married, two children (born in 2017 and 2021).

Professional Memberships

ACM SIGLOG and SIGPLAN – Member

European Joint Conferences on Theory and Practice of Software (ETAPS) – Member

Dutch National Association for Software Engineering (VERSEN) – Member of the Board

Languages

Spanish (native), English (fluent), Italian (fluent), Dutch (basic), Portuguese (basic).

List of Publications

Book Chapters (1)

1. Runtime Verification for Decentralised and Distributed Systems
   (A. Francalanza, J. A. Pérez, and C. Sánchez)
   In *Lectures on Runtime Verification*, vol 10457 of LNCS, pp. 176-210, Springer, 2018.

Journal Papers (21)

1. *Non-Deterministic Functions as Non-Deterministic Processes (Extended Version)*
   (J. W. N. Paulus, D. Nantes-Sobrinho, J. A. Pérez)
   Logical Methods in Computer Science. To appear, 2023.

2. *Bit-Vector Typestate Analysis*
   (A. Arslanagic, P. Subotic, and J. A. Pérez)
   Formal Aspects of Computing (ACM), Volume 35 (3) (2023).

3. *Session-Based Concurrency in Maude: Executable Semantics and Type Checking*
   (C. Ramírez, J. C. Jaramillo, and J. A. Pérez)
   Logical and Algebraic Methods in Programming (Elsevier), 133: 100872 (2023).

4. *A Bunch of Sessions: A Propositions-as-Sessions Interpretation of Bunched Implications in Channel-Based Concurrency*
   (D. Frumin, E. D'Osualdo, B. van den Heuvel, and J. A. Pérez)
   Proceedings of the ACM on Programming Languages. Volume 6, Issue OOPSLA2, Article No.: 155, pp 841–869 (2022).

5. *Session Coalgebras: A Coalgebraic View on Regular and Context-free Session Types*
   (A. C. Keizer, H. Basold, and J. A. Pérez)
   ACM Trans. Program. Lang. Syst. 44(3): 18:1-18:45 (2022)

6. *Comparing Type Systems for Deadlock Freedom*
   (O. Dardha and J. A. Pérez)
   Logical and Algebraic Methods in Programming (Elsevier), 124: 100717 (2022).

7. *Session-Based Concurrency, Declaratively*
   (M. Cano, H. A. López, J. A. Pérez, and C. Rueda)
   Acta Informatica (Springer), 59(1):1–87, 2022.

8. *Causal Consistency for Reversible Multiparty Protocols*
   (C. A. Mezzina and J. A. Pérez)
   Logical Methods in Computer Science. Vol. 17(4), 2021.

9. *On Primitives for Compensation Handling as Adaptable Processes*
   (J. Dedeić, J. Pantović, and J. A. Pérez)
   Logical and Algebraic Methods in Programming (Elsevier), 121: 100675 (2021).

10. *On the Relative Expressiveness of Higher-Order Session Processes*
    (D. Kouzapas, J. A. Pérez, and N. Yoshida)
    Information and Computation (Elsevier), 268 (2019).

11. *Reversibility in Session-Based Concurrency: A Fresh Look*
    (C. A. Mezzina and J. A. Pérez)
    Logical and Algebraic Methods in Programming (Elsevier), 90: 2-30 (2017).

12. *Characteristic Bisimulation for Higher-Order Session Processes*
    (D. Kouzapas, J. A. Pérez, and N. Yoshida)
    Acta Informatica (Springer), 54(3): 271-341 (2017). Special Issue: Best papers from CONCUR'15.

13. *Self-Adaptation and Secure Information Flow in Multiparty Communications*
    (I. Castellani, M. Dezani-Ciancaglini, and J. A. Pérez)
    Formal Aspects of Computing (Springer), 28 (4) 669-696 (2016).

14. *Event-Based Run-time Adaptation in Communication-Centric Systems*
(C. Di Giusto and J. A. Pérez)
Formal Aspects of Computing (Springer), 28 (4) 531-566 (2016).

