

# Dominique Méry's Home Page

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Dominique Méry is professor of computing science at Université de Lorraine, where he teaches formal methods and related topics in the school of computer engineering Telecom Nancy and in the Faculty of Science and Technology. His research activities are developed in the laboratory LORIA joint structure of CNRS, INRIA and Université de Lorraine. You can contact him using the email of LORIA.

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# 1 Last News

The talk is given on Wednesday, October 29., 2025 during my visit of the Dishui Lake International Software Engineering Institute at East China Normal University (ECNU) from. 27th October 2025 to 31st October 2025.

This document is published on the occasion of a day (27 May 2025 in Nantes) dedicated to Jean-Raymond Abrial, and no one knew that Jean-Raymond had passed away the day before, 26 May 2025, without any fuss. J.R. Abrial, a pioneer in the scientific development of computer languages and formal methods and their large-scale application in industry Organised by the Nantes Laboratory (LS2N) Articles, documents and Zoom replay: <https://velo.wiki.ls2n.fr/doku.php?id=velo:js2025>

Blog pages on the May 2025 conference: <https://lefenetrou.blogspot.com/2025/05/bienvenue-js2025-de-nantes-universite.html>

The preprint is entitled NOTES ON THE MODELLING LANGUAGE EVENT-B and is provided for students.

The preprint is entitled DESIGN OF CORRECT BY CONSTRUCTION SEQUENTIAL ALGORITHMS and is provided for students.

The preprint entitled Teaching formal techniques with Event-B and Rodin is a companion paper for my talk at JS2025 *J.R. Abrial, un pionnier du développement scientifique*.

# 2 Teaching

Using Event-B for checking contracts is an experiment carried out at Telecom Nancy to present contracts in several forms and was presented at the FMT workshop (see publication).

Lectures MOSOS on formal modelling that I teach in the third year of Telecom Nancy (corresponding to the fifth year at University) and in the University's Masters in Computer Science. Part of the course is taught at Maynooth University in Ireland as part of Rosemary Monahan's course on my formal methods.

Lectures MVSII on verification and modelling of programs.

# 3 Research

## 3.1 Current scientific activities

My current scientific activities focus on proof-based development of distributed algorithms using the refinement, as well as modelling and certification of medical devices.

First, distributed algorithms, recently redeveloped by refinement, are population protocols which are leading to extension of the refinement, and self- $\star$  algorithms. The main difficulty is to deal with liveness and fairness properties, when considering population protocols for instance, and with explicit assumptions as for instance oracles for faults.

Second, medical devices lead to propose a refinement-based methodology applicable for certification of cyber-physical systems and human-in-the-loop systems. Two collaborations (NASA Ames and CHU Nancy) are interacting with us for these topics.

Finally, the IMPEX (<http://impex.loria.fr>) project leads me to deal with the integration of the explicit semantics in proof-based development of software systems. Recently, I have obtained two new projects ANR FORMEDICIS (2017-2022) on verification of HMI, extending IMPEX, and ANR project DISCONT (<http://discont.loria.fr>) on hybrid models and refinement.

## 4 Curriculum Vitae

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MÉRY Dominique, born on the 18th of September 1958, married to Odile, five children (Fabien 1984-; Nicolas 1987-; Florent (1992-2001); Thibaut (1994-); Claire (1996-)).

Professor of Computer Science, CLasse exceptionnelle 2010, at Université de Lorraine and appointed to the school *Telecom Nancy*.

### 4.1 Titles and Diploms

- Maîtrise in Pures Mathematics in June 1980
- MSc in Computer Science (DEA d'Informatique) in June 1981
- Doctorate troisième cycle at Institut National Polytechnique de Lorraine (October 1981-May 1983) ;
- Doctorate ès-sciences mathématiques at Université Nancy 1 (Defense on February 26, 1993) ;

### 4.2 Professional Records

- PhD Grant DGRST at CRIN CNRS URA 262 Laboratory, Nancy (November 1, 1981 till November 30, 1982) ;
- Université de Metz :
  - Assistant (December 1, 1982 till December 1, 1983) ;
  - Maître-Assistant (December 1, - January 1, 1985) ;
  - Maître de Conférences (January 1, 1985 till March 1, 1988) ;
- Chargé de recherche au CNRS, CRIN URA 262, Nancy (March 1, 1988 till September 1, 1993)
- Professeur des Universités, section 27 du CNU, à l' Université Henri Poincaré - Nancy I since September 1, 1993 (First Class in 2000, Exceptional Class 2010).
- On leave during a year from September 1992 till September 1993 at Stirling University, Scotland, UK.

