

# Benoit COMBEMALE

Professor, University of Toulouse (UT2J)  
Mathematics and Computer Science Dep., IRIT Lab.

Born in November 12, 1981  
French, Married  
2 children

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## Short Biography

Since September 2017, Benoit Combemale is Full Professor of Software Engineering in the Department of Mathematics and Computer Science of the University of Toulouse - Jean Jaurès (UT2J), France. He is evolving within the research team SM@RT of the Research Institute in Computer Science of Toulouse (IRIT). Prof. Combemale is interested in software engineering, including model driven software engineering (MDE), software language engineering (SLE), software validation & verification (V&V) and DevOps; mostly in the context of (smart) cyber-physical systems and Internet of things. He is also teaching object-oriented programming, software and systems modeling, MDE, SLE, V&V and DevOps in the department and worldwide in various engineering schools and universities. Since September 2018, Prof. Combemale is also Research Scientist at Inria, evolving within the research team DiverSE.

Before joining University of Toulouse, Benoit Combemale was an Associate Professor at University of Rennes 1 (2009-2017), evolving within the research team DiverSE (formerly Triskell), joint to the IRISA and Inria labs, and teaching in the engineering school ESIR. During this period, he has been on secondment at Inria (Rennes), as Research Computer Scientist in the DiverSE research team, from 2013 to 2016. In 2016, he has been a visiting professor (3 months) at McGill University (Canada), in the group of Prof. Jörg Kienzle, and from 2010 to 2015, he has been a regular visiting researcher at the Computer Science Department of Colorado State University (USA), in the group of Prof. Robert B. France. Prior to that, he was a postdoctoral fellow at INRIA within the team AtlanMod (2008-2009), and a PhD candidate from 2005 to 2008 within the teams ACADIE and MACAO of the IRIT lab. He was also a teacher assistant at the IUT B de Blagnac (2004-2005) and at the INPT ENSEEIHT school of engineering (2005-2008). Benoit Combemale used to teach in various engineering schools, such as INSA Toulouse (2006-2009), INSA Rennes (2009-2012), CentraleSupélec (2012-2016) and ENSAI (2012-2016).

In 2015, Benoit Combemale received his Habilitation in Computer Science (in French *Habilitation à Diriger des Recherches*) from the University of Rennes 1. He earned a PhD in Computer Science in 2008 from the University of Toulouse, awarded the Leopold Escande prize. He graduated as M.Sc. in Computer Science in 2005 from the University of Toulouse.

Prof. Benoit Combemale co-authored 3 books, and 150+ journal and conference publications in the fields of MDE, SLE and V&V. He also edited 2 books, and various special issues in scientific journals. He is Deputy Editor-in-Chief of the JOT Journal, chair of the Steering Committee of the ACM SIGPLAN SLE conference, and a member of the Steering Committee of the MLE workshop series. He is also a member of the Editorial Boards of the international journals SoSyM (Springer), SQL (Springer), COLA (Elsevier), and SCP (Elsevier). He has been the program co-chair of SLE 2014, ECMFA 2019 and ICT4S 2020, and general co-chair of MODELS 2016 and SLE 2017. He also used to serve as program committee member for various top-level conferences and workshops in software engineering (incl., MODELS, SEFM, ECMFA, ICMT...). Prof. Combemale is also very active in setting up and participating to satellite events of flagship conferences, including organizing workshops and panels. He coordinated and participated in many collaborative projects, either directly with industry or in projects funded by the European Union or the French government. He is also a founding member of the GEMOC initiative, an international effort to develop techniques, frameworks, and environments to facilitate the creation, integration, and automated processing of heterogeneous modeling languages. He is a member of the ACM, the IEEE and the IEEE Computer Society.

