

Curriculum Vitae - Nelly Bencomo, March, 2021

Senior Lecturer in Computer Science, Aston University, UK

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Personal Google Scholar page (h-index 32):

<https://scholar.google.co.uk/citations?user=86H7HmkAAAAJ>

URL of DBLP page:

<http://dblp.uni-trier.de/pers/hd/b/Bencomo:Nelly.html>

Publications: a complete list of publications is found in the last part of this CV and at <http://www.nellybencomo.me/publications.html>

I exploit the interdisciplinary aspects of software engineering, comprising both technical and human concerns, while developing techniques for intelligent, autonomous and highly distributed systems.

I am Senior *Lecturer in Computer Science* in Aston University (since May 2013). Previously, I was an EU Marie Curie Fellow, from May 2011- May 2013 under a *Marie-Curie Fellowship (Grant) Requirements@run.time: Requirements-aware Systems*. I was a Senior Researcher at Lancaster University until May 2011 after being awarded my PhD in Computer Science by Lancaster University in 2008.

Research: I am interested in all aspects of software modelling and specially the application of model-driven techniques, during the **development and operation of intelligent, autonomous and highly distributed systems**. Lately, I have focused on **quantification of uncertainty** and the use of Bayesian learning to support **decision-making for self-adaptation**. I am particularly interested in what I call *models@run.time*, the use of models and model-driven techniques during runtime. Research on *models@run.time* seeks to extend the applicability of models and abstractions to the runtime environment, with the goal of providing effective technologies for managing the complexity of evolving software behaviour while it is executing. Runtime models can be used, for example, to check correctness and consult the current state of a system during execution. Key benefits of runtime models are (1) runtime models can be used to match domain-specific knowledge, offer a richer semantics support for runtime decision-making related to system adaptation and other runtime concerns and (2) runtime models support reasoning and self-awareness (i.e. requirements-awareness, context-awareness). My recent focus has been on the synergy between AI in SE, as evidenced by my recent EPSRC project Twenty20Insight.

Teaching: I enjoy teaching! I have substantial teaching experience since my first job as a lecturer at the Universidad Central de Venezuela. Since joining Aston University, I have taught a range of modules across the Software Engineering part of the curriculum, at both undergraduate and master's level. I am a Fellow of the Higher Education Academy (HEA) and I hold a Postgraduate Certificate in Teaching & Learning.

Employment History

2019 - present, Senior Lecturer in Computer Science, Aston University, UK

2013 May –2019, Lecturer in Computer Science, Aston University, UK

2011 May – May 2013, Marie Curie Fellow, INRIA, Paris-Rocquencourt, France

2008 April – April 2011, Senior Research Associate, Lancaster University

2006 – March 2008, Research Associate, Lancaster University

2003 – 2006, Teaching Assistant, Lancaster University

Education

- PhD in Computing, Lancaster University, 2008

- MSc in Software Engineering, Universidad Central de Venezuela (UCV), (honourable mention) 1998

- Five-year Bachelor in Computing Science, Universidad Central de Venezuela, 1993

- Fellow of The Higher Education Academy (2016)

- Postgraduate Certificate in Teaching & Learning (2014)

Professional Memberships

I am a member of the ACM, ACM SIGSOFT, IEEE, BCS

Research

Grant and Awards

- EPSRC **Twenty20Insight** (2020-2023), Principal Investigator, £892,384 (total Value to Aston £586,520)
 - Research Fellowship by Leverhulme Trust “**QuantUn: Quantification of Uncertainty using Bayesian Surprises**” (2019-2020) £54,983
 - Marie Curie Action Intra-European Fellowship **requirements@runtime: Requirements-aware Systems**, €222.547, Inria, France, (2011-2013)
 - 2 VC international PhD scholarships, Aston University, £60000 (2018)
 - Faculty PhD scholarship, Aston University (2015)
 - Visiting Scholar Funding 2015, Aston University, £1200
 - M@TURE Models @ Time for self-adaptive pervasive systems: enabling User-in-the-loop, REquirement-awareness, and interoperability in ad hoc settings, 24-month, €37.600, Inria-funded international collaboration grant (Brazil-France). We also won a second version (2014-2016) €37.600.
 - Faculty PhD Studentship 3 years (Lancaster University), October 2003 – September 2006
 - International Travel Grant, The Royal Academy of Engineering, 2009, 2008, 2007
 - International Travel Grant, The Royal Academy of Engineering
 - Student Travel Grant Association Internationale pour les Technologies Objects (AITO)
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Honours and Awards

2019

- **RE 10 year Most Influential Paper Award 2019**, “RELAX: Incorporating Uncertainty into the Specification of Self-Adaptive Systems,” by Jon Whittle, Pete Sawyer, Nelly Bencomo, Betty H.C. Cheng, Jean-Michel Bruel, Proceedings of 17th IEEE International Requirements Engineering Conference (RE09), pp. 79–88, September 2009, Atlanta, Georgia.

- **MODELS 10 year Most Influential Paper Award 2019**, “A Goal-Based Modeling Approach to Develop Requirements of an Adaptive System with Environmental Uncertainty” by Betty H.C. Cheng, Pete Sawyer, Nelly Bencomo, Jon Whittle, in the Proceedings of the ACM/IEEE International Conference on Model Driven Engineering Languages and Systems (MoDELS 2009), pp. 468–483, Denver, Colorado, 2009.

2013

- **Best Award Paper** in the 19th International Working Conference on Requirements Engineering (REFSQ), 2013

- **Keynote speaker** 14th Intl Working Conference on Variability Modelling of Software-Intensive Systems 2020 VAMOS 2020, Germany

- **Keynote speaker** in 14th IEEE International Conference on Autonomic Computing (ICAC 2017)
<http://icac2017.ece.ohio-state.edu/program/keynotes/>

- **Award Program for the Researcher’s Promotion** (Programa de Promoción al Investigador PPI)

- **Best National Postgraduate Thesis** "UCV/PDVSA-CIED". Universidad Central de Venezuela / National Oil Holding - PDVSA.