15. *Dynamic Role Authorization in Multiparty Conversations*
(S. Ghilezan, S. Jaksic, J. Pantovic, J. A. Pérez, H. T. Vieira)
Formal Aspects of Computing (Springer), 28 (4) 643-667 (2016).

16. *Combining Behavioural Types With Security Analysis*
(M. Bartoletti, I. Castellani, P.-M. Deniélou, M. Dezani-Ciancaglini, S. Ghilezan, J. Pantovic, J. A. Pérez, P. Thiemann, B. Toninho, and H. T. Vieira)
Logical and Algebraic Methods in Programming (Elsevier), 84: 763-780 (2015).

17. *Disciplined Structured Communications with Disciplined Runtime Adaptation*
(C. Di Giusto and J. A. Pérez.)
Science of Computer Programming (Elsevier), 97: 235-265 (2015).

18. *Linear Logical Relations and Observational Equivalences for Session-Based Concurrency*
(J. A. Pérez, L. Caires, F. Pfenning, and B. Toninho.)
Information and Computation (Elsevier), 239:254-302 (2014).

19. *Adaptable Processes*
(M. Bravetti, C. Di Giusto, J. A. Pérez, and G. Zavattaro.)
Logical Methods in Computer Science. Vol. 8(4:13), 2012.

20. *On the Expressiveness and Decidability of Higher-Order Process Calculi*
(I. Lanese, J. A. Pérez, D. Sangiorgi, and A. Schmitt).
Information and Computation (Elsevier), 209(2):198-226.

21. *Higher-Order Concurrency: Expressiveness and Decidability Results – A Survey*
(J. A. Pérez)
Bulletin of the European Association for Theoretical Computer Science, Number 101, pp. 92-124, June 2010.

Conference and Workshop Papers (58)

1. *Typed Non-determinism in Functional and Concurrent Calculi*
(B. van den Heuvel, J. W. N. Paulus, J. A. Pérez, and D. Nantes-Sobrinho)
In 21st Asian Symposium on Programming Languages and Systems (APLAS'23), ©Springer, 2023.

2. *Termination in Concurrency, Revisited*
(J. W. N. Paulus, J. A. Pérez, and D. Nantes-Sobrinho)
In 25th International Symposium on Principles and Practice of Declarative Programming (PPDP'23), ©ACM Press, 2023.

3. *Monitoring Blackbox Implementations of Multiparty Session Protocols*
(B. van den Heuvel, J. A. Pérez, and R. Dobre)
In Proc. of the 23rd International Conference on Runtime Verification (RV'23), ©Springer, 2023.

4. *Scalable Typestate Analysis for Low-Latency Environments*
(A. Arslanagic, P. Subotic, and J. A. Pérez)
In Proc. of the 17th International Conference on Integrated Formal Methods (iFM'22), ©Springer, 2022.
Best artifact award.

5. *Executable Semantics and Type Checking for Session-Based Concurrency in Maude*
(C.A. Ramírez Restrepo and J. A. Pérez)
In Proc. of 14th International Workshop on Rewriting Logic and Its Applications (WRLA'22), ©Springer, 2022.

6. *Asynchronous Functional Sessions: Cyclic and Concurrent*
(B. van den Heuvel and J. A. Pérez)
In Proc. of the Combined 29th International Workshop on Expressiveness in Concurrency and 19th Workshop on Structural Operational Semantics, (EXPRESS/SOS'22). EPTCS (Electronic Proceedings in Theoretical Computer Science), Vol 368, pp. 75–94.

7. *Minimal Session Types for the π-calculus*
   (A. Arslanagic, A. A. Palamariuc, and J. A. Pérez)
   In 23rd International Symposium on Principles and Practice of Declarative Programming (PPDP'21),
   ©ACM Press, 2021.

8. *Deadlock Freedom for Asynchronous and Cyclic Process Networks*
   (B. van den Heuvel and J. A. Pérez)
   In Proc. of 14th Workshop on Interaction and Concurrency Experience (ICE'21). EPTCS (Electronic
   Proceedings in Theoretical Computer Science), Vol 347, pp. 38–56.