## Education

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| 2015 | <b>HDR (<i>Habilitation à Diriger des Recherches</i>) in Computer Science</b><br>Title: " <i>Towards Language-Oriented Modeling</i> "<br>Reviewers: Franck Barbier, Lionel Briand, Betty H.C. Cheng and Oscar Nierstrasz<br>Examiners: Peter Mosses, Joerg Kienzle, Benoit Baudry and Jean-Marc Jézéquel<br>IRISA and Inria Rennes labs. (DiverSE team) - Université of Rennes 1, France                           |
| 2008 | <b>PhD in Computer Science (Awarded the Leopold Escande Prize 2008)</b><br>PhD Thesis title: " <i>A Metamodeling Approach for Model Simulation and Verification</i> "<br>Reviewers: Jean Bézivin and Pierre-Alain Muller<br>Examiners: Antoine Beugnard, François Vernadat, Bernard Coulette and Xavier Crégut<br>Invited member: Patrick Farail<br>IRIT Laboratory (ACADIE team) - University of Toulouse, France |
| 2005 | <b>M. Sc. in "Software Safety and High Performance Computing"</b><br>INPT ENSEEIHT & Université Paul Sabatier, Toulouse, France<br>Master Thesis title: " <i>Specification and Verification of Software Process Models</i> "<br>GRIMM Laboratory (ISYCOM team) - Université le Mirail, Toulouse, France  |
| 2004 | <b>IUP "New IT for Enterprise" (Awarded the title "Ingénieur Maitre")</b><br>Université le Mirail, Toulouse, France <i>First Class Honors</i><br>Apprenticeship with the company SNC INEO SCLE Ferroviaire, Toulouse (31)  |
| 2002 | <b>B. Sc. in Computer Science (DUT "Informatique")</b><br>IUT B de Blagnac, Université le Mirail, Toulouse, France <i>First Class Honors</i><br>Internship (4 months) : SCLE, Toulouse, France   |

## Academic and Industrial Positions

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Since 2017	<b>Full Professor</b> University of Toulouse Jean-Jaurès (France) Researcher in the SM@RT team (IRIT lab). Teacher in the Maths & Computer Science Dep. (UT2J) Bonus for scientific excellence ( <i>Prime d'excellence scientifique</i> ) since 2017
Since 2018	<b>Research Scientist</b> Inria (France) Part-time secondment ( <i>demi-délégation</i> ) as researcher in the DIVERSE team (IRISA & Inria labs).
2009 – 2017	<b>Associate Professor</b> University of Rennes 1 (France) Researcher in the DIVERSE team (IRISA & Inria labs). Teacher in the Engineering School ESIR Bonus for scientific excellence ( <i>Prime d'excellence scientifique</i> ) 2013–2017
2013 – 2016	<b>Research Scientist</b> Inria (France) On leave ( <i>détachement</i> ) as full-time researcher in the DIVERSE team (IRISA & Inria labs).
2010 – 2015	<b>Regular Visiting Researcher</b> Colorado State University (USA) <i>Group of the Prof. Robert B. France</i>
2012 – 2014	<b>Teaching Assistant (vacataire)</b> Supélec Rennes (France) <i>Model Driven Engineering</i>
2011 – 2014	<b>Teaching Assistant (vacataire)</b> ENSAI (France) <i>Software Modeling and testing</i>
2009 – 2011	<b>Teaching Assistant (vacataire)</b> INSA Rennes (France) <i>Model Driven Engineering</i>
2009 – 2010	<b>Teaching Assistant (vacataire)</b> University of Toulouse 2 (France) <i>Model Driven Engineering</i>
2008 – 2009	<b>Research Assistant (post-doctoral position)</b> Inria, AtlanMod team (France) Inria's Grant
2006 – 2010	<b>Teaching Assistant (vacataire)</b> INSA Toulouse (France) <i>Model Driven Engineering</i>
2007 and 2008	<b>(International Cooperation) Teaching Assistant in Master</b> University Yaoundé I, Cameroun <i>Life cycles of Software Development, OCL, Metamodeling, and Model Transformation</i>
2005 – 2008	<b>Teaching Assistant (moniteur)</b> INPT ENSEEIHT, Toulouse (France) <i>Model Driven Engineering, OOP, Algorithmic, Systems</i>
2004 – 2005	<b>Teaching Assistant (vacataire)</b> IUT B, Computer Science Department, Blagnac (France). <i>Internet, GUI</i>
Sep. 02 – Jun. 04	<b>Project Manager in Apprenticeship</b> SNC INEO SCLE Ferroviaire, Toulouse (France) <i>Project manager for a unified software platform with secure access through Internet</i>
Apr. 02 – Aug. 02	<b>Software Engineer</b> SA SCLE, Toulouse (France) <i>Requirement elicitation, design, development, test and deployment of software applications</i>