## 4.3 National and International Implications:

### 4.3.1 Grants, Prices and Reputation

- Member of the Institut Universitaire de France nominated by Ministre de l'Enseignement Supérieur et de la Recherche [1995-2000].
- Grant for research and PhD supervision (PEDR) (from 1994 till 2009).
- Grant for Scientific Excellence (PES), Grad A ( 2009-2013 and 2013-2017).
- Member of the IFIP Working Group 1.3 *Foundations of System Specification*.
- Price of the Academy Stanislas in 2012
- *Palmes Académiques* on the 14th of July 2012

### 4.3.2 Assessment and Scientific Expertise

- PC Member: RenPar (RenPar'98, RenPar'99, RenPar'2000, Renpar2001, Renpar2002, Renpar2003), Perspectives in System Informatics PSI (2001, 2003, 2006, 2009), International Conference on Formal Engineering Methodology (ICFEM 2000, ICFEM 2002, ICFEM2005, ICFEM 2009, ICFEM 2010, ICFEM 2011, ICFEM 2012, ICFEM2014), Formal Methods Europe (FME 1997, FME 2001, FM 2006, FM 2008, FM 2009, FM 2012, FM 2014, FM 2015, FM 2016, FM2018), Integrated Formal Methods (IFM 1999, IFM 2000, IFM 2002, IFM 2004, IFM 2005, IFM 2007, IFM 2009, IFM 2010 (Cochair), IFM 2012, IFM 2014, IFM 2016, IFM2017, IFM2018), ABZ (2008,2010,2014,2016,2018), FASE 2008, CAL 2008, CAL 2009, CAL 2010, ISOLA (2007,2010,2012), DS-Event-B 2012, FHIES (2011,2012,2013), MEDI (2011,2012,2014,2015,2016,2017), PSI 2011, SEFM (2010;2017), TASE 2012, AFADL 2014, FACS 2014, FHIES/SEHC 2014, GDR-PhD2014, GPL2014, ICECCS 2014, iHARNESS 2014, ICECCS (2012,2013,2015,2017), ICTAC (2015,2016,2017).
- CoChair and CoEditor of FMMPTA96, FMPPTA97, FMPPTA98, FMPPTA99, MSR2003, IFM2010, FM2012, FIDE2014, FIDE2015, ICTAC2014
- Expertise: european community for the programme LTR; expert for CIFRE Grants; external referres for promotion of researchers or professors in foreign universities (University of UTAH at Salt Lake City, University of Cambridge, UK, Docent at Turku); expert for NSF (ITR in June 2000; expert for Enterprise Ireland (2001 and 2002); referee for french and foreign PhD (more than 30 PhD), expert DS9 in July 2004, July 2006 and September 2007; Expert ANR; Expert NSERC Canada.
- Expertise AERES: Ten PhD Schools (Cergy, Pau, 3 in Lyon, Chambéry, Bretagne (2), Paris (Villetaneuse, Ecole de Médecine), Nice, Paris Est (2) and two laboratory (LACL,LIURPA).
- Member of the Editorial Board of the journal *Formal Aspects of Computing - Applicable Formal Methods*, Springer.

#### 4.3.3 Scientific Management

- Deputy Head of the team PROGRAIS joint to CRIN and INRIA Lorraine (1989-1992) (10 permanent stuffs, 5-to-8 PhD students)
- Head of the research department *Formal Methods* (<http://fm.loria.fr>) of the LORIA laboratory (5 departments in LORIA) June 2011 - July 2015 with 35 permanent staffs (Professors, Assistant Professors, Senior/Junior Researchers) structured in teams or projects: CARTE (LORIA & INRIA), CASSIS (LORIA & INRIA), DEDALE (LORIA), MOSEL (LORIA), TYPES (LORIA) (LORIA), PAREO (LORIA & INRIA), VERIDIS (LORIA & INRIA & SAARLAND).
- Head of the PPF IAEM Lorraine (transversal research programme) 2004-2008 integrating research activities in Computer Science, Automatic Control, Electrical Engineering and Mathematics (40 000 euros per year) (The project involved the laboratories in Mathematics, Computer Science and Automation of the Lorraine Région).
- Creation and heading of the team MODEL in 1994 at CRIN, then at LORIA on formal methods and applications (1994 till 2004).
- Head of the team MOSEL (<http://mosel.loria.fr>) of LORIA laboratory and INRIA Project MOSEL( 2004 - 2008) on *Proof-based development of software systems* (10 permanent stuffs and 3-to-5 PhD students).
- Deputy Director of CRIN laboratory from 1994 till 1996 (laboratory in computer science joint to the three former universities of Nancy gathering more than 100 university teachers, 50 CNRS or INRIA researchers, 100 PhD Students);

