

Publications

Articles published in journals with international audience

- [1] Sadaf Alam, Roland N. Ibbett, and Frédéric Mallet. Simulation of a computer architecture for quantum chromodynamics calculations. *Crossroads, ACM Magazine, Interdisciplinary Computer Science*, 9(3):18–23, 2003.
- [2] Charles André and Frédéric Mallet. Modèles de contraintes temporelles pour systèmes polychrones. *Journal Européen des Systèmes Automatisés*, 43(7–8–9):725–739, 2009.
- [3] Calin Glitia, Julien DeAntoni, Frédéric Mallet, Jean-Vivien Millo, Pierre Boulet, and Abdoulaye Gamatié. Progressive and explicit refinement of scheduling for multidimensional data-flow applications using UML MARTE. *Design Automation for Embedded Systems*, 19:1–33, 2015.
- [4] Jing Liu, Ziwei Liu, Jifeng He, Frédéric Mallet, and Zuohua Ding. Hybrid MARTE statecharts. *Frontiers of Computer Science*, 7(1):95–108, 2013.
- [5] Frédéric Mallet, Charles André, and Robert de Simone. CCSL: specifying clock constraints with UML/Marte. *Innovations in Systems and Software Engineering*, 4(3):309–314, 2008.
- [6] Frédéric Mallet, Charles André, and Robert de Simone. Logical time: specification vs. implementation. *ACM SIGSOFT Software Engineering Notes*, 36(1):1–8, 2011.
- [7] Frédéric Mallet and Robert de Simone. Correctness issues on MARTE/CCSL constraints. *Science of Computer Programming*, 106:78–92, 2015.
- [8] Frédéric Mallet, Julien DeAntoni, Charles André, and Robert de Simone. The clock constraint specification language for building timed causality models. *Innovations in Systems and Software Engineering*, 6(1–2):99–106, March 2010.
- [9] Jean-Vivien Millo, Frédéric Mallet, Anthony Coadou, and S. Ramesh. Scenario-based verification in presence of variability using a synchronous approach. *Frontiers of Computer Science*, 7(5):650–672, 2013.

Articles published in journals with national audience

- [10] Charles André and Frédéric Mallet. Les modèles de temps de MARTE et CCSL. *Génie Logiciel*, 89(89):44–49, June 2009.
- [11] Sébastien Demathieu, Yves Bernard, Laurent Maillet-Contoz, M. Bourding, and Frédéric Mallet. Mise en oeuvre de l’IDM pour la conception de systèmes embarqués: premiers résultats et perspectives du projet lambda. *Génie Logiciel*, 93(90):38–42, June 2010.
- [12] Sébastien Demathieu, Sébastien Gérard, and Frédéric Mallet. Marte, le nouveau standard UML pour les systèmes temps réel embarqués. *Electronique mensuel*, 189:2–6, March 2008. (invited).
- [13] Frédéric Mallet, Charles André, and François Lagarde. Un processus automatique pour concevoir les profils UML. *Technique et Sciences Informatiques*, 29(4–5):391–419, May 2010.