## Invited Workshops and Schools

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2020 5d.	<b>Static Methods for Correctness of Model and Program Transformations</b> Dagstuhl Seminar #20131
2020 6d.	<b>2nd Workshop on Data and Models</b> Bellairs Research Institute of McGill
2020 5d.	<b>2nd Winter Modelling Meeting</b> San Vigilio di Marebbe (Italy)
2019 5d.	<b>Composing Model-Based Analysis Tools</b> Dagstuhl Seminar #19481
2019 6d.	<b>1st Workshop on Data and Models</b> Bellairs Research Institute of McGill
2018 5d.	<b>Modeling for Sustainability</b> Dagstuhl Seminar #18351
2018 6d.	<b>2nd Workshop on Modular DSL Development</b> Bellairs Research Institute of McGill
2018 5d.	<b>1st Winter Modelling Meeting</b> San Vigilio di Marebbe (Italy)
2017 5d.	<b>SLEBOK: The Software Language Engineering Body of Knowledge</b> Dagstuhl Seminar #17342
2017 6d.	<b>1st Workshop on Modular DSL Development</b> Bellairs Research Institute of McGill
2016 5d.	<b>Engineering Academic Software</b> Dagstuhl Seminar #16252
2016 6d.	<b>1st Modelling For Sustainability Workshop</b> Bellairs Research Institute of McGill
2015 6d.	<b>1st Concern-Oriented Reuse (CORE) Workshop</b> Bellairs Research Institute of McGill
2014 5d.	<b>Model Driven Development for Distributed Real-time Embedded Systems</b> Brest - France
2014 5d.	<b>Globalizing Domain-Specific Languages</b> Dagstuhl Seminar #14412
2014 6d.	<b>1st Modeling Outside the Box (MOTB) Workshop</b> Bellairs Research Institute of McGill
2013 5d.	<b>Meta-Modeling Model-Based Engineering Tools</b> Dagstuhl Seminar #13182
2013 6d.	<b>5th Aspect Oriented Modelling Workshop</b> Bellairs Research Institute of McGill
2012 6d.	<b>4th Aspect Oriented Modelling Workshop</b> Bellairs Research Institute of McGill
2011 6d.	<b>Computer Automated Multi-Paradigm Modelling</b> Bellairs Research Institute of McGill
2008 3d.	<b>Perspectives Workshop: Model Engineering of Complex Systems</b> Dagstuhl - Allemagne
2006 5d.	<b>Model Driven Development for Distributed Real-time Embedded Systems</b> Brest - France
2006 15d.	<b>Ecole de Jeunes Chercheurs en Programmation (EJCP'06)</b> Luchon, Toulouse - France
2005 3d.	<b>Training on the Eclipse Environment</b> Valtech Training Toulouse - France
2005 – 2008 30d.	<b>Teaching Training</b> ( <i>Centre d'Initiation a l'Enseignement Supérieur – CIES</i> ).

## Research Projects

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DEBUG4SCIENCE (2020-2022)	<b>Debugging facilities for Scientific Computing (Principal Investigator)</b> <i>Bilateral collaboration with CEA-DAM</i>
FORMALDSL (2019-2022)	<b>Formal and Executable Specification of DSL Families (Principal Investigator)</b> <i>Grant from the French Ministry of Armed Forces</i>
ALE (2017-2022)	<b>Agile Language Engineering (Principal Investigator)</b> <i>Inria associate team with the SWAT team at CWI</i>
GLOSE (2017-2020)	<b>GLOBALization in Systems Engineering (Principal Investigator for CNRS)</b> <i>Bilateral collaboration with Safran</i>
FAMILY (2016-2019)	<b>DSL Families for Packet Filtering Policy (Principal Investigator)</b> <i>Grant from the French Pôle d'Excellence Cyber</i>
CLARITY (2014-2017)	<b>Ecosystème pour la plateforme d'ingenierie systeme Melody</b> <i>LEOC Project <a href="http://clarity-se.org/">http://clarity-se.org/</a></i>
MPM4CPS (2014-2018)	<b>Multi-Paradigm Modelling for Cyber-Physical Systems (Management Committee)</b> <i>EU COST Action <a href="http://www.cost.eu/ict">http://www.cost.eu/ict</a></i>
GEMOC (2012-2016)	<b>A Generic Framework for Model Execution and Dynamic Analysis (Project Coordinator)</b> <i>ANR Project, Program INS <a href="http://www.gemoc.org/ins">http://www.gemoc.org/ins</a></i>
DIVERSIFY (2013-2016)	<b>Explore Ecological Diversity for New Software Design Principles</b> <i>FP7 Project, FET <a href="http://diversify-project.eu">http://diversify-project.eu</a></i>
CYBERDEFENCE (2014-2016)	<b>Formal DSL design and implementation (Co-Principal Investigator)</b> <i>French Defense Procurement Agency (DGA)</i>
MBSAR (2013-2015)	<b>Model-Based Security Analysis at Runtime (Principal Investigator)</b> <i>CNRS Project, Program PICS <a href="http://www.gemoc.org/mbsar">http://www.gemoc.org/mbsar</a></i>
VARYMDE (2011-2015)	<b>Variability in Model Driven Engineering (Co-Principal Investigator)</b> <i>Bilateral collaboration with Thales Research &amp; Technology</i>
RELATE (2011-2014)	<b>Engineering and provisioning of service-based Cloud applications</b> <i>European Project FP7 Marie Curie ITN <a href="http://www.relate-itn.eu/">http://www.relate-itn.eu/</a></i>
AS GEMOC (2011)	<b>Survey on Heterogeneous Modeling (Principal Investigator)</b> <i>CNRS Specific Action from GDR GPL <a href="http://www.gemoc.org/as2011">http://www.gemoc.org/as2011</a></i>
OPEES (2009-2012)	<b>Open Platform for the Engineering of Embedded Systems</b> <i>European Project ITEA2 <a href="http://www.opees.org/">http://www.opees.org/</a></i>
PODMDE (2011)	<b>MDE and Model Composition Application (Principal Investigator)</b> <i>Bilateral collaboration with Pod Programming</i>
UCSAALS (2009)	<b>User-Centric Safe Adaption of Assisted Living Systems</b> <i>Scientific Project of the University of Rennes 1</i>
TOPCASED (2005-2009)	<b>Toolkit in OPEN source for Critical Applications &amp; SystEms Development</b> <i>DGCIS, FUI Project <a href="http://www.topcased.org">http://www.topcased.org</a></i>