PhD Students

Luis Garcia (Completed 2020)

Juan M. Parra (3rd Year), co-supervised with Dr. Antonio Garcia

Owen Reynolds (3rd Year), co-supervised with Dr. Antonio Garcia

Huma Samin (2nd Year) co-supervised with Prof Pete Sawyer

Master Students

Amel Balagoun, 2012 with honours, Université de Versailles Saint-Quentin-en-Yvelines, France

Services to Research Community

- Member of the IEEE TCSE (Technical Council on Software Engineering) members-at-large (TCSE Elected Officers) <https://tc.computer.org/tcse/>

- Associate Editor, IEEE Transactions on Software Engineering (TSE) (2019-Present)

- Editorial Board Member, Journal of Software and Systems Modeling (2019-Present)

- General secretary of the BCS RESG Committee (special interest group for systems requirements) (2017-)

- Member of the Editorial Board of the Springer Journal of Software Engineering Research and Development (JSERD) since March 2016

- Member Program Board MODELS Conference since 2017, 2018, 202

- Member of the Steering Committee SEAMS 2014 – 2018

Grant Proposal Reviewing

- The Alan Turing Institute
- The Leverhulme Trust
- The Knowledge Foundation, Sweden
- National Science Foundation, USA
- EU ERA-NET CHIST-ERA Expert reviewer
- Swiss National Science Foundation (SNSF), Expert reviewer, Switzerland
- Natural Sciences and Engineering Research Council of Canada, Expert reviewer, Canada
- French National Research Agency (ANR), Expert reviewer, France
- Vienna Science and Technology Fund, Austria, project reviewer/evaluator

Regular Publications Reviewing

- ACM Transactions on Software Engineering and Methodology (TOSEM)
- ACM Transactions on Autonomous and Adaptive Systems (TAAS)
- Journal SoSyM Software and Systems Modeling, Springer
- Requirements Engineering (REEN) Journal
- Journal Computing, Springer
- JUICS Special issue on Software Components, Architectures and Reuse- Special Issue, Summer 2009
- IEEE Software Special Issue: Domain-Specific Languages & Modeling, Jul/Aug 2009
- Journal of Systems and Software - Special issue on Software Architectures and Mobility
- Journal Formal Aspects of Computing (FAC)

Program Committee and organization

I have served or serve as Program Committee member of several international Conferences

International Conference on Software Engineering (**ICSE**)

International Conference on Model Driven Engineering Languages and Systems (**MODELS**)

Symposium on Software Engineering for Adaptive and Self-Managing Systems (**SEAMS**)

International Working Conference on Requirements Engineering (**REFSQ**)

ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (**ESEC/FSE**)

International Conference on Autonomic Computing and Self-Organizing Systems (**ACSOS**) previously SASO

Working IEEE/IFIP Conference on Software Architecture (**WICSA**)

International Conference on Conceptual Modeling (**ER**)

Ibero-American Conference on Software Engineering (**CibSE**)

2022

- **Conference Chair (REFSQ), UK**
- **PC ICSE 2022**

2021

- **PC ICSE 2021**, Spain
- **Board PC MODELS 2021**, Japan
- **PC SEAMS 2021**, Spain
- **PC ESEC-FSE, 2021**, Greece

2020

- **PC SEAMS 2020**, Korea
- **PC MODELS 2020**, Canada
- **Program Chair of WICSA 2020**, Bahia, Brazil
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2019

- **PC ICSE 2019**, Canada
- **PC International Conference on Requirements Engineering (RE) RE-Next 2019**, Korea
- **PC SEAMS 2019**, Canada
- **PC MODELS 2019**, Germany

2018

- **ICSE 2018**, Sweden
- **20th RE 2018, SEAMS 2018**, Sweden, 2018
- **MODELS 2018**, 14-19 October 2018 Copenhagen, Denmark
- **ER 2018**, China
- **CibSE 2018**

2017

- **PC 20th MODELS 2017**, USA, 2017
- **PhD Symposium Chair at MODELS 2017**
- **PC RE-NEXT 2017**, Portugal, 2017
- **PC Member SEAMS 2017**
- **ER 2017**
- **PC CibSE Argentina, 2017**

2016

- **PC Member ESEC/FSE 2016**
- **PC 19th MODELS 2016**, France, 2016
- **PC PhD Symposium at MODELS 2016**,
- **PC RE 2016**, China, 2016

- PC Member **SEAMS 2016**
- PC Member **REFSQ 2016**
- PC Member **SAC-RE 2016** 9th Edition of the Requirements Engineering Track

2015

- PC Member **ESEC/FSE 2015**
- PC Member **ICSE NIER Track 2015, ICSE 2015**
- PC 18th **MODELS 2015**
- Member of the **RE'15** Workshop Selection Committee

2014

- **SEAMS'14, RE'14, RE'14 Posters&Demos, MODELS 2014, ICSE NIER Track 2014, Publicity co-Chair MODELS 2014, VAMOS 2014, CibSE 2014**

2013

- **SEAMS'13, MODELS, RE 2013: Posters&Demos, VaMOS, 2013, SBES 27th Brazilian Symposium on Software Engineering (SBES), Brazil, 2013 – PC, MoDRE 3rd International Model-Driven Requirements Engineering Workshop 2013 – Organizer and PC**

2012

- **ICSE 2012, Zurich, Switzerland, Students Volunteer Chair, MODELS'12, SEAMS'2012, Posters and Demonstration RE 2012 –PC, CibSE 2012, SBES**

2011

- **Posters and Demonstrations RE 2011, SBES 25th Brazilian Symposium on Software Engineering (SBES), MoDRE, SEAMS 2011**

2010

- **SEAMS 2010 , WCSI 2010 International Workshop on Component and Service Interoperability at TOOLS 2010**

2009

- **SOAR 2009 Workshop Self-Organizing Architectures at WICSA/ECSA 09, WASELF 2009 2nd Workshop on Autonomic and SELF-adaptive Systems, 2009, SEAMS 2009**

2008

- **ASE 2008, AQuSerM: Advances in Quality of Service Management with EDOC 2008 , WASELF-*: Workshop on Autonomic and SELF-adaptive Systems, Spain, 2008, REV 2008 Third International Workshop on Requirements Engineering Visualization (REV'08), WCAT 2008 5th Workshop on Coordination and Adaptation Techniques, Italy, 2008, ARAMIS 2008 Automated Engineering of Autonomic and run-time evolving Systems, Italy, MDDAS 2008 The First IEEE International Workshop on Model-Driven Development of Autonomic Systems, Turku, Finland, 2008 IDEAS 2008 11th Iberoamerican Workshop Requirements Engineering and Software Environments, Brazil**

Organization of Events

- Co-organizer and co-founder of Workshop Models@run.time in MODELS 2006-2019 (average participants 20-40 people)
- Coordinator Five-day Dagstuhl seminar on Models@run.time 2011, Germany, <http://www.dagstuhl.de/> (participants 64 people)
- Co-organizer and Steering Committee member of Workshop Artificial Intelligence for Requirements Engineering (AIRE) in RE 2014-17
- Co-organizer and co-founder of Workshop Requirements@run.time in RE 2010 and 2011 (average participants 20-35 people)
- Co-organizer 3rd International Model-Driven Requirements Engineering Workshop MoDRE 2013, 2019
- Co-organizer of the First International workshop on Validation and Verification of Dynamic Software Systems ViDaS' 10, Paris, April, 2010
- Co-organizer Workshop M-ADAPT: Model-Driven Software Adaptation in ECOOP 2007 (participants >20 people)
- Co-organizer Working Meeting "Models and Aspects for Product Families: A Roadmap for Research" 1st Nov 2006, Lancaster University, UK

