

## Jacques Robin

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### Professional Experience Research Fund-Raising and Project Management

#### Research Engineer

**Université Paris 1 Panthéon-Sorbonne (UP1)**, Paris, France, *since 2017*

- Leader of verification work package of ITEA-3.2 project REVaMP<sup>2</sup>

*Topic:* Automation of product line extraction, verification and evolution from legacy assets of software intensive systems variants resulting from initial clone-and-own approach to variability management

*Consortium:* 30 participants in 5 countries, including 5 SME and 9 multinationals (ABB, Altran, AVL, Bosch, SAAB, Scania, Siemens, Sony, Thales)

**Université Pierre et Marie Curie (UPMC)**, Paris, France, *2014-2016*

- Co-led consortium building and proposal writing of REVaMP<sup>2</sup>

- Worked on Thales-led ITEA-2 MERGE project

*Topic:* Lifecycle process modeling, formal verification and intelligent guidance of flexible enactment in multi-view **Model-Driven Engineering (MDE)** of safety, security and real-time critical systems

- Worked on Softeam-led FUI project Monoge

*Topic:* Metamodel-model co-evolution automation and meta-model extension

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### Professional Experience Research Team Management

#### Research Laboratory Head

**Thales Research and Technology**, Palaiseau, France, *2011-2013*

- Head of MDE laboratory, managing 11 research engineers

*Topics:*

- Multi-view component-based product line MDE for real-time, safety and security critical embedded systems
- System architecture space exploration and multi-criteria evaluation
- Formal modeling and verification of non-functional properties

*Industrial application domains:* aerospace, railways and defense

**Professional  
Experience  
Research**

**Research Engineer**

**UPMC**, Paris, France, 2010-2011

- Worked on Airbus-led Galaxy project (ANR funding)  
*Topic: Scalability in version-controlled collaborative MDE tool-kits*
- Worked on INRIA-led TODAS project (STIC Amsud / CNRS funding)  
*Topic: Generic, formal, executable and user-friendly reasoning explanation facility for rule-based constraint programming engines*

**Associate Professor**

**Universidade Federal de Pernambuco (UFPE)**, Recife Brazil, 1997-2009

- Leader of the WAKAME project in cooperation with Universität Mannheim, Germany (CNPq / CAPES funding)

*Topic: Web-browser accessible, cloud-deployed CASE tool, for component-based multi-view MDE, with structural, behavioral and deployment code generation from platform-independent models in UML2 and OCL2*

- Co-leader of ROARS project (CAPES / DAAD funding) in cooperation with German research groups at Universität Mannheim, Universität Ulm and Fraunhofer-Gesellschaft Berlin

*Topic: Cross-fertilization between component-based, multi-view MDE and rule-based constraint programming*

- Co-leader of C4RBCP project (FACEPE / INRIA funding) in cooperation with INRIA (Contraintes group)

*Topic: Extending rule-based constraint programming with objects and components*

- Leader of CIGOLF project (CNPq funding)

*Topic: Inductive object-oriented logic programming*

- **Adviser of 7 PhD. theses and 17 Master's theses**

**Visiting Researcher**

**UPMC**, Paris, France, 2004-2005

- Leader of MODELOG project, a UPMC-UFPE cooperation

*Topic: Fully automated object-oriented logic program generation from platform-independent models in UML2/OCL2.*

### Visiting Researcher

**UFPE**, Recife Brazil, 1996-1997

- Leader of MATRIKS project (CAPES funding)

*Topic: Automated generation of natural language hypertext summarizing data mining discoveries.*

### Post-Doctoral Researcher

**Bellcore Laboratories**, New Jersey, USA, 1995-1996

- Participant to the FlowDoc and PlanDoc projects

*Topic: Automated generation of natural language explanatory summaries of business reengineering and telecommunication equipment installation plans from workflows and expert system traces*

### Professional Experience Consulting

#### Business plan analysis

**Anxo Investments**, São Paulo, Brazil, 2013

#### Institutional conception

Information technology cluster **Porto Digital** Recife, Brazil, 2003

- Conception of institutional structure, self-funding mechanisms and technological agenda for new IT Innovation Institute