## PhD Students

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2019–...	<b>Emmanuel Chebbi</b> <i>Formal DSL Reuse</i> Co-supervised with Gurvan Leguernic (grant from DGA and Brittany Council)
2018–...	<b>June Benvegna-Sallou</b> <i>DSL for Scientific Computing</i> Co-supervised with Johann Bourcier (grant from Univ. Rennes 1)
2018–...	<b>Pierre Jeanjean</b> <i>Unpredictable Languages</i> Co-supervised with Olivier Barais and Djamel Eddine Khelladi (GLOSE project)
2017–...	<b>Fabien Coulon</b> <i>Web-based DSL Development</i> Co-supervised with Olivier Barais (CIFRE convention with Obeo)
2016–2020	<b>Dorian Leroy</b> <i>Whitebox testing of model transformation</i> Co-supervised with Manuel Wimmer at TU Wien (Tetrabox project)
2016–2019	<b>Manuel Leduc</b> <i>Modular DSL Development</i> Co-supervised with Olivier Barais and Gurvan LeGuernic (Family project)
2015–2017	<b>Marcelino Rodriguez Cancio</b> <i>Adaptable Software Languages</i> Co-supervised with Benoit Baudry and Olivier Barais (Clarity project)
2013–2016	<b>David Mendez-Acuna</b> <i>Modeling Language Variability</i> Co-supervised with Benoit Baudry (Marie Curie ITN Relate)
2013–2016	<b>Thomas Degueule</b> <i>DSL Composition and Interoperability</i> Co-supervised with Olivier Barais and Arnaud Blouin (Merge project)
2012–2015	<b>Erwan Bousse</b> <i>Combination of V&amp;V Techniques in System Engineering</i> Co-supervised with Benoit Baudry (grant from the French government)
2010–2014	<b>Emmanuelle Rouillé</b> <i>Gestion de la variabilité et automatisation des processus de développement</i> Co-supervised with Jean-Marc Jézéquel and Olivier Barais (CIFRE convention with Sodifrance)
2010–2013	<b>Clément Guy</b> <i>Facilités de typage pour l'ingénierie des langages</i> Co-supervised with Jean-Marc Jézéquel and Steven Derrien (grant from the French government)