9. *Types and Terms Translated: Unrestricted Resources in Encoding Functions as Processes*
   (J. W. N. Paulus, D. Nantes-Sobrinho, J. A. Pérez)
   In Post-Proc. of 27th International Conference on Types for Proofs and Programs, (TYPES'21), ©LIPICS, 2021.

10. *Non-Deterministic Functions as Non-Deterministic Processes (Extended Abstract)*
    (J. W. N. Paulus, D. Nantes-Sobrinho, J. A. Pérez)
    In Proc. of 7th Intl Conference on Formal Structures for Computation and Deduction (FSCD'21), ©LIPICS, 2021.

11. *Session Coalgebras: A Coalgebraic View on Session Types and Communication Protocols*
    (A. C. Keizer, H. Basold, and J. A. Pérez)
    In Proc. of 30th European Symposium on Programming (ESOP'21), ©Springer, 2021.

12. *Hyperledger Fabric: Evaluating Endorsement Policy Strategies in Supply Chains.*
    (M. Soelman, V. Andrikopoulos, J. A. Pérez, V. Theodosiadis, K. Goense, and A. Rutjes)
    In Proc. of 2nd International Conference on Decentralized Applications and Infrastructures (DAPPS
    2020). ©IEEE, 2020.

13. *Session Type Systems based on Linear Logic: Classical versus Intuitionistic*
    (B. van den Heuvel and J. A. Pérez)
    In Proc. of Eleventh Workshop on Programming Language Approaches to Concurrency and Communication-
    cEntric Software (PLACES@ETAPS 2020). EPTCS (Electronic Proceedings in Theoretical Computer
    Science), Vol 314, pp. 1–11.

14. *Domain-Aware Session Types*
    (L. Caires, F. Pfenning, J. A. Pérez, and B. Toninho.)
    In Proc. of 30th Intl Conference in Concurrency Theory (CONCUR'19), ©LIPICS, 2019.

15. *Minimal Session Types (Pearl)*
    (A. Arslanagic, J. A. Pérez, and E. Voogd)
    In 33rd European Conference on Object-Oriented Programming (ECOOP'19), ©LIPICS, 2019.

16. *Reversible Session-Based Concurrency in Haskell*
    (F. de Vries and J. A. Pérez)
    In Proc. of the 19th International Symposium on Trends in Functional Programming (TFP'18), vol 11457
    of LNCS, pp. 20–45 ©Springer, 2018.

17. *Relating Process Languages for Security and Communication Correctness (Extended Abstract)*
    (D. Nantes-Sobrinho and J. A. Pérez)
    In Proc. of the 38th IFIP International Conference on Formal Techniques for Distributed Objects, Com-
    ponents and Systems (FORTE'18), vol 10854 of LNCS, pp. 79–100 ©Springer, 2018.

18. *Causally Consistent Reversible Choreographies: A Monitors-as-Memories Approach*
    (C. A. Mezzina and J. A. Pérez)
    In Proc. of 19th Intl Symposium on Principles and Practice of Declarative Programming (PPDP'17),
    ©ACM, 2017.

19. *Session-Based Concurrency, Reactively.*
    (M. Cano, J. Arias, and J. A. Pérez)
    In Proc. of the 37th IFIP International Conference on Formal Techniques for Distributed Objects, Com-
    ponents and Systems (FORTE'17), vol 10321 of LNCS, pp. 74–91 ©Springer, 2017.

20. *Linearity, Control Effects, and Behavioral Types*
    (L. Caires and J. A. Pérez)
    In Proc. of 26th European Symposium on Programming (ESOP'17), vol 10201 of LNCS, pp. 229–259
    ©Springer, 2017.

21. *Efficient Compensation Handling via Subjective Updates*
(J. Dedeic, J. Pantovic, and J. A. Pérez)
In Proc. of 32nd ACM Symposium On Applied Computing (SAC'17), ©ACM, 2017.

22. *On the Relative Expressiveness of Higher-Order Session Processes*
(D. Kouzapas, J. A. Pérez, and N. Yoshida)
In Proc. of 25th European Symposium on Programming (ESOP'16), vol 9632 of LNCS, pp. 446–475
©Springer, 2016.