### Professional Experience Teaching

#### Lecturer

- **UP1**, Paris, France, 2017-2018, *Technology Watch*
- **UPMC**, Paris, France, 2010-2011, *Software Engineering Project*
- **École Centrale d'Électronique (ECE)**. Paris, France, 2010, *UML*

#### Associate Professor

- **UFPE**, Recife Brazil, 1997-2009

#### Courses:

- *Model-Driven Engineering*
- *Software Engineering Project*
- *Automated Reasoning and Knowledge Representation*
- *Logic Programming*
- *Artificial Intelligence and Intelligent Agents*
- *Machine Learning*
- *Data Mining and Knowledge Discovery in Databases*
- *Natural Language Processing*

### Education

#### PhD. in Computer Science

**Columbia University**, New York, USA, 1995.

#### Master in Artificial Intelligence

**UPMC**, Paris, France, 1985

#### Master in Computer Engineering

**ESIEA**, Paris, France, 1985

<b>Citizenship</b>	French
<b>Languages</b>	Fluent: <i>French, English, Portuguese</i> Intermediate level: <i>Spanish</i>
<b>IT technical knowledge</b>	Modeling languages: <i>UML, OCL, MOF</i> Programming languages: <i>CoffeeScript, JavaScript, Python, C#, Prolog, Lisp</i> Application design languages and application frameworks: <i>HTML5, Pug, CSS3, Stylus, Quasar, Vue.js, Meteor.js, ASP.NET</i> Software engineering methods: <i>CMMI, SCRUM, RUP, V-Cycle</i>
<b>Referees</b>	<p><b>Prof. Camille Salinesi</b></p> <ul style="list-style-type: none"> <li>• Full-professor, Université Paris 1, Panthéon-Sorbonne (UP1)</li> <li>• Researcher: Centre de Recherche en Informatique (CRI), UP1</li> <li>• <a href="mailto:camille.salinesi@univ-paris1.fr">camille.salinesi@univ-paris1.fr</a>, +33(0) 1-4407-8954</li> </ul> <p><b>Prof. Colin Atkinson</b></p> <ul style="list-style-type: none"> <li>• Full-professor, Chair of Software Engineering</li> <li>• <i>School of Business Informatics and Mathematics, University of Mannheim</i></li> <li>• <a href="mailto:atkinson@informatik.uni-mannheim.de">atkinson@informatik.uni-mannheim.de</a>, +49(0) 621-181-3911</li> </ul> <p><b>Prof. Reda Bendraou</b></p> <ul style="list-style-type: none"> <li>• Full-professor, <i>Université Paris-Ouest Nanterre La Défense</i></li> <li>• Researcher, <i>Laboratoire d'Informatique de Paris 6 (LIP6)</i></li> <li>• <a href="mailto:reda.bendraou@lip6.fr">reda.bendraou@lip6.fr</a>, +33(0) 1-4427-8861</li> </ul>
<b>International Publications</b> <i>H-Index: 15</i>	<p><b>Journal papers</b></p> <ol style="list-style-type: none"> <li>1. Khelladi, D., Hebig, R., Bendraou, R, Robin, J. and Gervais. M.P. <i>Detecting Complex Changes and Refactorings during (Meta-)Model Evolution</i>. Information Systems, 2016, A*</li> <li>2. Robin, J., Vitorino, J. and Wolf, A. <i>Constraint Programming Architectures: Reviews and a New Proposal</i>. Journal of Universal Computer Science 13(6), 2007, C</li> <li>3. Ramalho, F., Robin, J. and Schiel, U. <i>Concurrent Transaction Frame Logic Formal Semantics for UML Activity and Class Diagrams</i>. Electronic Notes in Computer Science, 95, pp. 83-109, 2004, C.</li> <li>4. Ramalho, F., Robin, J and Barros, R. <i>XOCL, an XML Language for Representing Logical Constraints in Object-Oriented Models</i>. Journal of Universal Computer Science , 9(8) 14 pages, 2003, C.</li> <li>5. Elhadad, M., McKeown, K. and Robin, J. <i>Floating Constraints in Lexical Choices</i>. Computational Linguistics, 23(2), 195-239, 1997, A*</li> <li>6. Robin, J. and McKeown, K. <i>Empirically Designing and Evaluating a New Revision-Based Model for Summary Generation</i>, Artificial Intelligence , 85(1), 135-179, 1996, A*</li> </ol>