## Master Students

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2020	<b>Self-Adaptable Virtual Machines</b> Gwendal Jouneaux Research Master 2 (6 months) UR1, Rennes, France. <b>Integration of third party models in CoSApp and co-simulation</b> Janice Conquet Stage de Master (6 months) TU Eindhoven, The Netherlands.
2019	<b>Self-Adaptable Languages</b> Gwendal Jouneaux Research Master 1 (6 months) UR1, Rennes, France.
2018	<b>Unpredictable Languages</b> Pierre Jeanjean Research Master (6 months) ENSEEIH, Toulouse, France.
2015	<b>Metamorphic DSL</b> Pierre Legall Research Master (6 months) UR1, Rennes, France. Co-supervised with Mathieu Acher <b>Live Modeling</b> Stéphane Mangin M. Sc (6 months) University of Rennes 1, France. Co-supervised with Mathieu Acher
2012	<b>Requirements management led by formal verification</b> Erwan Bousse Research Master (6 months) UR1, Rennes, France. Co-supervised with Benoit Baudry et David Mentré (Mitsubishi)
2011	<b>Formal and tool-supported operator for multi-formalism modelling</b> Jonathan Marchand Research Master (6 months) UR1, Rennes, France. Co-supervised with Benoit Baudry
2010	<b>Coping with Modular Modelling in fUML</b> André Fonseca Research Master (6 months) UR1, Rennes, France. Co-supervised with Jean-Marc Jézéquel
2009	<b>Advanced Techniques for Model Handling in the Eclipse Platform</b> Cauê Avila Clasen Engineering School (6 months) UFSC, Brésil. Co-supervised with Frédéric Jouault
2008	<b>MDE and Ladder Validation and Verification</b> Darlam Bender Engineering School (6 months) UFSC, Brésil. Co-supervised with Xavier Crégut
2007	<b>Model Validation and Simulation in Up2UML and TOPCASED</b> Youssef Dkiouak Engineering School (6 months) ENSIAS, Maroc. Co-supervised with Xavier Crégut <b>Modeling of the TOPCASED Quality Process</b> Jean-Noël Guyot B. Sc (4 months) Université Paul Sabatier, Toulouse, France. Co-supervised with Xavier Crégut et Angel Garcia) <b>A GMF-based SPEM Model Editor</b> Boris Libert B. Sc (4 mois) IUP NTIE, Université le Mirail, Toulouse, France. Co-supervised with Xavier Crégut et Angel Garcia <b>A Simplified TOPCASED Model Simulator</b> Vincent Gaillaud Engineering School (9 mois) CNAM Toulouse, France. Co-supervised with Xavier Crégut <b>Instantiation Management for the Simulation of UML State Machines</b> Christophe Bez M. Sc. (4 months) INPT ENSEEIH, France. Co-supervised with Xavier Crégut

## Invited Talks, Keynotes and Seminars

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- 2019      **Smart Modeling: On the Convergence of Scientific and Engineering Models**  
*Invited talk at Lancaster university, UK (14/11/19).*  
**Bringing Intelligence to Sociotechnical IoT Systems: Modeling Opportunities and Challenges**  
*Keynote at MDDE4IoT'19, DE (15/09/19).*  
**Breathe Life Into Your IDE**  
*Talk at LangDev'19, NL (22/03/19).*
- 2018      **Model Execution: Past, Present and Future**  
*Keynote at EXE'18, DK (14/10/18).*  
**Modeling For Sustainability - Or How to Make Smart CPS Smarter?**  
*Keynote at Models@run.time'18, DK (14/10/18), and invited talk at TU Wien, AT (15/05/18).*  
**Execution Framework of the GEMOC Studio**  
*Talk at LangDev'18, NL (08/03/18).*
- 2017      **Model Simulation, Graphical Animation, and Omniscient Debugging with Sirius Animator.**  
*Talk at SiriusCon'17, FR (09/11/17).*  
**Modeling For Sustainability - Or How to Make Smart CPS Smarter?**  
*Invited talk at CWI, NL (03/11/17).*  
**Sound, yet Flexible, Modeling: A Language Engineering Point Of View**  
*Keynote at FlexMDE'17, US (18/09/17).*  
**Towards Language-Oriented Modeling**  
*Invited talk at UQAM, CA (03/05/17).*  
**From Model (driven) Engineering, to Language (driven) Engineering**  
*Invited talk at CEA-DAM (12/01/15).*
- 2016      **Modeling for Sustainability**  
*Invited talk at Lancaster University (05/12/16).*  
**Dynamic Validation & Verification in Language-Oriented Modeling**  
*Keynote at MoDeVVA 2016 (03/10/16).*  
**Towards Language-Oriented Modeling**  
*Invited talk at RWTH Aachen University (11/07/16).*  
**Modeling for Smart Cyber-Physical Systems**  
*Talk at CPS days (26/01/16).*
- 2015      **A Journey Through MDE, DSL and SLE**  
*Talk at JDEV 2015 (02/07/15).*  
**Breathe Life into Your Designer!**  
*Talk at EclipseCon Europe 2015 (05/11/15) and EclipseCon France 2015 (25/06/15).*  
**Modeling for Sustainability**  
*Invited talk at INRA (19/06/15).*  
**On the Globalization of Modeling Languages**  
*Invited talk at IRT Saint Exupery (08/06/15).*  
**From Model (driven) Engineering, to Language (driven) Engineering**  
*Invited talk at McGill (17/04/15).*
- 2014      **From Model (driven) Engineering, to Language (driven) Engineering**  
*Invited talk at University of Namur (16/12/14).*  
**The Role of (Software) Languages in the Socio-Technical Coordination**  
*Invited talk at the 2nd Workshop on TowArds the Model DrIveN Organization (AMINO 2014).*  
**MDE and SLE: From Theory to Practice**  
*Invited talk at the MDE Day of DevLog (27/10/14).*
- 2013      **Modeling, Composition and Simulation of Heterogeneous Models**  
*Invited talk at the MDE Day of DevLog (18/10/13).*  
**On the Globalization of Modeling Languages**  
*Invited keynote at Neptune 2013 (22/05/13).*  
**On Modeling and Testing When Unpredictability Becomes a Pattern**  
*Keynote speaker at CIEL 2013 (02/04/13).*  
**On the Globalization of Modeling Languages**  
*Colorado State University, USA (20/02/13).*  
**On Language Composability**  
*Workshops AOM at Bellairs (09/02/13).*  
**Model-Driven Engineering for Software Language Engineering**  
*Università degli Studi di Milano, Italy (16/01/13).*