Book and book chapters of collective books

- [14] Charles André, Julien DeAntoni, Frédéric Mallet, and Robert de Simone. *The Time Model of Logical Clocks Available in the OMG MARTE Profile*, chapter 7, pages 201–227. In *Synthesis of Embedded Software: Frameworks and Methodologies for Correctness by Construction Software Design*. Springer Science + Business Media, June 2010.
- [15] Charles André, Frédéric Mallet, and Robert de Simone. *Modeling of AADL data-communications with UML Marte*, volume 10 of *LNEE*, chapter 11, pages 150–170. Springer, May 2008.
- [16] Charles André, Frédéric Mallet, and Robert de Simone. *Time Modeling*, chapter 9, pages 55–88. Number formal/2009-11-02. OMG, November 2009. The UML Profile for Modeling and Analysis of Real-Time and Embedded systems (MARTE).
- [17] Michel Bourdellès, Shuai Li, Imran Quadri, Etienne Brosse, Andrey Sadovykh, Emmanuel Gaudin, Frédéric Mallet, Arda Goknil, David George, and Jari Kreku. *Fostering Analysis from Industrial Embedded Systems Modeling*, chapter 11, pages 283–300. IGI-Global, 2014. Handbook of Research on Embedded Systems Design.
- [18] Calin Glitia, Julien DeAntoni, and Frédéric Mallet. *Logical Time @ Work: Capturing Data Dependencies and Platform Constraints*, volume 106 of *Lecture Notes in Electrical Engineering*, chapter 14, pages 223–238. Springer New York, 2012.
- [19] Frédéric Mallet, André Charles, and Robert de Simone. *IP-XACT components with Abstract Time Characterization*, volume 63 of *LNEE*, chapter 1, pages 3–18. Springer, July 2010.
- [20] Frédéric Mallet and Robert de Simone. *Allocation Modeling*, chapter 11, pages 119–135. Number formal/2009-11-02. OMG, November 2009. The UML Profile for Modeling and Analysis of Real-Time and Embedded systems (MARTE).
- [21] Frédéric Mallet and Robert de Simone. *MARTE vs. AADL for Discrete-Event and Discrete-Time Domains*, volume 36 of *LNEE*, chapter 2, pages 27–41. Springer, May 2009.
- [22] Frédéric Mallet, Marie-Agnès Peraldi-Frati, Julien DeAntoni, and Robert de Simone. *UML MARTE Time Model and Its Clock Constraint Specification Language*, chapter 2, pages 29–51. IGI-Global, 2014. Handbook of Research on Embedded Systems Design.

Papers published in the proceedings of international conferences

- [23] Sadaf Alam, Roland N. Ibbett, and Frédéric Mallet. Performance evaluation of local communications: A case-study. In T. Gonzalez, editor, *International Conference on Parallel and Distributed Computing and Systems*, pages 393–398. ACTA Press, November 2003.
- [24] Charles André and Frédéric Mallet. Specification and verification of time requirements with CCSL and estereL. In Christoph Kirsch and Mahmut Kandemir, editors, *International Conference on Languages Compilers, and Tools for Embedded Systems (LCTES'09)*, volume 44, pages 167–176, Dublin, Ireland, June 2009. ACM SIGPLAN/SIGBED, ACM DL.
- [25] Charles André, Frédéric Mallet, and Robert de Simone. Modeling of immediate vs. delayed data communications: from AADL to UML MARTE. In *Forum on specification and Design Languages (FDL'07)*, pages 249–254, Barcelona, Spain, Sep. 2007. ECSI.
- [26] Charles André, Frédéric Mallet, and Robert de Simone. Modeling time(s). In *10th International Conference on Model Driven Engineering Languages and Systems (MODELS'07)*, number 4735 in LNCS, pages 559–573, Nashville, TN, USA, Sep. 2007. ACM-IEEE, Springer.