Talks and Invitations

- Invited Keynote 14th IEEE International Conference on Autonomic Computing (ICAC 2017): **“The role of Software Engineering in Autonomic Computing”**
- **“Decision making for Self-adaptation under Uncertainty”**, Fraunhofer IESE – Kaiserslautern, Germany, June, 2016
- **“How Self-Adaptive Systems Challenge Requirements Engineering”**, Fraunhofer IESE – Kaiserslautern, Germany, May, 2012
- **“On the Use of Runtime Models: the use of claims to tackle uncertainty”**, Projet ADAM – IRIAN – Lille, France - May, 2012
- **“On the Use of Runtime Models: from architectural-based models to requirement-based models”**, Projet MARGE - Équipe SAMOVAR/ACMES - Dpt INF - Télécom SudParis, France, November, 2011
- **“Known Unknowns: How Self-Adaptive Systems Challenge Requirements Engineering”**, University of Trento, Italy, November, 2011
- **“Requirements for Self-adaptation: a tutorial”**, 4th Summer School on Generative and Transformational Techniques in Software Engineering, Braga, Portugal, July, 2011
- **“Dagstuhl Perspective Workshop: Model Engineering of Complex Systems, 10-13 August 2008, Dagstuhl, Germany”**, 10-08-2008 – 13-08-2008
- **“Supporting the Model Driven Development of Reflective, Component-based Adaptive Systems”**, Conference Code Generation, 2008, CG2008, Cambridge, UK, 25 - 27 June 2008
- **Workshop on Quality of Service Management**, at King's College London, 22nd and 23rd of April 2008
- **Invited talk: “Dynamically Adaptive Systems supported by Reflective Component-based Technologies: a Software-based Models Perspective”**, 25th February, 2008, King's College London
- **Dagstuhl-Seminar on “Software Engineering for Self-Adaptive Systems”**, 13-01-2008 – 18-01-2008. Workshop Organized by Cheng H.C. Betty, de Lemos Rogerio, Giese Holger, Inverardi Paola, Magee Jeff
- Workshop on **“Perspectives on Model Driven Engineering of Software”**, Rennes, April 2007, organized by Prof Jézéquel

Panels

- Fishbowl Panel: Do we need to Change Software Engineering Curricula for the Challenges of an Instrumented and Interconnected World, **ICSE 2012**, (Wed June 6 2012)
- Panelist invited at **SEAMS Workshop (Software Engineering for Adaptive and Self-Managing Systems)**, 12,13 May held with ICSE, 2008

PhD External Examiner (12)

University of Bristol (2020), University of Sweden (2020), University of Oslo (2019), UCL UK (2018), Universidad Javeriana (2018), University of Valencia (2017), University of York, UK (2015), Birmingham University, UK (2015), Universidad Técnica Federico Sta Maria, Chile (2014), University of Malaga, Spain (2012), Fondazione Bruno Kessler, University of Trento, Italy (2011), King's College London, UK (2010)

Teaching Experience

At Aston University, UK:

- Java Programming [~170- 220 students] module leader
- Object Oriented Programming Year 1 [~344 students], module leader
- Computational Intelligence [~20 students]
- Software Project Management [~170-220 students], module leader of different versions: undergraduate, master students and degree apprenticeships
- Supervisor of Final Year Projects, Group projects,
- Personal tutor and Final Year Tutor for Computing for Business (2014-17).
- PhD Tutor of the PhD students in CS at Aston (2017-)

At Lancaster University, UK:

- 2007, 2008, 2009 Guest Lectures on the use of UML and Models-driven Engineering, for undergraduate students and Master Student at Lancaster
- *Web Technologies Practical course*, Responsible for design of curriculum, overseeing lab activity, designing and grading exams (number of students between 50 and 100).
- *Discrete Math* course, I presented lectures and prepared associated material designing, and grading exams (between 50-100 students)
- *Concurrent Programming* course, lectures and prepared associated material.

At UCV, Venezuela:

- Courses in *Distributed Object Applications, Probability and Statistic and Object-Oriented Simulation*, Responsible for design of curriculum, presenting topics, overseeing lab activity, designing, administering and grading exams, and assigning final grades.

Courses/events on teaching undertaken or attended

I went through a two-year training as a Instructor Lecturer (Junior Lecturer) after been promoted to Assistant Lecturer (tenure position) at the UCV before joining Lancaster. This training program is very structured and rigorous and is part of the preparation of all Assistant Lecturers in any public university in Venezuela. It is a very competitive field.

During my training I was awarded the certificate for the following course:

- **Teaching techniques and learning strategies in the classroom:** The course teaches skills to design and deliver material in the classrooms and lab, how to open, develop, and close a lecture in an effective way. It was fully based in reflection and auto feedback received from videos of classes delivered that were filmed. The feedback was discussed by peers and tutor of the course (20 hours 5 sessions of 4 hours each plus the assessment).

- **Fundamentals of the Design of Courses and Elaboration of Programs:** This course was about how to design course programs and syllabus. The course teaches the skills of how to develop and program a course, including the description of the main goals of a course and the specific goals of every lecture/class to be delivered, and strategies of evaluations to be used. (60 hours in 15 sessions of 4 hours each. Assessment: The course needed me to design 2 new courses I was in charge of in those days.)

Languages Spanish (mother tongue), English (second language), French (good)

Other activities Cinema, Trekking, Photography, and Yoga

References

- **Prof Gordon Blair, Computing Department, Lancaster University, UK** (PhD Supervisor, co-author of several research papers, co-organizer of international workshops, co-organizer Dagstuhl Seminar)
- **Prof Betty H.C. Cheng, Computer Science and Engineering, Michigan State University, USA** (co-author of several papers, co-organizer of international workshops, co-organizer Dagstuhl Seminar)
- **Dr Valérie Issarny, Senior Research Scientist INRIA, Paris, France** (line manager and co-author of several papers)
- **Prof. Anthony Finkelstein, Professor UCL Faculty of Engineering Sciences, Government's Chief Scientific Adviser for National Security, President of City, University of London (2021)** (co-author of several papers)

Publications see Annexe next pages

Publications (www.nellybencomo.me/publications.html)

Editorials and Keynotes

- **"Next steps in variability management due to autonomous behaviour and runtime learning"**. Nelly Bencomo, International Conference VaMoS 2020, Germany, **2020**
- **"The Role of models@run. time in Autonomic Systems: Keynote"**, N. Bencomo, Keynote paper for the Autonomic Computing Conference (ICAC), **2017** IEEE International Conference on, 293-294
- **"Introduction to the Special Section on Best Papers from SEAMS 2014"**, Nelly Bencomo, Gregor Engels (Eds.) ACM Transactions on Autonomous and Adaptive Systems, Volume 10, Issue 4, February **2016**
- **Editorial of the Book "Models@run.time: Foundations, Applications, and Roadmaps"**, Nelly Bencomo, Robert France, Betty H.C. Cheng and Uwe Assmann (Eds.) LNCS 8378, 2014, © Springer International Publishing Switzerland **2014**
- **"Editorial: IEEE Computer: Special issue on [Models@run.time](#)"**, Gordon Blair, Nelly Bencomo, and Robert France, October, **2009** [546 citations]