## Book chapters

7. Wolf, A., Robin, J. and Vitorino, J. *Adaptive CHR meets CHR<sup>v</sup>: an Extended Refined Operational Semantics for CHR<sup>v</sup>*. In *Constraint Handling Rules: Current Research Topics*. Schrijvers, T. and Frühwirth (Eds). pp. 48-69, Springer. 2008.
8. Kukich, K., McKeown, Shaw, J., Robin, J., Morgan. N. and Phillips, J. *User-Needs Analysis and Design methodology for an Automated Document Generator*. In *Current Issues in Computational Linguistics: in Honor of Don Walker*. Zampolli, A., Calzorari, N. and Palmer, M. (Eds). Kluwer Academic Press. 1994.
9. Robin, J. *Revision-Based Generation Architecture for Reporting Facts in their Historical Context*. In *New Concepts in Natural Language Generation: Planning, Realization and Systems*. Horacek, H. and Zock, M. (Eds). Frances Pinter. 1993.
10. McKeown, K., Elhadad M., Fukumoto, Y., Lim, J. Lomdardi, C., Robin, J. and Smadja, F. *Text Generation in COMET*. In *Current Research in Natural Language Generation*. Dale, R., Mellish, C.S., and Zock, M. (Eds). Academic Press. 1990.

## Conference proceedings

11. Khelladi, D.E., Hebig, R., Bendraou, R., Robin, J. and Gervais M.P. *Metamodel and Constraint Co-Evolution: a Semi-Automatic Maintenance of OCL Constraints*. 15<sup>th</sup> International Conference on Software Reuse (ICSR'16), Limassol, Cyprus, 2016, A.
12. Khelladi, D.E., Hebig, R., Bendraou, R., Robin, J. and Gervais. M.P. *Detecting Complex Changes during Metamodel Evolution*. 27<sup>th</sup> International Conference on Advanced Information Systems Engineering (CaiSE'15), Stockholm, Sweden, 2015, A
13. Almeida da Silva, M.A., Mougénot, A., Bendraou, R., Robin, J. and Blanc, X. *Artifact or Process Guidance, an Empirical Study*. 13<sup>th</sup> International Conference on Model-Driven Engineering Languages and Systems (MoDELS'10). pp. 318-330. Oslo, Norway. 2010, B.
14. Meister, M., Djelloul, K. and Robin, J. *A Unified Semantics for Constraint Handling Rules in Transaction Logic*. 9<sup>th</sup> International Conference on Logic Programming and Non-Monotonic Reasoning (LPNMR'07). pp. 201-213. Tempe, AZ, USA. 2007, A.
15. Macedo, H. and Robin, J. *Increasing Profitability: Voice-Based Browsing to Recommendation System Web Services*. 3<sup>rd</sup> Atlantic Web Intelligence Conference (AWIC'05). Lodz, Poland. 2005. pp. 279-285. Springer LNCS 3528. C
16. Blanc, X., Ramalho, F. and Robin, J. *Metamodel Reuse with MOF*. 8<sup>th</sup> International on Model-Driven Engineering Languages and Systems