- [27] Charles André, Frédéric Mallet, and Robert de Simone. Time modeling in MARTE. In *Forum on specification and Design Languages (FDL'07)*, pages 268–273, Barcelona, Spain, September 2007. ECSI.
- [28] Charles André, Frédéric Mallet, and Julien Deantoni. Vhdl observers for clock constraint checking. In *IEEE Symposium on Industrial Embedded Systems (SIES'10)*, Trento, Italy, October 2010. IEEE Computer Press. To appear.
- [29] Charles André, Frédéric Mallet, and Marie-Agnès Peraldi-Frati. A multiform approach to real-time system modeling: Application to an automotive system. In *IEEE International Symposium on Industrial Embedded Systems (SIES'07)*, pages 234–241, Lisboa, Portugal, July 2007. IEEE Computer Press.
- [30] Charles André, Frédéric Mallet, and Marie-Agnès Peraldi-Frati. Multiform time in UML for real-time embedded applications. In *IEEE International Conference on Embedded and Real-Time Computing Systems and Applications (RTCSA'07)*, pages 232–237, Daegu, Korea, August 2007. IEEE Computer Press.
- [31] Xiaohong Chen, Jing Liu, Frederic Mallet, and Zhi Jin. Modeling timing requirements in problem frames using ccsL. In *18th Asia Pacific Software Engineering Conference (APSEC'11)*, Ho Chi Minh Ville, Vietnam, December 2011.
- [32] Benoît Combemale, Julien DeAntoni, Matias Vara Larsen, Frédéric Mallet, Olivier Barais, Benoit Baudry, and Robert B. France. Reifying concurrency for executable meta-modeling. In *6th International Conference on Software Language Engineering (SLE'13)*, volume 8225 of *Lecture Notes in Computer Science*, pages 365–384. Springer, October 2013.
- [33] Julien Deantoni and Frédéric Mallet. Timesquare: Treat your models with logical time. In *50th International Conference on Objects, Models, Components, Patterns (TOOLS'12)*, pages 34–41, May 2012.
- [34] Julien DeAntoni, Frédéric Mallet, Frédéric Thomas, Gonzague Reydet, Jean-Philippe Babau, Chokri Mraidha, Ludovic Gauthier, Laurent Rioux, and Nicolas Sordon. Rt-simex: retro-analysis of execution traces. In *8th ACM SIGSOFT Int. Symp. on Foundations of software engineering (FSE'10)*, FSE'10, pages 377–378, New York, NY, USA, 2010. ACM.
- [35] Kelly Garcés, Julien DeAntoni, and Frédéric Mallet. A model-based approach for reconciliation of polychronous execution traces. In *EUROMICRO-SEAA*, pages 259–266, 2011.
- [36] Régis Gascon, Frédéric Mallet, and Julien DeAntoni. Logical time and temporal logics: Comparing UML MARTE/CCSL and PSL. In *8th International Symposium on Temporal Representation and Reasoning (TIME'11)*, pages 141–148, 2011.
- [37] Calin Glitia, Julien Deantoni, and Frédéric Mallet. Logical time at work: capturing data dependencies and platform constraints. In *Forum on specification, verification & Design Languages (FDL'10)*. ECSI, IEEE Computer Press, September 2010. To appear.
- [38] Arda Goknil, Julien DeAntoni, Marie-Agnès Peraldi-Frati, and Frédéric Mallet. Tool support for the analysis of tatl2 timing constraints using timesquare. In *International Conference on Engineering of Complex Computer Systems (ICECCS'13)*, pages 145–154. IEEE, July 2013.
- [39] Arda Goknil, Jagadish Suryadevara, Marie-Agnès Peraldi-Frati, and Frédéric Mallet. Analysis support for tatl2 timing constraints on east-adl models. In *European Conference Software Architecture (ECSA'13)*, volume 7957 of *Lecture Notes in Computer Science*, pages 89–105. Springer, 2013.
- [40] Carlos Gomez, Julien DeAntoni, and Frédéric Mallet. Multi-view power modeling based on UML, MARTE and SysML. In *EUROMICRO-SEAA*, pages 17–20, 2012.