Journal Publications and Book Contributions

- **"Agent-based Framework for Self-Organization of Collective and Autonomous Shuttle Fleets"**, Antonio Bucchiarone, Martina De Sanctis, Nelly Bencomo, IEEE Transactions on Intelligent Transportation Systems, **2020** <https://ieeexplore.ieee.org/document/9199130>
- **"Towards Model-Driven Sustainability Evaluation"**, Jorg Kienzle, Gunter Mussbacher, Benoit Combemale, Lucy Bastin, Nelly Bencomo, Jean-Michel Bruel, Christoph Becker, Stefanie Betz, Ruzanna Chitchyan, Betty H.C. Cheng, Sonja Klingert, Birgit Penzenstadler, Norbert Seyff, Communications of the ACM, **2020**
- **"A Hitchhiker's Guide to Model-Driven Engineering for Data-Centric Systems"**, Benoit Combemale, Jorg Kienzle, Gunter Mussbacher, Hyacinth Ali, Daniel Amyot, Mojtaba Bagherzadeh, Edouard Batot, Nelly Bencomo, Benjamin Benni, Jean-Michel Bruel, Jordi Cabot, Betty Cheng, Philippe Collet, Gregor Engels, Robert Heinrich, Jean-Marc Jezequel, Anne Koziolok, Sebastien Mosser, Ralf Reussner, Houari Sahraoui, Rijul Saini, June Sallou, Serge Stinckwich, Eugene Syriani, Manuel Wimmer, Communications of the ACM, March **2020**, Vol. 63 No. 3, Pages 80-91
- **"Opportunities in Intelligent Modeling Assistance"**, Gunter Mussbacher, Benoit Combemale, Jorg Kienzle, Silvia Abrahao, Hyacinth Ali, Nelly Bencomo, Marton Bur, Loli Burgueno, Gregor Engels, Pierre Jean, Jean-Marc Jezequel, Thomas Kuhn, Sebastien Mosser, Houari Sahraoui, Eugene Syriani, Daniel Varro, Martin Weyssow, Software and Systems Modeling (**2020**)
- **"Models@run.time: a Guided Tour of the State-of-the-Art and Research Challenges"**, Nelly Bencomo, Sebastian Götz and Hui Song, Sosym Journal, **2018**
- **"A dynamic CWW architecture for supporting runtime reconfiguration decisions of service-based systems"**, R. Torres, R. Salas, N. Bencomo, H. Astudillo, The International Journal of Computational Intelligence Systems (IJCIS) (ISI/WOS), **2018**
- **"Self-explanation in Adaptive Systems based on Runtime Goal-based Models"**, Nelly Bencomo, Kris Welsh, Pete Sawyer, Jon Whittle, Transactions on Computational Collective Intelligence, **2014**
- **"The Role of Models@run.time in Supporting On-the-fly Interoperability"**, Nelly Bencomo, Amel Bennaceur, Paul Grace, Gordon Blair, and Valerie Issarny, Special Issue [Models@run.time](#), Springer Computing, Edited by Radu Calinescu, Robert France, and Carlo Guezzi, **2013**

- **"A View of the Landscape of Dynamic Software Product Lines"**, Nelly Bencomo, Svein Hallsteinsen, Eduardo Almeida, *Special Special Issue on Dynamic Software Product Lines (DSPL) IEEE Computing*, Edited by Mike Hinchey and Klaus Schmid, October **2012**
- **"Software Engineering for Self-Adaptive Systems: A Second Research Roadmap"**, In Software Engineering for Self-Adaptive Systems 2, Editors R. de Lemos, H. Giese, H. Müller, and M. Shaw. Lecture Notes in Computer Science Hot Topics, Springer, **2012** [1336 citations]
- **"RELAX: A Language to Address Uncertainty in Self-Adaptive Systems Requirements"**, Jon Whittle, Pete Sawyer, Nelly Bencomo, Betty H.C. Cheng, and Jean-Michel Bruel in Requirements Engineering Journal, **2010**
- **"Software Engineering for Self-Adaptive Systems: A Research Roadmap"**, Betty H.C. Cheng, Rogério de Lemos, Holger Giese, Paola Inverardi, Jeff Magee, Jesper Andersson, Basil Becker, *Nelly Bencomo*, Yuriy Brun, Bojan Cukic, Giovanna Di Marzo Serugendo, Schahram Dustdar, Anthony Finkelstein, Cristina Gacek, Kurt Geihs, Vincenzo Grassi, Gabor Karsai, Holger M. Kienle, Jeff Kramer, Marin Litoiu, Sam Malek, Rafaela Mirandola, Hausi A. Muller, Sooyong Park, Mary, , Matthias Tichy, Massimo Tivoli, Danny Weyns, Jon Whittle, Chapter in Book on Software Engineering for Self-Adaptive Systems (SEfSAS Book) [LNCS Hot Topics on Software Engineering for Self-Adaptive Systems](#), **2009**
- **"Traceability Management through Use Cases when Developing Distributed Object Applications" extended/refereed article**, Bencomo, N., Mateo, A., in Journal of Object Technology, vol. 4, no. 6, **2005** pp 29-43

Conferences Publications

- **"Investigating the potential impact of values on requirements and software engineering"**, Alistair Sutcliffe, Pete Sawyer, Wei Liu and Nelly Bencomo, Track Software Engineering in Society in the 43rd International Conference in Software Engineering (ICSE **2021**), Madrid, Spain ICSE SEIS 2021
- **"Towards Priority-Awareness in Autonomous Intelligent Systems"**, Huma Samin, Luis Hernan Garcia Paucar, Peter Sawyer, and Nelly Bencomo, The Edition of the Requirements Engineering Track (Requirements Engineering RE -Track'21) is part of the 36th ACM Symposium on Applied Computing. Korea, SAC **2021**
- **"Towards an Architecture Integrating Complex Event Processing and Temporal Graphs for Service Monitoring"**, Juan Parra-Ullauri, Antonio Garcia-Dominguez, Juan Boubeta-Puig, Nelly Bencomo and Guadalupe Ortiz, The Edition of the Requirements Engineering Track (Data Streams-Track'21) is part of the 36th ACM Symposium on Applied, Computing. Korea, SAC **2021**
- **"Temporal Models for History-Aware Explainability"**, Antonio Garcia-Dominguez, *Nelly Bencomo*, Juan Parra and Luis Garcia Paucar, 12th System Analysis and Modelling Conference SAM'20 , **2020**
- **"Towards automated provenance collection for runtime models to record system history"**, Owen Reynolds, *Nelly Bencomo* and Antonio Garcia-Dominguez, 12th System Analysis and Modelling Conference SAM'20, **2020**
- **"RaM: Causally-connected and Requirements-aware Runtime Models using Bayesian Learning"**, Nelly Bencomo, Luis H. Garcia-Paucar, ACM/IEEE 22th International Conference on Model Driven Engineering Languages & Systems MODELS 2019 MODELS 2019, Germany, September, **2019**
- **"Querying and annotating model histories with time-aware patterns"**, Antonio Garcia, Nelly Bencomo, Juan Parra, Luis H. Garcia-Paucar, ACM/IEEE 22th International Conference on Model Driven Engineering Languages & Systems MODELS 2012 MODELS 2019, Germany, September, **2019**
- **"Runtime K Models to Support Trade-offs for Self-adaptation using Partially Observable Markov Decision Processes"**, Luis Garcia-Paucar, Nelly Bencomo, 13th IEEE Conference on Self-Adaptive and Self-Organizing Systems SASO 2019, Umea, Sweden, June **2019**