#### 4.3.4 Administrative and social activities

- Head of DEA Informatique from 2000 till 2005 (DEA was the name of the Master before 2005 in France).
- Member of the Education Board of Université Henri Poincaré 2000-2004
- Member of the Scientific Council of Université Henri Poincaré 2004-2008.
- Head of the joint degree C2I of Université Henri Poincaré Nancy 1 (C2I stands for Certificate for Computer Science en Internet) from 2004 till 2008 (any student of one of the three first year has to prepare it in any section).
- Creation et heading of the MSc in Computer Science joint to the three former universities of Nancy 2005-2009: 7 specialities (3 Professional and 4 Research) and 120 students per year. .
- President of the association APCB since 2007 (association for promoting the B method)
- Member of the Scientific Council of the joint national programme *GDR Génie de la Programmation et du Logiciel* 2008-2012 and 2012-2017.
- Head of the PhD School ED 0077 IAEM Lorraine (300 students of 11 laboratories) October 1, 2008 - September 1, 2017 (<http://www.iaem.univ-lorraine.fr>).
- Member of the Scientific Council of Université de Lorraine since April 2012 - April 2017,

## 5 List of PhD Supervisions

- Manamiary Bruno Andriamiarina. *Modélisation de Systèmes Répartis Dynamiques*. PhD thesis, Université de Lorraine, November 2015.
- Nazim Benaissa. *La composition des protocoles de sécurité avec la méthode B événementielle*. Thèse d'université, UHP, May 2010.
- Naima Brown. *Vérification et mise en oeuvre distribuée des programmes UNITY*. PhD thesis, Université Henri Poincaré-Nancy 1, octobre 1994.
- François Carrez. *Spécification, vérification et raffinement de réseaux de processus communicants*. PhD thesis, Université Henri Poincaré-Nancy 1, mai 1991. en codirection avec Jean-Pierre Finance.
- Raphaël Couturier. *Utilisation des méthodes formelles pour le développement de programmes parallèles*. PhD thesis, Université Henri Poincaré-Nancy 1, janvier 2000.
- Souad Kherroubi. *Un cadre formel pour l'intégration de connaissances du domaine dans la conception des systèmes : application au formalisme Event-B*. PhD thesis, Université de Lorraine, December 2018.
- Romain Lieber. *Spécification d'exigences physico-physiologiques en ingénierie d'un système support de maintenance aéronautique*. PhD thesis, Université de Lorraine, 2013.
- Bruno Mermet. *Qualité de services dans une logique temporelle compositionnelle*. PhD thesis, Université Henri Poincaré-Nancy 1, février 1998.
- Yassine Mokhtari. *Validation des spécifications formelles de la logique temporelle des actions*. PhD thesis, Université Henri Poincaré-Nancy 1, février 2000.
- Abdelillah Mokkedem. *Vérification et raffinement de programmes parallèles dans une logique temporelle compositionnelle - Application au langage SDL*. PhD thesis, Institut Polytechnique de Lorraine, avril 1994.
- Julien Peyroux. *Equations de Vlasov et calculs des solutions*. Thèse d'université, UHP, November 2006.
- Cyril Proch. *Développement incrémental et prouvé de systèmes sur puces*. Thèse d'université, UHP, March 2006.
- Armand Pucetti. *Preuves de propriétés de fatalité temps-réel de programmes ADA, sémantique opérationnelle et axiomatique associées*. PhD thesis, Institut Polytechnique de Lorraine, septembre 1987. en codirection avec Patrick Cousot.
- Denis Roegel. *Etude de la sémantique de programmes parallèles réels en TLA*. PhD thesis, Université Henri Poincaré-Nancy 1, novembre 1996.
- Dimitri Samborski. *Problème d'interaction des services téléphoniques*. Thèse d'université, INPL, October 2000.
- Neeraj Kumar Singh. *Fiabilité et sûreté des systèmes informatiques critiques*. Thèse d'université, UHP, October 2011.