## Invited Talks, Keynotes and Seminars (contd)

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2012	<b>Formally Defining and Iterating Infinite Models</b> <i>68NQRT Seminar at IRISA/Inria Rennes, France (25/10/12).</i> <b>Model Driven Engineering for Software Language Engineering</b> <i>Universidade Federal do Paraná, Brazil (12/07/12).</i> <b>Mashup of Meta-Languages: Building Modular and Efficient DSML</b> <i>Workshops AOM and CAMPaM at Bellairs (30/04/12).</i>
2011	<b>Executable Metamodeling for Model V&amp;V</b> <i>Kings College London (10/06/11).</i>
2010	<b>Hyper-Agility: A Model-Driven Software Agility from Design-Time to Run-Time</b> <i>Agile Tour Rennes 2010 (07/10/10).</i> <b>Executable Metamodeling for Model V&amp;V</b> <i>Colorado State University, USA (25/05/10).</i>
2009	<b>A Formal Metamodeling Approach – Application to Model V&amp;V</b> <i>LAAS CNRS (Toulouse, 13/02/09), LISI (Poitiers, 26/03/09), and LIP6 (Paris, 05/05/09).</i> <b>A Formal Metamodeling Approach – Application to Model V&amp;V and Autonomous Systems</b> <i>Inria Rennes ( 21/01/09) and Inria Lille (13/03/09).</i>
2008	<b>Metamodeling Approach for Model Simulation</b> <i>CEA-List at Saclay (19/09/08).</i> <b>Model Verification and Simulation using Model Transformation</b> <i>MDE Training at EMN (18/06/08).</i>
2007	<b>Execution Semantics &amp; MDE, Application to the Process Engineering</b> <i>INRIA-ATLAS (03/01/07).</i> <b>A Framework to Formalise the MDE Foundations</b> <i>IRIT-UTM (06/06/07).</i> <b>Presentation of the Research Work</b> <i>Action IDM. Paris, 21/05/07.</i>
2006	<b>SPEM 1.1 vs. SPEM 2.0</b> <i>Topcased-WP1 (19/06/06).</i>

## Scientific and Administrative Services

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- **Deputy Editor in Chief of The JOT Journal.**
- **Editorial Board:** Elsevier's Intl Journals Computer Languages (COLA) and Science of Computer Programming (SCP, *Advisory Board of the Software Section*), the Springer's Intl Journals on Software and Systems Modeling (SoSyM) and Software Quality (SQJ).
- **Steering Committee:** ACM SIGPLAN Intl. Conference on Software Language Engineering (member since 2014, chair since 2018), International Workshop on *Modeling Language Engineering* (member since 2019).
- **General co-chair** for MODELS 2016 and SLE 2017
- **Program co-chair** for SLE 2014, ECMFA 2019 and ICT4S 2020
- **Co-organizer of the Dagstuhl Seminar 17342** "SLEBOK: The Software Language Engineering Body of Knowledge"
- **Co-organizer of the Dagstuhl Seminar 14412** "Globalizing Domain-Specific Languages"
- **Program Board** member for MODELS'18 and MODELS'20
- **Program Committees**
  - Conferences: QUATIC'20, CBI (20, 18), MODELS'17, ICMT (19-12), ECMFA (20, 18, 16-11), SLE'15, Tutorials@MODELS'15, SEFM (15, 13-12), ICSSP'15, APSEC (14-11), QSIC'13, ITSLE'11, IDM'11, INFORSID'11
  - Workshops: SRC @ MODELS'20, MoSC@STAF'20, Doctoral Symposium @ MODELS'19, PNSE (20-19), FlexMDE@MODELS'19, DevOps@MODELS'19, MLE@MODELS'19, DevOps'18, MiSE@ICSE (18-15), LaMod@Modularity'16, MoMo@Modularity'16, MDEbug@MODELS (18-17), EXE@MODELS (18-15), MPM (15-14), VOLT@ICST (14-13), CSP@WETICE (14-12), EduSymp'13, AMT (13-12), CMA@MODELS'13, CMA@RE'13, PMDE'12, FML'10, SafeModel'10, SéMo'08, SéMo'07, MP'07.
- **External reviewer**
  - Journals: Transactions on Software Engineering (IEEE), SoSym (Springer), Survey (ACM), Empirical Software Engineering (Springer), L'objet (Lavoisier).
  - Conferences and workshops: MoDELS'14, ICSE'13, MoDELS'13, MoDELS'12, MoDELS'11, INDIN'11, MoDELS'10, CBSE'10, Notere'09.