- **"ARRoW: Automatic Runtime Reappraisal of Weights for Self-Adaptation"**, Luis Garcia Paucar and Nelly Bencomo, The 12th Edition of the Requirements Engineering Track (RE-Track'19) is part of the 34rd ACM Symposium on Applied Computing. SAC 2019
- **"Re-STORM: Runtime Non-Functional Requirements trade-off supported by Partially Observable Markov Decision Processes"**, Luis Garcia Paucar and Nelly Bencomo, 13th International Symposium on Software Engineering for Adaptive and Self-Managing Systems, 2018
- **"DeSiRE: Further Understanding Nuances of Degrees of Satisfaction of Non-functional Requirements Trade-off"**, Ross Edwards and Nelly Bencomo, 13th International Symposium on Software Engineering for Adaptive and Self-Managing Systems, 2018
- **"Juggling Preferences in a World of Uncertainty"**, Luis Garcia Paucar and Nelly Bencomo, *International requirements Engineering Conference 2017*
- **"RE-PREF: Support for REassessment of PREFERences of Non-functional Requirements for Better Decision-making in Self-adaptive System"**, Luis Garcia Paucar and Nelly Bencomo, *24th International Conference on Requirements Engineering 2016, RE 2016. Posters and Demo Tools*
- **"QuantUn: Quantification of Uncertainty for the Reassessment of Requirements"**, Nelly Bencomo, *RE: Next! track at the 23rd International Requirements Engineering Conference RE'15 Ottawa, Canada, 24-28 Aug, 2015*
- **"Minimizing Nasty Surprises with Better Informed Decision-Making in Self-Adaptive Systems"**, Sara Hassan, Nelly Bencomo and Rami Bahsoon, *10th International Symposium on Software Engineering for Adaptive and Self-Managing Systems, 2015, Florence, Italy*
- **"Revisiting Goal-Oriented Models for Self-Aware Systems-of-Systems"**, André Almeida, Nelly Bencomo, Thais Batista, Everton Cavalcante, Francisco Dantas, *30th ACM Symposium on Applied Computing (SAC), Requirements Engineering Track (SAC-RE-Track'15), Salamanca, Spain, April, 2015*
- **"Dynamic Decision-Making based on NFR for Managing Software Variability and Configuration Selection"**, Everton Cavalcante, Thais Batista, Nelly Bencomo, Pete Sawyer, *12th IEEE International Conference on Autonomic Computing ICAC 2015, Grenoble, France, 7 - 10 July, 2015*
- **"CloudMPL: A Domain Specific Language for Describing Management Policies for an Autonomic Cloud Infrastructure"**, Marwah M. Alansari, Andre Almeida, Nelly Bencomo and Behzad Bordbar, *5th International Conference on Cloud Computing and Services Science CLOSER 2015, Lisbon, Portugal, May, 2015 (one of the Best Papers)*
- **"Self-adaptive Probabilistic Roadmap Generation for Intelligent Virtual Agents"**, Kat Mclvor, Nelly Bencomo, Peter Lewis, *Eighth IEEE Conference on Self-Adaptive and Self-Organizing Systems SASO 2014, London, UK in September 2014 (one of the best papers)*
- **"A world full of surprises: Bayesian theory of surprise to quantify degrees of uncertainty"**, Nelly Bencomo, Amel Belaggoun, *36st International Conference on Software Engineering 2014, ICSE 2014, Track on New Ideas and Emerging Results (NIER), India, 31 May - June 7 2014, Acceptance rate: 24%*
- **"Dynamic Decision Networks for Decision-making in Self-adaptive Systems : a Case Study"**, Nelly Bencomo, Amel Belaggoun, and Valerie Issarny, *8th International Symposium on Software Engineering for Adaptive and Self-Managing Systems, 2013*
- **"Supporting Decision-making for Self-adaptive Systems: From Goal Models to Dynamic Decision Networks"**, Nelly Bencomo and Amel Belaggoun, submitted to the 19th International Working Conference on Requirements Engineering: Foundation for Software Quality REFSQ 2013 (one of the best papers)
- **"RELAXing Claims: Coping With Uncertainty While Evaluating Assumptions at Run Time"**, Andres Ramirez, Betty H.C. Cheng, Nelly Bencomo, and Pete Sawyer, submitted to 15th ACM/IEEE International

Conference On Model Driven Engineering Languages And Systems MODELS 2012 (Foundations Tracks), Austria

- **"Self-explanation in Adaptive Systems"**, Nelly Bencomo, Kristopher Welsh, Pete Sawyer, and Jon Whittle
17th IEEE International Conference on Engineering of Complex Computer Systems, ICECCS 2012, Paris, France, July, 2012 (one of the best papers)
- **"Towards Requirements Aware Systems: Run-time Resolution of Design-time Assumptions"**, Kristopher Welsh, Pete Sawyer, Nelly Bencomo
26th IEEE/ACM International Conference On Automated Software Engineering, ASE 2011, Kansas, USA, November 6 - 10, 2011
- **"Requirements-Aware Systems A research agenda for RE for self-adaptive systems"**, Pete Sawyer, Nelly Bencomo, Jon Whittle, Emmanuel Letier, Anthony Finkelstein,
18th IEEE International Requirements Engineering Conference, RE 2010, Sydney, Australia, September 27th - October 1st 2010, Acceptance rate: 15.9%
- **"Requirements Reflection: Requirements as Runtime Entities"**, Nelly Bencomo, Jon Whittle, Pete Sawyer, Anthony Finkelstein, and Emmanuel Letier,
32st International Conference on Software Engineering 2010, ICSE 2010, Track on New Ideas and Emerging Results (NIER), Cape Town, South Africa, 2-8 May 2010, Acceptance rate: 25%
- **"A Goal-Based Modeling Approach to Develop Requirements for Adaptive Systems with Environmental Uncertainty"**, Betty H.C. Cheng, Pete Sawyer, Nelly Bencomo, and Jon Whittle,
12th ACM/IEEE International Conference On Model Driven Engineering Languages And Systems MODELS 2009, Denver, Colorado, USA, 4 - 9 October 2009, Acceptance rate: 16%
- **"RELAX: Incorporating Uncertainty into the Specification of Self-Adaptive Systems"**, Jon Whittle, Pete Sawyer, Nelly Bencomo, Betty H.C. Cheng, and Jean-Michel Bruel,
17th IEEE International Requirements Engineering Conference, RE 2009, Atlanta, Georgia, USA, 31 August - 4 September 2009, Acceptance rate : 21%
- **"An Aspect-Oriented and Model-Driven Approach for Managing Dynamic Variability"**, Brice Morin, Franck Fleurey, Nelly Bencomo, Jean-Marc Jezequel, Arnor Solberg, Vegard Dehlen, and Gordon Blair,
11th ACM/IEEE International Conference On Model Driven Engineering Languages And Systems MODELS Conference, Toulouse, France, 28 September - 3 October 2008, Acceptance rate: 21%
- **"Engineering Complex Adaptations in Highly Heterogeneous Distributed Systems"**, Paul Grace, Gordon Blair, Carlos Flores, Nelly Bencomo
2nd International Conference on Autonomic Computing and Communication Systems [Autonomics 2008](#), Turin, Italy, September 2008, *Invited paper*
- **"Genie: Supporting the Model Driven Development of Reflective, Component-based Adaptive Systems"**, Nelly Bencomo, Paul Grace, Carlos Flores, Danny Hughes, and Gordon Blair
Formal Research Demonstrations, 30th International Conference on Software Engineering, [Formal demos at ICSE 2008](#), 811-814, Leipzig, Germany, May 2008, Acceptance rate for formal demos: 20.5%
- **"Goal-Based Modeling of Dynamically Adaptive System Requirements"**, Heather J. Goldsby, Pete Sawyer, Nelly Bencomo, Danny Hughes, and Betty H. C. Cheng
15th IEEE International Conference on Engineering of Computer-Based Systems, [ECBS 08](#), Belfast, Northern Ireland, 31 March - 4 April, 2008.
- **"Adapting the Unified Process UP for the Development of CORBA Applications"**, N. Bencomo, A. Matteo, IRMA Conference, PH, USA May, 2003
- N. Bencomo, A. Matteo, Distribution and the Internet Conference, CIMPAUNESCOINRIA, Vzla, Jan, 2002 (in Spanish)
- **"Rescate de Aplicaciones Legacy: Mecanismo de Comunicación para Procesos Legacy con memoria compartida en Aplicaciones Distribuidas"**,