- [41] Amani Khecharem, Carlos Gomez, Julien DeAntoni, Frédéric Mallet, and Robert de Simone. Execution of heterogeneous models for thermal analysis with a multi-view approach. In *Forum on Specification and Design Languages (FDL'14)*, pages 1–8, 2014.
- [42] Matias Ezequiel Vara Larsen, Julien DeAntoni, Benoît Combemale, and Frédéric Mallet. A behavioral coordination operator language (bcool). In *18th ACM/IEEE International Conference on Model Driven Engineering Languages and Systems (MoDELS'15)*, pages 186–195, September 2015.
- [43] Su-Young Lee, Frédéric Mallet, and Robert de Simone. Dealing with AADL end-to-end flow latency with UML MARTE. In *13th International Conference on Engineering of Complex Computer Systems (ICECCS'08)*, pages 228–233, Belfast, Northern Ireland, April 2008. IEEE Computer Press.
- [44] Ziwei Liu, Jing Liu, Jifeng He, Frédéric Mallet, and Miaomiao Zhang. Formal specification of hybrid MARTE statecharts. In *Theoretical Aspects of Software Engineering Conference (TASE'12)*, pages 59–66, 2012.
- [45] Frédéric Mallet. Automatic generation of observers from MARTE/CCSL. In *23rd IEEE International Symposium on Rapid System Prototyping (RSP'12)*, pages 86–92, 2012.
- [46] Frédéric Mallet and Charles André. On the semantics of UML/Marte clock constraints. In *International Symposium on Object/component/service-oriented Real-time distributed Computing (ISORC'09)*, pages 301–312, Japan, Tokyo, March 2009. IEEE Computer Press.
- [47] Frédéric Mallet, Charles André, and Julien Deantoni. Executing AADL models with UML/Marte. In *International Conference on Engineering of Complex Computer Systems (ICECCS'09)*, pages 371–376, Potsdam, Germany, June 2009. IEEE Computer Press.
- [48] Frédéric Mallet and Fernand Boéri. Esterel and java in an object-oriented framework for heterogeneous software and hardware system modelling and simulation. the sep approach. In *Euromicro Conference*, volume I, pages 214–222. IEEE Computer Press, September 1999.
- [49] Frédéric Mallet and Fernand Boéri. Architecture validation in object-oriented framework. In *European Simulation Multiconference (ESM'01)*, pages 139–145, Prague, Czech Republic, June 2001. SCS.
- [50] Frédéric Mallet, Fernand Boéri, and Jean-Francois Duboc. Hardware architecture modelling using an object-oriented method. In *Euromicro Conference*, volume I, pages 147–153. IEEE Computer Press, August 1998.
- [51] Frédéric Mallet, Fernand Boéri, and Jean-Francois Duboc. Hardware modelling and simulation using an object-oriented method. In *European Simulation Multiconference (ESM'98)*, pages 166–168. SCS, June 1998.
- [52] Frédéric Mallet, Fernand Boéri, and Jean-Francois Duboc. Sep: simulation framework to evaluate rapid-prototyped hardware architectures. In *European Simulation Multiconference (ESM'00)*, pages 355–359, Ghent, Belgium, May 2000. SCS.
- [53] Frédéric Mallet, Robert de Simone, and Laurent Rioux. Event-triggered vs. time-triggered communications with UML Marte. In *Forum on Specification, Verification and Design Languages (FDL'08)*, pages 154–159, Stuttgart, Germany, September 2008. IEEE Computer Press.
- [54] Frédéric Mallet, Daniel Gaffé, and Fernand Boéri. Concurrent control systems : from grafcet to vhdl. In *Euromicro Conference*, volume I, pages 230–234. 26th Euromicro Conference, IEEE Computer Press, September 2000.
- [55] Frédéric Mallet and R. N. Ibbett. Javahase: Automatic generation of applets from hase simulation models. In *Summer Computer Simulation Conference (SCSC'03)*, pages 659–664, Montreal, Canada, July 2003. Summer Computer Simulation Conference.