- **Organizing Committees**

- *Tools & Demos co-chair* @ MODELS 2020, Canada
- *Industry day co-organizer* @ MODELS 2018, Denmark
- *Co-organizer* of the session “Application of Advanced Software Engineering Tools and Methods in the Environmental Sciences” at CMWR’18
- *Panel co-chair* @ MODELS 2015, Canada
- *Co-chair* of the workshop on the *Globalization of Modeling Languages (GEMOC 2015)* @ MODELS 2015, Ottawa, Canada
- *Co-chair* of the workshop on the *Next Generation of Modularity Approaches for Multiple Dimensions of Sustainability (Sustainability 2015)* @ Modularity 2015, Fort Collins, USA
- *Program co-chair* of the summer school MDD4DRES’14, France
- *Demonstration co-chair* @ MODELS 2014, Spain
- *Co-chair* of the workshop on the *Future* @ STAF 2020, Bergen, Norway
- *Co-chair* of the workshop on the *Globalization of Modeling Languages (GEMOC)* @ MODELS’18, Copenhagen, Denmark
- *Co-chair* of the workshop on the *Globalization of Modeling Languages (GEMOC)* @ MODELS’14, Valencia, Spain
- *Co-chair* of the workshop on the *Globalization of Modeling Languages (GEMOC)* @ MODELS’13, Miami, USA
- *Co-chair* of the workshop on the *Globalization of Domain Specific Languages (GlobalDSL)* @ ECOOP, ECMFA, ECSA 2013, Montpellier, France
- *Co-chair* of the 8th International Educators’ Symposium @ MODELS 2012 (EduSymp 2012), Innsbruck, Austria
- **Founder of the series of workshops** SéMo, on modeling language semantics, and GEMOC, on the globalization of modeling languages
- *Sponsorship chair* of AOSD’10 (St Malo, Fr), and GDR-GPL’12 & CIEL’12 (Rennes, Fr)
- *Localization chair* of SLE’08 (Toulouse, Fr)
- Member of the organizing committee of the conferences, workshops and summer schools MDD4DRES’14, AOSD’10 (St Malo, Fr), SafeModel@IDM’10 (Pau, Fr), MtATL’09 (Nantes, Fr), SéMo’08 (Mulhouse, Fr), LMO’07, IDM’07 and SéMo’07 (Toulouse, Fr).

- **Coordinator of the international GEMOC initiative** (cf. <http://www.gemoc.org>), chair of the corresponding Research Consortium at the Eclipse Foundation, and leader of the Eclipse project for the GEMOC Studio. GEMOC coordinates research partners worldwide to develop breakthrough software language engineering approaches that support global software engineering through the use of multiple domain-specific languages.

- **PhD Committees (in addition to my PhD students)**

- Théo Zimmermann, Univ Paris (December 2019), Reviewer
- Stephanie Challita, Univ Lille 1 (December 2018), Reviewer
- Pablo Inostroza Valdera, Univ. Amsterdam & CWI (November 2018), The Netherlands
- Ulyana Tikhonova, TU/e (November 2017), The Netherlands, Reviewer
- Cyril Cecchinell, Univ. Nice (November 2017), Examiner
- Blazo Nastov, Univ. Montpellier (November 2016), Reviewer
- Florent Latombe, Univ Toulouse (June 2016), Examiner
- Andreas Wortmann, Aachen University, Germany (June 2016), Reviewer
- Matias Ezequiel Vara Larsen, Univ Nice (April 2016), Examiner
- Paola Vallejo: University of Brest, Lab-STICC (December 15th, 2015), Examiner
- Faiez Zalila: University of Toulouse, IRIT (December 9th, 2014), Examiner
- Jean-Christophe Bach: Loria, Nancy (September 12th, 2014), Examiner
- Moussa Amrani: Univ. Luxembourg (November 5th, 2013), Examiner
- Laurent Wouters: LIP6, Paris (January 18th, 2013), Examiner
- Robert Guduvan: ONERA, Toulouse (April 18th, 2013), Examiner
- Mounira Kezadri: University of Toulouse, IRIT (July 11th, 2013), Examiner

- **National and International Expertises**

- Prime d'Investissement Recherche de l'UPMC,
- Conventions Industrielles de Formation par la Recherche (CIFRE),
- European Research Council (ERC)
- Engineering and Physical Sciences Research Council (EPSRC),
- Netherlands Organisation for Scientific Research (NWO),
- Portuguese Foundation for Science and Technology (FCT).