N.Bencomo, et all, Proc. Latin American Conference of Informatics CLEI 2001, Mérida, Vzla Sep, 2002 (in Spanish)

- **"PTMS: A graphical Multiuser Interface for a RealTime System"**, N.Bencomo, et all, Practical Experience Segment of Distributed Objects Conference 2001, Sao Paolo, Brazil Nov, 2001
- **"Comparación de CORBA y X Web en el Desarrollo y Desempeño de Una Interfaz Gráfica Multiusuario"**, N.Bencomo et all, Proc. Latin American Conference of Informatics CLEI2000, Méjico, 2000 (in Spanish)
- **"Java Implementation for user interface frameworks"**, N.Bencomo, F. Losavio. A. Matteo, Proc. TOOLS Conference 97, Technology of ObjectOriented Languages and Systems 1997, Sta. Barbara, California, USA, 1997

Book Contributions

- **"Managing Trade-offs in Self-Adaptive Software Architectures: A Systematic Mapping Study"**, Maria Salama, Rami Bahsoon and Nelly Bencomo in *Managing trade-offs in adaptable software architectures*, Ivan Mistrík, Nour Ali, John Grundy, Rick Kazman and Bradley Schmerl (Eds.) Elsevier, Switzerland, 2016
- **"Perpetual Assurances for Self-Adaptive Systems"**, Danny Weyns, Nelly Bencomo, Radu Calinescu, Javier Camara, Carlo Ghezzi, Vincenzo Grassi, Lars Grunske, Paola Inverardi, Jean-Marc Jezequel, Sam Malek, Raffaella Mirandola, Marco Mori and Giordano Tamburrelli in *Software Engineering for Self-Adaptive Systems 3 (SEfSAS Book 3)*, Rogério de Lemos, David Garlan, Carlo Ghezzi, Holger Giese (Eds.) Springer-Verlag, 2016 (in press)
- **"State of the Art in Architectures for Self-Aware Computing Systems"**, Holger Giese, Thomas Vogel, Ada Diaconescu, Peter Lewis, Sebastian Gotz, Nelly Bencomo, Kurt Geihs, Samuel Kounev, Kirstie Bellman and Paola Inverardi in *Self-Aware Computing Systems*, Samuel Kounev, Xiaoyun Zhu, Jeffrey O. Kephart, and Marta Kwiatkowska (Eds.) Springer-Verlag, 2016 (to be published)
- **"Self-explanation in Adaptive Systems based on Runtime Goal-based Models"**, Nelly Bencomo, Kris Welsh, Pete Sawyer, Jon Whittle, *Transactions on Computational Collective Intelligence*, 2014
- **"Living with Uncertainty in the Age of Runtime Models"**, Holger Giese, Nelly Bencomo, Liliana Pasquale, Andres J. Ramirez, Paola Inverardi, Sebastian Watzoldt, and Siobhan Clarke, in *Bencomo, France, Betty Cheng and Assmann (Editors), LNCS 8378, pp. 47-100, 2014, © Springer International Publishing Switzerland*
- **"Revisiting Software Engineering Processes for Self-adaptive Systems"**, Jesper Andersson, Luciano Baresi, Nelly Bencomo, Rogério de Lemos, Alessandra Gorla, Paola Inverardi and Thomas Vogel, In *Software Engineering for Self-Adaptive Systems 2*, Editors R. de Lemos, H. Giese, H. Müller, and M. Shaw. Lecture Notes in Computer Science Hot Topics, Springer, 2012
- **"Software Engineering for Self-Adaptive Systems: A Second Research Roadmap"**, In *Software Engineering for Self-Adaptive Systems 2*, Editors R. de Lemos, H. Giese, H. Müller, and M. Shaw. Lecture Notes in Computer Science Hot Topics, Springer, 2012
- **Requirements for Self-adaptation**, Nelly Bencomo, In *Generative and Transformational Techniques in Software Engineering - International Summer School, GTTSE 2011, Revised Papers*, Braga, Portugal, Edited by Ralf Lammel, Joao Saraiva, and Joost Visser, Lecture Notes in Computer Science, Springer, 2011
- **"Dynamic variability in adaptive systems"**, Ruzanna Chitchyan, Brice Morin, Franck Fleurey, Nelly Bencomo, Arnor Solberg and Thomas Genssler, Book Chapter in *Book Aspect-Oriented, Model-Driven Software Product Lines The AMPLE Way*, Cambridge University Press, October, 2011
- **"Using Architecture Models to Support the Generation and Operation of Component-based Adaptive Systems"**, Nelly Bencomo, Gordon Blair,

- **"Software Engineering for Self-Adaptive Systems: A Research Roadmap"**, Betty H.C. Cheng, Rogério de Lemos, Holger Giese, Paola Inverardi, Jeff Magee, Jesper Andersson, Basil Becker, Nelly Bencomo, Yuriy Brun, Bojan Cukic, Giovanna Di Marzo Serugendo, Schahram Dustdar, Anthony Finkelstein, Cristina Gacek, Kurt Geihs, Vincenzo Grassi, Gabor Karsai, Holger M. Kienle, Jeff Kramer, Marin Litoiu, Sam Malek, Rafaela Mirandola, Hausi A. Muller, Sooyong Park, Mary, Shaw, Matthias Tichy, Massimo Tivoli, Danny Weyns, Jon Whittle, Chapter in Book on Software Engineering for Self-Adaptive Systems (SEfSAS Book) [LNCS Hot Topics on Software Engineering for Self-Adaptive Systems](#), 2009