- [56] Frédéric Mallet, Roland N. Ibbett, and Sadaf Alam. An extensible clock mechanism for computer architecture simulations. In *13th International Conference on Modeling and Simulation*, volume 1, pages 91–96, Marina del Rey, CA, USA, May 2002.
- [57] Frédéric Mallet, François Lagarde, Charles André, Sébastien Gérard, and François Terrier. An automated process for implementing multilevel domain models. In Mark van den Brand, Dragan Gasevic, and Jeff Gray, editors, *2nd International Conference Software Language Engineering (SLE '09)*, volume 5969 of *Lecture Notes in Computer Science*, pages 314–333, Denver, CO, USA, March 2010. Springer. Revised Selected Papers.
- [58] Frédéric Mallet and Jean-Vivien Millo. Boundedness issues in CCSL specifications. In *International Conference on Formal Methods and Software Engineering (ICFEM'13)*, volume 8144 of *Lecture Notes in Computer Science*, pages 20–35. Springer, 2013.
- [59] Frédéric Mallet, Jean-Vivien Millo, and Robert de Simone. Safe CCSL specifications and marked graphs. In *11th ACM/IEEE International Conference on Formal Methods and Models for Codesign (MEMOCODE'13)*, pages 157–166. IEEE, 2013.
- [60] Frédéric Mallet, Marie-Agnès Peraldi-Frati, and Charles André. From UML to petri nets for non functional property verification. In *IEEE Symposium on Industrial Embedded Systems (IES'06)*, Antibes, France, October 2006.
- [61] Frédéric Mallet, Marie-Agnès Peraldi-Frati, and Charles André. Marte CCSL to execute East-ADL timing requirements. In *International Symposium on Object/component/service-oriented Real-time distributed Computing (ISORC'09)*, pages 249–253, Japan, Tokyo, March 2009. IEEE Computer Press.
- [62] Frédéric Mallet and Grygoriy Zholtkevych. Coalgebraic semantic model for the clock constraint specification language. In *International Workshop Formal Techniques for Safety-Critical Systems (FTSCS'14)*, pages 174–188, 2014. Revised Selected Papers.
- [63] A. Mehmood Kahn, F. Mallet, C. André, and R. de Simone. IP-XACT components with abstract time characterization. In *Forum on specification, verification & Design Languages (FDL'09)*. ECSI, IEEE Computer Press, September 2009.
- [64] Isabelle Perseil, Laurent Pautet, Jean-François Rolland, Mamoun Filali, Didier Delanote, Stefan Van Baelen, Wouter Joosen, Yolande Berbers, Frédéric Mallet, Dominique Bertrand, Sébastien Faucou, Abdelhafid Zitouni, Mahmoud Boufaïda, Lionel Seinturier, Joël Champeau, Thomas Abdoul, Peter H. Feiler, Chokri Mraidha, and Sébastien Gérard. An efficient modeling and execution framework for complex systems development. In *International Conference on Engineering of Complex Computer Systems (ICECCS'11)*, pages 317–331, 2011.
- [65] Yuliia Romenska and Frédéric Mallet. Lazy parallel synchronous composition of infinite transition systems. In *ICTERI*, pages 130–145, 2013.
- [66] Jagadish Suryadevara, Cristina Cerschi Secoleanu, Frédéric Mallet, and Paul Pettersson. Verifying MARTE/CCSL mode behaviors using UPPAAL. In *International Conference on Software Engineering and Formal Methods (SEFM'13)*, volume 8137 of *Lecture Notes in Computer Science*, pages 1–15. Springer, September 2013.
- [67] Ling Yin, Jing Liu, Zuohua Ding, Frédéric Mallet, and Robert de Simone. Schedulability analysis with CCSL specifications. In *20th Asia-Pacific Software Engineering Conference (APSEC'13)*, volume 1, pages 414–421, 2013.
- [68] Ling Yin, Frédéric Mallet, and Jing Liu. Verification of marte/ccsl time requirements in promela/spin. In *International Conference on Engineering of Complex Computer Systems (ICECCS'11)*, pages 65–74, 2011.
- [69] Min Zhang and Frédéric Mallet. An executable semantics of clock constraint specification language and its applications. In *International Workshop Formal Techniques for Safety-Critical Systems (FTSCS'15)*, pages 37–51, November 2015. Revised Selected Papers.

- [70] Yuanrui Zhang, Frédéric Mallet, and Yixiang Chen. Timed automata semantics of spatial-temporal consistency language stec. In *Theoretical Aspects of Software Engineering Conference (TASE'14)*, pages 201–208, 2014.

Panels and invited conferences

- [71] Jean Bézivin, Jean-Michel Bruel, and Frédéric Mallet. UML and formal methods – is there a future ? In *UML and Formal Methods Workshop*, Kitakyushu, Japan, November 2009. Panel.
- [72] Peter Feiler, Frédéric Mallet, and Oleg Sokolsky. Schedulability analysis from different levels of modeling. In *Int. Conf. on Engineering of Complex Computer Systems (ICECCS'09)*, Potsdam, Germany, June 2009. Panel.
- [73] Frédéric Mallet. Marte: The OMG UML2 profile for modeling and analysis of real-time and embedded systems. In *Sophia Antipolis MicroElectronics (SAME'09)*, Sophia Antipolis, France, September 2009. Keynote.
- [74] Frédéric Mallet. Tutorial on time modeling with MARTE. In *Forum on Design & Specification Language, FDL 2010*, Southampton, UK, September 2010. Invited tutorial.
- [75] Frédéric Mallet. UML Profile for MARTE: Time Model and CCSL. In *ICTERI*, pages 289–294, 2013.
- [76] Frédéric Mallet. MARTE/CCSL for modeling cyber-physical systems. In *International Summer School on Methods and Tools for the Design of Digital Systems*, Formal Modeling and Verification of Cyber-Physical Systems, pages 26–49, September 2015. (invited).
- [77] Frédéric Mallet and Robert de Simone. MARTE: A profile for RT/E systems modeling, analysis (and simulation?). In *Int. Conf. on Simulation Tools and Techniques for Communications, Networks and Systems (SIMUTools'08)*, pages 1–8, Marseille, France, March 2008. ICST, ACM Digital Library. (invited).