- (MoDELS'05). pp. 661-675, Montego Bay, Jamaica. 2005. LNCS 3713. Springer. B.
17. Robin, J. and Favero, E. *Natural Language Generation Meets Knowledge Discovery in Databases*. 3<sup>rd</sup> International Conference on Information Integration and Web-Based Applications (IIWAS'01). Linz, Austria. 2001. 9 pages. C.
  18. Favero, E. and Robin, J. *Using OLAP and Data Mining for Content Planning in Natural Language Generation*. 5<sup>th</sup> International Conference on Application of Natural Language to Information Systems (NLDB'00), Versailles, France. 2000. pp. 164-175. Springer LNCS 1959, C.
  19. Robin, J. and Favero, E. *Content Aggregation in Natural Language Hypertext Summarization of Data Mining Discoveries*. 1<sup>st</sup> International Conference on Natural Language Generation (INLG'00). Mitzpe Ramon, Israel. 2000, B.
  20. Robin, J. *Evaluating the Portability of Revision Rules for Incremental Summary Generation*. 34<sup>th</sup> Annual Meeting of the Association for Computational Linguistics. (ACL'96). Santa Cruz, CA, USA. 1996. A\*
  21. Passoneau, B., Kukich, K., Robin, J. and Hatzivassiloglou, V., Lefkowitz, L. and Jin, H. *Generating Summaries of Workflow Diagrams*. International Conference on Natural Language Processing and Industrial Applications (NLP+IA'96) Moncton, NB, Canada. 1996. 7 pages.
  22. Robin, J. and McKeown, K. *Corpus Analysis of Revision-Based Generation for Complex Sentences*. 11<sup>th</sup> National Conference on Artificial Intelligence (AAAI'93). pp. 365-372. Washington, DC, USA. 1993. A\*
  23. McKeown, K., Robin, J. and Tanenblatt, M. *Tailoring Lexical Choice to the User's Vocabulary in Multimedia Explanation Generation*. 31<sup>st</sup> Annual Meeting of the Association for Computational Linguistics. (ACL'93). Santa Cruz, CA, USA. 1993. A\*
  24. McKeown, K., Feiner, S., Robin, J. and Seligmann D. *Generating Cross-References for Multimedia Explanation*. 10<sup>th</sup> National Conference on Artificial Intelligence (AAAI'92). pp. 365-372. San Jose, CA, USA. 1992. A\*

#### **Workshop proceedings**

25. Atkinson, C., Tunjic, C., Stoll, D. and Robin, J. *A prototype Implementation of an Orthographic Software Modeling Environment*. 1st Workshop on View-based, Aspect-oriented and Orthographic software modeling (VAO'13), 2013, Montpellier, France.
26. Gonçalves, A., Deransart, P. and Robin, J. *Towards a Generic Trace for Rule Based Constraint Reasoning*. 8<sup>th</sup> International Workshop on Constraint Handling Rules, 2011, Cairo.

27. Silva, M.A.A and Robin, J. *Extending CHR with Objects under a Variety of Inheritance and World-Closure Assumptions*. 6<sup>th</sup> International Workshop on Constraint Handling Rules (CHR'09). pp. 3-17. Pasadena, CA, USA. 2009.
28. Silva, M.A.A, Fages, F. and Robin, J. *Default Reasoning in CHR*. 5<sup>th</sup> International Workshop on Constraint Handling Rules (CHR'08). pp. 111-126. Hagenberg, Austria. 2008.
29. Robin, J. and Vitorino, J. *ORCAS: Towards a CHR-Based Model-Driven Framework of Reusable Reasoning Components*. 20<sup>th</sup> Workshop on Logic Programming (WLP'06). pp. 192-199. Vienna, Austria. 2006.
30. Barbosa, L., Salgado, A.C., Carvalho, F., Robin, J. and Freire, J. *Looking at both the Present and the Past to Efficiently Update Replicas of Web Content*. 7<sup>th</sup> ACM International Workshop on Web Information and Data Management (WIDM'05). pp. 75-80. Bremen, Germany. 2005.
31. Ramalho, F. and Robin, J. *Mapping UML Class Diagrams to Object-Oriented Logic Programs for Model-Driven Development*. 3<sup>rd</sup> UML Workshop in Software Model Engineering (WISME'04). Lisbon, Portugal. 2004.
32. Andrade, E. and Robin, J. *Inductive Object-Oriented Logic Programming*. CoLogNet Workshop on Implementation Technology for Computational Logic Systems. Pisa, Italy, 2003. 13 pages.
33. Robin, J. and Ramalho, F. *Empirically Evaluating WorldNet-Based Query Expansion in a Web Search Engine Setting*. International Workshop on Information Retrieval. Oulu, Finland, 2001. pp. 80-89. **Best paper award**.
34. Elhadad, M. and Robin, J. *Controlling content realization with functional unification grammars*. 6<sup>th</sup> International Workshop on Natural Language Generation, Trento, Italy 1992. pp. 89-104. LNAI 587.