23. *Multiparty Session Types Within A Canonical Binary Theory, and Beyond*
(L. Caires and J. A. Pérez)
In Proc. of the 36th IFIP International Conference on Formal Techniques for Distributed Objects, Components and Systems (FORTE'16), vol 9688 of LNCS, pp. 74–95 ©Springer, 2016.

24. *The Challenge of Typed Expressiveness in Concurrency (Short Paper)*
(J. A. Pérez)
In Proc. of the 36th IFIP International Conference on Formal Techniques for Distributed Objects, Components and Systems (FORTE'16), vol 9688 of LNCS, pp. 239–247 ©Springer, 2016.

25. *Reversible Semantics in Session-based Concurrency (Short Communication)*.
(C. A. Mezzina and J. A. Pérez)
In Proc.of the 17th Italian Conference on Theoretical Computer Science (ICTCS'16), vol 1720 of CEUR
Workshop Proceedings, pp. 221-226

26. *Towards A Practical Model of Reactive Communication-Centric Software (Short Communication)*.
(J. Arias, M. Cano, and J. A. Pérez)
In Proc.of the 17th Italian Conference on Theoretical Computer Science (ICTCS'16), vol 1720 of CEUR
Workshop Proceedings, pp. 227-233

27. *Reversible Sessions Using Monitors*
(C. Mezzina and J. A. Pérez)
In Proc. of Ninth Workshop on Programming Language Approaches to Concurrency and Communication-cEntric Software (PLACES'16). EPTCS (Electronic Proceedings in Theoretical Computer Science), Vol
211, pp. 56–64.

28. *Characteristic Bisimulations for Higher-Order Session Processes*
(D. Kouzapas, J. A. Pérez, and N. Yoshida)
In Proc. of 26th Intl Conference in Concurrency Theory (CONCUR'15), ©LIPICS, 2015.

29. *Declarative Interpretations of Session-Based Concurrency*
(M. Cano, H. A. López, J. A. Pérez, and C. Rueda)
In Proc. of 17th Intl Symposium on Principles and Practice of Declarative Programming (PPDP'15),
©ACM, 2015.

30. *Comparing Deadlock-Free Session Typed Processes*
(O. Dardha and J. A. Pérez)
In Proc. of the Combined 22th International Workshop on Expressiveness in Concurrency and 12th
Workshop on Structural Operational Semantics, and 12th Workshop on Structural Operational Semantics (EXPRESS/SOS'15). EPTCS (Electronic Proceedings in Theoretical Computer Science), Vol 190, pp.
1–15.

31. *On Compensation Primitives as Adaptable Processes*
(J. Dedeic, J. Pantovic, and J. A. Pérez)
In Proc. of the Combined 22th International Workshop on Expressiveness in Concurrency and 12th
Workshop on Structural Operational Semantics, and 12th Workshop on Structural Operational Semantics (EXPRESS/SOS'15). EPTCS (Electronic Proceedings in Theoretical Computer Science), Vol 190, pp.
16–30.

32. *A Typed Model for Dynamic Authorizations*
(S. Ghilezan, S. Jaksic, J. Pantovic, J. A. Pérez, H. T. Vieira)
In Proc. of Eighth Workshop on Programming Language Approaches to Concurrency and Communication-cEntric Software (PLACES'15). EPTCS (Electronic Proceedings in Theoretical Computer Science), Vol
203, pp. 73–84.

33. *An Event-Based Approach to Runtime Adaptation in Communication-Centric Systems*
(C. Di Giusto and J. A. Pérez)
In Post-proc. of 11th Intl. Workshop on Web Services and Formal Methods (WS-FM'14), vol 9421 of LNCS, pp. 67–85. ©Springer, 2016.

34. *Dynamic Role Authorization in Multiparty Conversations*
(S. Ghilezan, S. Jaksic, J. Pantovic, J. A. Pérez, and H. T. Vieira)
In Proc. of Third International Workshop on Behavioral Types (BEAT'14). EPTCS (Electronic Proceedings in Theoretical Computer Science), Vol 162, pp. 1–8.