## 6 Publications

### 6.1 On HAL

List of publications on HAL

### 6.2 On DBLP

List of publications on DBLP

### 6.3 My list of publications

#### Books, monographs and proceedings

- [1] D. MÉRY (éd.). – *First International Workshop on Formal Methods for Parallel Programming: Theory and Applications*, IEEE Technical Computer Society Technical Committee, IPPS. – Hawaii. USA, CRIN, avril 1996.
- [2] D. MÉRY (éd.). – *Second International Workshop on Formal Methods for Parallel Programming: Theory and Applications*, IEEE Technical Computer Society Technical Committee, IPPS. – Geneva. Switzerland, LORIA UMR 7503 Laboratoire Lorrain de Recherche en Informatique et Applications, avril 1997.
- [3] D. MÉRY (éd.). – *Edition Spéciale FMPPTA98, Parallel Processing Letters*. – World Scientific, December 1998.
- [4] D. MÉRY, G.-R. PERRIN (éd.). – *Edition Spéciale RenPar'10 Dixièmes Rencontres Francophones du Parallélisme, Techniques et Sciences Informatiques*. – HERMES, Mai 1998.
- [5] D. MÉRY, G.-R. PERRIN (éd.). – *RenPar'10 Dixièmes Rencontres Francophones du Parallélisme*. ICPS et LORIA. – ICPS et LORIA, 9-12 Juin 1998.
- [6] D. MÉRY, B. SANDERS (éd.). – *Third International Workshop on Formal Methods for Parallel Programming: Theory and Applications*, IEEE Technical Computer Society Technical Committee, IPPS. – Orlando, Florida USA, LORIA UMR 7503 Laboratoire Lorrain de Recherche en Informatique et Applications, avril 1998.
- [7] D. MÉRY, B. SANDERS (éd.). – *Fourth International Workshop on Formal Methods for Parallel Programming: Theory and Applications, Lecture Notes in Computer Science*, IEEE Technical Computer Society Technical Committee, IPPS. – Puerto Rico, Springer Verlag, avril 1999.
- [8] D. MÉRY, N. REZG, X. XIE (éd.). – *Modélisation des systèmes réactifs MSR 2003*. – Hermès Lavoisier, 2003.
- [9] D. MÉRY, S. MERZ (éd.). – *Integrated Formal Methods, Lecture Notes in Computer Science*, 6396. – Springer, octobre 2010, 335p.
- [10] D. GIANNAKOPOULOU, D. MÉRY (éd.). – *FM 2012: Formal Methods - 18th International Symposium, Paris, France, August 27-31, 2012. Proceedings, LNCS, 7436*. – Springer, août 2012, 488p.
- [11] G. CIOBANU, D. MÉRY (éd.). – *Theoretical Aspects of Computing - ICTAC 2014 - 11th International Colloquium, Bucharest, Romania, September 17-19, 2014. Proceedings, Lecture Notes in Computer Science, 8687*. – Springer, 2014.