Workshop Publications

- **"An Architectural Framework for Quality-driven Adaptive Continuous Experimentation"**, Miguel Jiménez, Luis F. Rivera, Norha M. Villegas, Gabriel Tamura, Hausi A. Müller and Nelly Bencomo, 5th International Workshop on Rapid Continuous Software Engineering at ICSE 2019
- **"Reflecting on the past and the present with temporal graph-based models"**, Antonio García-Domínguez, Nelly Bencomo, Luis Hernán García Paucar: Workshop MOdels@run.time, MODELS Workshops 2018
- **"Interacting Decision-Making Agents and their Impacts on Assurances: Taxonomy and Challenges"**, Nelly Bencomo, Peter R. Lewis, Sebastian Götz: Workshop MOdels@run.time, MoDRE@RE 2018: 79-83
- **"Non-Human Modelers: Can They Work?"**, Antonio Garcia-Dominguez, Nelly Bencomo, Grand Challenges in Modeling Workshop at STAF 2017
- **"The Reassessment of Preferences of Non-Functional Requirements for Better Informed Decision-making in Self-Adaptation"**, Luis Garcia Paucar and Nelly Bencomo, 11th International Workshop on Models@run.time at MODELS 2016
- **"Runtime models based on dynamic decision networks: enhancing the decision-making in the domain of ambient assisted living applications"**, Luis Garcia Paucar and Nelly Bencomo, Third International Workshop on Artificial Intelligence for Requirements Engineering (AIRE) at RE 2016
- **"Two-B or not Two-B? Design Patterns for Hybrid Metaheuristics"**, Alina Patelli, Nelly Bencomo, Anikó Ekárt, Harry Goldingay, and Peter R. Lewis 2nd Workshop on Metaheuristic Design Patterns [MetaDeeP @ GECCO 2015](#), Spain, July, 2015
- **"Bayesian Artificial Intelligence for Tackling Uncertainty in Self-adaptive Systems: the Case of Dynamic Decision Networks"**, Nelly Bencomo, Amel Belaggoun, Valerie Issarny, 2nd International NSF sponsored Workshop on Realizing Artificial Intelligence Synergies in Software Engineering [RAISE 2013](#), May 25-26, San Francisco, USA
- **"Addressing the QoS drift in specification models of self-adaptive service-based systems"**, Romina Torres, Nelly Bencomo and Hernan Astudillo, 2nd International NSF sponsored Workshop on Realizing Artificial Intelligence Synergies in Software Engineering [RAISE 2013](#), May 25-26, San Francisco, USA
- **"S-Theory: a Unified Theory of Multi-Paradigm Software Development"**, Danny Hughes, Christophe Huygens, Brice Morin, Nelly Bencomo The 8th International Conference on Grid and Pervasive Computing [GPC 2013](#), May 9-11, 2013, Seoul, Korea
- **"Market-awareness in Service-based System"**, Romina Torres, Nelly Bencomo, Hernan Astudillo, Workshop 2nd Awareness Workshop on Challenges for Achieving Self-awareness in Autonomic Systems, Sixth IEEE International Conference on Self-Adaptive and Self-Organizing Systems (SASO), Lyon, France; 10-14 September 2012

- **"How the Web of Things Challenges Requirements Engineering"**, Pete Sawyer, Animesh Pathak, Nelly Bencomo, Valerie Issarny, 3rd Workshop on The Web and Requirements Engineering (WERE) at 12th International Conference on Web Engineering ICWE 2012, Berlin, Germany, July, 2012,
- **"Mitigating the obsolescence of quality specifications models in service-based systems"**, Romina Torres, Nelly Bencomo, Hernan Astudillo, Workshop MoDRE 2012, Model-driven Requirements Engineering Workshop at IEEE 20th International Requirements Engineering Conference 2012, Chicago, USA, 24th September 2012,
- **"Tracing Requirements for Adaptive Systems using Claims"**, Kristopher Welsh; Nelly Bencomo; Peter Sawyer, 6th International Workshop on Traceability in Emerging Forms of Software Engineering, TEFSE'11, Honolulu, Hawaii, May 23, 2011,
- **"How dynamic is your Dynamic Software Product Line?"**, Nelly Bencomo, Jaejoon Lee, Svein Hallsteinsen, 4th International Workshop on Dynamic Software Product Lines ,DSPL '10, Jeju Island, South Korea, 13 September 2010,
- **"On the Use of Software Models during Software Execution"**,
Nelly Bencomo,
Workshop on Modeling in Software Engineering [MISE'2009](#), at ICSE'09, 2009
- **"Comparative Study of Variability Management in Software Product Lines and Runtime Adaptable Systems"**,
Vander Alves, Daniel Schneider, Martin Becker, *Nelly Bencomo*, Paul Grace,
3rd International workshop on Variability Modelling of Software-intensive Systems, [VaMOS](#), Sevilla, Spain, 28-30 January, 2009
- **"Modeling and Validating Dynamic Adaptation"**,
Franck Fleurey, Vegard Dehlen, *Nelly Bencomo*, Brice Morin, Jean-Marc Jézéquel,
[Models@run.time](#) Workshop, Toulouse, France, 30 September 2008
- **"Dynamically Adaptive Systems are Product Lines too: Using Model-Driven Techniques to Capture Dynamic Variability of Adaptive Systems"**,
Nelly Bencomo, Pete Sawyer, Gordon Blair, and Paul Grace
[2nd International Workshop on Dynamic Software Product Lines \(DSPL 2008\)](#), with [SPLC 2008](#) Limerick, Ireland, 8 September 2008,
- **"A Language for Self-Adaptive System Requirements"**,
Jon Whittle, Pete Sawyer, *Nelly Bencomo*, and Betty Cheng,
[4th International Workshop on Service-Oriented Computing Consequences for Engineering Requirements \(SOCCER'08\)](#) with [RE 2008](#), Barcelona, Spain, 8 September 2008
- **"Reflective Component-based Technologies to Support Dynamic Variability"**,
Nelly Bencomo, Gordon Blair, Carlos Flores, and Pete Sawyer
2nd International Workshop on Variability Modelling of Software-intensive Systems, [VaMoS 08](#), Essen, Germany, January 16-18, 2008.
- **"Visualizing the Analysis of Dynamically Adaptive Systems Using i* and DSLs"**,
Pete Sawyer, *Nelly Bencomo*, Danny Hughes, Paul Grace, Heather J. Goldsby, and Betty H. C. Cheng
2nd International Workshop on Requirements Engineering Visualization, held with the 15th IEEE International Requirements Engineering Conference, New Delhi, India 2007.
- **"Models, Reflective Mechanisms and Family-based Systems to Support Dynamic Configuration"**,,
Nelly Bencomo, Gordon Blair and Paul Grace, Workshop on Model Driven Development for Middleware (MODDM), held with the 7th International Middleware Conference Melbourne, Australia, November, 2006.
- **"Genie: a Domain-Specific Modeling Tool for the Generation of Adaptive and Reflective Middleware Families"**,,
Nelly Bencomo and Gordon Blair, The 6th OOPSLA Workshop on Domain-Specific Modeling, Portland, October, 2006.