35. *Self-Adaptation and Secure Information Flow in Multiparty Structured Communications: A Unified Perspective*
(M. Dezani-Ciancaglini, I. Castellani, and J. A. Pérez)
In Proc. of Third International Workshop on Behavioral Types (BEAT'14). EPTCS (Electronic Proceedings in Theoretical Computer Science), Vol 162, pp. 9–18.

36. *Behavioral Polymorphism and Parametricity in Session-Based Communication*
(L. Caires, J. A. Pérez, F. Pfenning, and B. Toninho)
In Proc. of 22nd European Symposium on Programming (ESOP'13), vol 7792 of LNCS, pp. 330–349. ©Springer, 2013.

37. *Disciplined Structured Communications with Consistent Runtime Adaptation*
(C. Di Giusto and J. A. Pérez)
In Proc. of 28th ACM Symposium On Applied Computing (SAC'13), ©ACM, 2013.

38. *Towards Global and Local Types for Adaptation*
(M. Bravetti, M. Carbone, T. Hildebrandt, I. Lanese, J. Mauro, J. A. Pérez, and G. Zavattaro)
In SEFM 2013 Collocated Workshops (BEAT'13), vol 8368 of LNCS, pp. 1–12. ©Springer, 2014.

39. *Session Types with Runtime Adaptation: Overview and Examples*
(C. Di Giusto and J. A. Pérez)
In Proc. of Fifth Workshop on Programming Language Approaches to Concurrency and Communication-cEntric Software (PLACES'13). EPTCS (Electronic Proceedings Theoretical Computer Science), Vol 137, pp. 21–32.

40. *Towards Formal Interaction-based Models of Grid Computing Infrastructures*
(C. Di Giusto and J. A. Pérez)
In Proc. of Ninth International Workshop on Developments in Computational Models (DCM'13). EPTCS (Electronic Proceedings in Theoretical Computer Science), Vol 144, pp. 57–72.

41. *Linear Logical Relations for Session-Based Concurrency*
(J. A. Pérez, L. Caires, F. Pfenning, and B. Toninho)
In Proc. of 21st European Symposium on Programming (ESOP'12), vol 7211 of LNCS, pp. 536–555. ©Springer, 2012.

42. *Towards the Verification of Adaptable Processes*
(M. Bravetti, C. Di Giusto, J. A. Pérez, and G. Zavattaro)
In Proc. of 5th Intl. Symposium On Leveraging Applications of Formal Methods, Verification and Validation (ISoLA'12) vol 7609 of LNCS, pp. 269–208. ©Springer, 2012.

43. *Type-Based Access Control for Data-Centric Systems*
(L. Caires, J. A. Pérez, J. Seco, H. T. Vieira, and L. Ferrão)
In Proc. of 20th European Symposium on Programming (ESOP'11), vol 6602 of LNCS, pp. 136–155. ©Springer, 2011.

44. *Adaptable Processes (Extended Abstract)*
(M. Bravetti, C. Di Giusto, J. A. Pérez, and G. Zavattaro.)
In Proc. of Joint 13th IFIP WG 6.1 Intl. Conference and 31th IFIP WG 6.1 Intl. Conference (FMOODS-FORTE'11), vol 6722 of LNCS, pp. 90–105. ©Springer, 2011.

45. *Time and Exceptional Behavior in Multiparty Structured Interactions*
(H. A. López and J. A. Pérez)
In Post-proc. of 8th Intl. Workshop on Web Services and Formal Methods (WS-FM'11), vol 7176 of LNCS, pp. 48–63. ©Springer, 2012.

46. *On the Expressiveness of Polyadic and Synchronous Communication in Higher-Order Process Calculi*
(I. Lanese, J. A. Pérez, D. Sangiorgi, and A. Schmitt).
In Proc. of 37th Intl. Colloquium on Automata, Languages and Programming (ICALP'10), vol 6199 of LNCS, pp. 442–453. ©Springer, 2010.

47. *Steps On the Road to Component Evolvability*
(M. Bravetti, J. A. Pérez, C. Di Giusto, and G. Zavattaro)
In Proc. of 7th Intl. Workshop on Formal Aspects of Component Software (FACS'10), vol 6921 of LNCS, pp. 295–299. ©Springer, 2012.