- **Workgroup Participation**

- Member of the GDR GPL, cf. <http://gdr-gpl.imag.fr/> ,
- Member of the SysML France association, cf. <http://www.sysml-france.fr/> .

- **Other industrial dissemination**

- Organization at Inria of a workshop about MDE for industry (Inria 5.7), Inria, May, 2012
- Participation to the Inria Industry Days for the EPI TRISKELL/DiverSE, 2010, 2015
- Co-Organizer with MEITO of a workshop on software modularity and agility for industry, ESIR, March, 2010



## Publications of Benoit Combemale (March 26, 2020)

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SUMMARY	International	French	Total
<b>Book</b>	1	2	3
<b>Journal article</b>	25	4	29
<b>Book chapter</b>	3	0	3
<b>Conference paper</b>	58	11	69
<b>Tool demonstration</b>	7	0	7
<b>Workshop paper</b>	29	4	33
<b>Proceedings</b>	9	0	9
<b>Total</b>	132	21	153

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#### International

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- [J2] Dorian Leroy, Erwan Bousse, Manuel Wimmer, Benoit Combemale, Tanja Mayerhofer, and Wieland Schwinger. Behavioral interfaces for executable dsls. *Software and Systems Modeling*, 2020.
- [J3] Manuel Leduc, Thomas Degueule, Eric Van Wyk, and Benoit Combemale. The software language extension problem. *Software and Systems Modeling*, 12 2020.
- [J4] Andreas Wortmann, Olivier Barais, Benoit Combemale, and Manuel Wimmer. Modeling languages in industry 4.0: an extended systematic mapping study. *Software and Systems Modeling*, 19(1):67–94, 2020.
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- [J8] Benoît Combemale, Jörg Kienzle, Gunter Mussbacher, Olivier Barais, Erwan Bousse, Walter Cazzola, Philippe Collet, Thomas Degueule, Robert Heinrich, Jean-Marc Jézéquel, Manuel Leduc, Tanja Mayerhofer, Sébastien Mosser, Matthias Schöttle, Misha Strittmatter, and Andreas Wortmann. Concern-oriented language development (COLD): fostering reuse in language engineering. *Computer Languages, Systems & Structures*, 54:139–155, 2018.
- [J9] Erwan Bousse, Dorian Leroy, Benoît Combemale, Manuel Wimmer, and Benoit Baudry. Omniscient debugging for executable dsls. *Journal of Systems and Software*, 137:261–288, 2018.
- [J10] Erwan Bousse, Tanja Mayerhofer, Benoit Combemale, and Benoit Baudry. Advanced and efficient execution trace management for executable domain-specific modeling languages. *Software & Systems Modeling*, pages 1–37, May 2017.
- [J11] David A Méndez-Acuña, José A Galindo, Benoit Combemale, Arnaud Blouin, and Benoit Baudry. Reverse Engineering Language Product Lines from Existing DSL Variants. *Journal of Systems and Software (JSS)*, May 2017.
- [J12] Thomas Degueule, Benoît Combemale, Arnaud Blouin, Olivier Barais, and Jean-Marc Jézéquel. Safe model polymorphism for flexible modeling. *Computer Languages, Systems & Structures*, 49:176–195, 2017.

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- [J17] Wuliang Sun, Benoit Combemale, Robert B. France, Arnaud Blouin, Benoit Baudry, and Indrakshi Ray. Using Slicing to Improve the Performance of Model Invariant Checking. *Journal of Object Technology*, page 28, 2015.
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- [J29] Benoit Combemale, Julien Deantoni, Ali Koudri, and Jérôme Le Noir. Le nouveau défis de la coordination des langages de modélisation. Gestion de l’hétérogénéité des modèles dans le développement et l’exécution de systèmes logiciels complexes. *Génie logiciel*, (105):4–11, 2013.
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- [C36] Manuel Leduc, Gwendal Jouneaux, Thomas Degueule, Gurvan Le Guernic, Olivier Barais, and Benoît Combemale. Automatic generation of truffle-based interpreters for domain-specific languages. volume 20, 2020.
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