- **"Ubiquitous Computing: Adaptability Requirements Supported by Middleware Platforms"**,
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- **"Reflection and Aspects Meet Again: Runtime Reflective Mechanisms for Dynamic Aspects"**,
Nelly Bencomo, Gordon Blair, Geoff Coulson, Paul Grace, Awais Rashid, Proceedings of the First Middleware '05 Workshop on Aspect Oriented Middleware Development (AOMD 05) Grenoble, France, November, 2005.
- **"Towards a MetaModelling Approach to Configurable Middleware"**,
Bencomo, N., Blair, G.S., Coulson, G., Batista, T., Proc. 2nd ECOOP'2005 Workshop on Reflection, AOP and MetaData for Software Evolution RAM-SE 2005, pp 73-82, Glasgow, Scotland, July 2005
- **"Raising a Reflective Family"**,
Bencomo, N., Blair, G., Proc. Models and Aspects Handling Crosscutting Concerns in MDS, Glasgow, Scotland, July 2005
- **"Tracing the Distribution Concern: Bridging the Gap"**,
Bencomo N., Blair G., Sawyer P., Early Aspects 2004: AspectOriented Requirements Engineering and Architecture Design Workshop, OOPSLA 2004, Canada
- **"Traceability Management through Use Cases when Developing Distributed Object Applications"**,
Bencomo N., Matteo A., International Workshop Open Issues in Industrial Use Case Modeling, UML 2004, Portugal
- **"Middleware Unaware Software Development and Interoperability using MDA"**,
Bencomo N., Blair G., Second European Workshop on Model Driven Architecture (MDA) with an emphasis on Methodologies and Transformations September, 2004, Canterbury, England

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- **"Preening: Reflection of Models in the Mirror a Meta-modelling Approach to Generate Reflective Middleware Configurations"**,
Bencomo, N., Blair G, Lecture Notes in Computer Science, Satellite Events at the MoDELS 2005 Conference: The Doctoral Symposium, MODELS 2005, Springer-Verlag , pp. 337 - 338

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- **"Devising the Future of the Models@run.time Workshop"**, Sebastian Götz, Nelly Bencomo, Robert B. France, ACM SIGSOFT Software Engineering Notes 40(1), January, 2015
- **Models@run.time (Dagstuhl Seminar 11481)**, Uwe Aßmann, Nelly Bencomo, Betty H. C. Cheng, Robert B. France., December 2011
- **"Foreword: Second Workshop [requirements@run.time](#)"**, Nelly Bencomo, Emmanuel Letier, Jon Whittle, Anthony Finkelstein, November 2011
- **"6th International Workshop on [Models@run.time](#)"**, Nelly Bencomo, Gordon S. Blair, Robert B. France, Cédric Jeanneret, MODELS 2010 Workshops, LNCS 6002, Springer-Verlag (2010)
- **"5th International Workshop on [Models@run.time](#)"**, Nelly Bencomo, Gordon S. Blair, Robert B. France, Freddy Muñoz, Cédric Jeanneret, S. Ghosh (Ed.): MODELS 2009 Workshops, LNCS 6002, Springer-Verlag (2010)
- **"Foreword: First Workshop [requirements@run.time](#)"**, Pete Sawyer, Nelly Bencomo, Jon Whittle, Daniel M. Berry, Anthony Finkelstein, DOI: 10.1109/RERUNTIME.2010.5628554, IEEE Xplore, November 2010
- **"4th International Workshop on [Models@run.time](#)"**, Nelly Bencomo, Gordon S. Blair, Robert B. France, Freddy Muñoz, Cédric Jeanneret, S. Ghosh (Ed.): MODELS 2009 Workshops, LNCS 6002, Springer-Verlag (2010)
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- **"Model-Driven Software Adaptation (M-ADAPT)"**, Nelly Bencomo, Gordon Blair and Robert France, ECOOP Workshops 2007: 132-141
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Conference Posters/Tools

- "Run-Time Model Evaluation for Requirements Model-Driven Self-Adaptation", Kris Welsh, Nelly Bencomo, IEEE 20th International Requirements Engineering Conference 2012, **Posters and Demos Track**, RE 2012, Chicago, USA, September 2012
- "Run-time Resolution of Uncertainty", Kristopher Welsh, Pete Sawyer, Nelly Bencomo, International Requirements Engineering Conference, **RE 2011, Tool Demonstration Track**, Trento, Italy, 29th August 2nd September 2011
- Danny Hughes, Nelly Bencomo, Gordon Blair, Geoff Coulson, Paul Grace, Barry Porter, Exploiting Extreme Heterogeneity in a Flood Warning Scenario using the GridKit Middleware", **Poster in Middleware Conference 2008**, Leuven Belgium, December, 2008
- Nelly Bencomo, Gordon Blair, Paul Grace, "*The world is going MAD: Models for Adaptation*", **Poster in MoDELS 2006**, Genoa, October, 2006
- Bencomo, N.: "*A Green Family: Generating Publish/Subscribe Middleware Configurations*", **Poster in the 4th Workshop on Adaptive and Reflective Middleware (ARM05)**, Grenoble, France, November, 2005
- Nelly Bencomo, Gordon Blair, Geoff Coulson, and Paul Grace: "*Families of Reflective Middleware Systems: the new generation*", **Poster in MODELS 2005**, Jamaica, October, 2005
- Bencomo N., Matteo A.: "*CUP: A CORBA-based unified process adaptation*", **Poster in ECOOP 2004**, Oslo, Norway, June 2004

PhD Thesis

- **Supporting the Modelling and Generation of Reflective Middleware Families and Applications using Dynamic Variability**, Ph.D. Thesis. Lancaster University. March 2008

Miscellaneous Publications and Internal reports

- **"To Adapt or Not to Adapt: that is the Requirements Question"**, Nelly Bencomo and Jon Whittle, Lancaster University, Requirements Quarterly, The Newsletter of the Requirements Engineering Specialist Group of the British Computer Society RESG, pp. 3-5, June, 2008
- **"Handling Multiple Levels of Requirements for Middleware-Supported Adaptive Systems"**, Pete Sawyer, Nelly Bencomo, Paul Grace, and Gordon Blair, Technical Report (COMP 001-2007), January, 2007, Lancaster University
- **"CORBAadapted UP: An Unified Process adaptation for CORBA Applications"**, N.Bencomo, A. Matteo, Promotion Project, April 2003 (in Spanish)
- Bencomo Nelly, "CORBAadapted UP: A Unified Process adaptation for CORBA Applications", **Promotion Project required to be promoted to Profesor Asistente (Tenure Position)**, February 2003 (in Spanish)
- **"Experiences using Distributed Object Technologies in the Computing Schools at the UCV"**, 2002