48. *On the Expressiveness of Forwarding in Higher-Order Communication*
(C. Di Giusto, J. A. Pérez, and G. Zavattaro)
In *Theoretical Aspects of Computing*: Proc. of the Sixth Intl. Colloquium (ICTAC'09), vol 5684 of LNCS, pp. 155–169. ©Springer, 2009.

49. *Towards a Unified Framework for Declarative Structured Communications*
(H. A. López, J. A. Pérez, and C. Olarte)
In Proc. of Second Workshop on Programming Language Approaches to Concurrency and Communication-cEntric Software (PLACES'09). EPTCS (Electronic Proceedings in Theoretical Computer Science), Vol 17, pp. 1–15.

50. *An Overview of FORCES: An INRIA Project on Declarative Formalisms for Emergent Systems.*
(J. Aranda, G. Assayag, C. Olarte, J. A. Pérez, C. Rueda, M. Toro, and F. D. Valencia)
Logic Programming: Proc. of the Twenty-Fifth Intl. Conference (ICLP'09), vol 5649 of LNCS, pp. 509–513, ©Springer, 2009.

51. *On the Expressiveness and Decidability of Higher-Order Process Calculi*
(I. Lanese, J. A. Pérez, D. Sangiorgi, and A. Schmitt)
In Proc. of the 23rd IEEE Symposium on Logic in Computer Science (LICS'08), pp. 145–155. ©IEEE Computer Society, 2008.

52. *Stochastic Behavior and Explicit Discrete Time in Concurrent Constraint Programming*
(J. Aranda, J. A. Pérez, C. Rueda, and F. Valencia)
In *Logic Programming*: Proc. of the Twenty-Fourth Intl. Conference (ICLP'08), vol 5366 of LNCS, pp. 682–686, ©Springer, 2008.

53. *Non-determinism and Probabilities in Timed Concurrent Constraint Programming*
(J. A. Pérez and C. Rueda)
In *Logic Programming*: Proc. of the Twenty-Fourth Intl. Conference (ICLP'08), vol 5366 of LNCS, pp. 677–681, ©Springer, 2008.

54. *A Declarative Framework for Security: Secure Concurrent Constraint Programming (Abstract)*
(H. López, C. Palamidessi, J. A. Pérez, C. Rueda, and F. Valencia)
Logic Programming: Proc. of the Twenty-Second Intl. Conference (ICLP'06), vol 4079 of LNCS, pp. 449–450. ©Springer, 2006.

55. *Timed Concurrent Constraint Programming for Analysing Biological Systems*
(J. Gutierrez, J. A. Pérez, C. Rueda, and F. Valencia)
In Proc. of the Workshop on Membrane Computing and Biologically Inspired Process Calculi (MeCBIC'06), part of ICALP'06. Electr. Notes Theor. Comput. Sci. 171(2) 117-137, ©Elsevier B.V., 2007.

56. *Implementing an Abstraction Scheme for Soft Constraints*
(A. Delgado, J. A. Pérez, and C. Rueda)
In *Abstraction, Reformulation and Approximation*: Proc. of the Sixth Intl. Symposium (SARA'05), vol 3607 of Lecture Notes in Artificial Intelligence, pp. 60–75. ©Springer, 2005.

57. *Implementing Semiring-Based Constraints Using Mozart*
(A. Delgado, J. A. Pérez, C. Olarte and C. Rueda)
In *Multiparadigm Programming in Mozart/Oz*: Extended Proc. of the Second Intl. Conference (MOZ'04), vol 3389 of LNCS, pp. 224–236. ©Springer, 2005.

58. *An Interactive Tool for the Controlled Execution of an Automated Timetabling Constraint Engine*
(A. Delgado, J. A. Pérez, G. Pabón, R. Jordan, J. F. Díaz and C. Rueda)
In *Multiparadigm Programming in Mozart/Oz*: Extended Proc. of the Second Intl. Conference (MOZ'04), vol 3389 of LNCS, pages 322–332. ©Springer, 2005.