- [12] C. DUBOIS, D. GIANNAKOPOULOU, D. MÉRY (réd.). – *Proceedings 1st Workshop on Formal Integrated Development Environment, F-IDE 2014, Grenoble, France, April 6, 2014, EPTCS, 149.* – 2014.
- [13] C. DUBOIS, P. MASCI, D. MÉRY (réd.). – *Proceedings Second International Workshop on Formal Integrated Development Environment, F-IDE 2015, Oslo, Norway, June 22, 2015, EPTCS, 187.* – 2015.
- [14] C. DUBOIS, P. MASCI, D. MÉRY (réd.). – *Proceedings of the Third Workshop on Formal Integrated Development Environment, F-IDE@FM 2016, Limassol, Cyprus, November 8, 2016, EPTCS, 240.* – 2017.
- [15] E. H. ABDELWAHED, L. BELLATRECHE, D. BENSLIMANE, M. GOLFARELLI, S. JEAN, D. MÉRY, K. NAKAMATSU, C. ORDONEZ (réd.). – *New Trends in Model and Data Engineering - MEDI 2018 International Workshops, DETECT, MEDI4SG, IWCFS, REMEDY, Marrakesh, Morocco, October 24-26, 2018, Proceedings, Communications in Computer and Information Science, 929.* – Springer, 2018.
- [16] E. H. ABDELWAHED, L. BELLATRECHE, M. GOLFARELLI, D. MÉRY, C. ORDONEZ (réd.). – *Model and Data Engineering - 8th International Conference, MEDI 2018, Marrakesh, Morocco, October 24-26, 2018, Proceedings, Lecture Notes in Computer Science, 11163.* – Springer, 2018.
- [17] R. LALEAU, D. MÉRY, S. NAKAJIMA, E. TROUBITSYNA (réd.). – *Proceedings Joint Workshop on Handling IMPLICIT and EXPLICIT knowledge in formal system development (IMPEX) and Formal and Model-Driven Techniques for Developing Trustworthy Systems (FM&MDD), IMPEX/FM&MDD 2017, and Formal and Model-Driven Techniques for Developing Trustworthy Systems (FM&MDD) Xi'An, China, 16th November 2017, EPTCS, 271.* – 2018.
- [18] D. MÉRY, S. QIN (réd.). – *2019 International Symposium on Theoretical Aspects of Software Engineering (TASE), Xianxian Li and Zhi Li.* – Guillin, China, IEEE, novembre 2019.
- [19] A. RASCHKE, D. MÉRY, F. HOUDEK (réd.). – *Rigorous State-Based Methods - 7th International Conference, ABZ 2020, Ulm, Germany, May 27-29, 2020, Proceedings, Rigorous State-Based Methods - 7th International Conference, ABZ 2020, Ulm, Germany, May 27-29, 2020, Proceedings, Lecture Notes in Computer Science, 12071, Alexander Raschke.* – ULM, Germany, Springer, mai 2020.
- [20] Y. AÏT-AMEUR, S. NAKAJIMA, D. MÉRY (réd.). – *Implicit and Explicit Semantics Integration in Proof-Based Developments of Discrete Systems.* – Springer Singapore, 2021.
- [21] A. RASCHKE, D. MÉRY (réd.). – *Rigorous State-Based Methods - 8th International Conference, ABZ 2021, Ulm, Germany, June 9-11, 2021, Proceedings, Lecture Notes in Computer Science, 12709.* – Springer, 2021.
- [22] U. GLÄSSER, J. C. CAMPOS, D. MÉRY, P. A. PALANQUE (réd.). – *Rigorous State-Based Methods - 9th International Conference, ABZ 2023, Nancy, France, May 30 - June 2, 2023, Proceedings, Lecture Notes in Computer Science, 14010.* – Springer, 2023.
- [23] K. OGATA, D. MÉRY, M. SUN, S. LIU (réd.). – *Formal Methods and Software Engineering - 25th International Conference on Formal Engineering Methods, ICFEM 2024, Hiroshima, Japan, December 2-6, 2024, Proceedings, Lecture Notes in Computer Science, 15394.* – Springer, 2024.

## Theses

- [24] D. MÉRY. – *Une Méthode Axiomatique de Preuves de Propriétés de Fatalité de Programmes Paralleles avec Hypothèses d'Execution équitable*. – Thèse de doctorat, Institut National Polytechnique de Lorraine, 1983. – Thèse de Troisième Cycle.
- [25] D. MÉRY. – *Une Méthode de Raffinement et de Développement pour la Programmation Parallèle*. – Thèse de doctorat, Université de Nancy 1, UFR STMIA, DFD Informatique, Février 1993. – Doctorat ès Sciences Mathématiques.

## Papers in peer reviewed journals

- [26] D. MÉRY. – -Méthode axiomatique pour les propriétés de fatalité des programmes parallèles-. – *RAIRO Informatique Théorique et Application* 21, 3 (1987), pp. 287–322.
- [27] D. MÉRY. – -The  $\mathcal{NU}$  system as a development system for concurrent programs:  $\delta\mathcal{NU}$ -. – *Theoretical Computer Science* 94, 2 (march 1992), pp. 311 – 334.
- [28] A. MOKKEDEM, D. MÉRY. – -On using temporal logic for refinement and compositional verification of concurrent systems-. – *Theoretical Computer Science* 140 (avril 1995), pp. 95–138.
- [29] B. MERMET, D. MÉRY, D. SAMBORSKI. – -Spécification de services : une approche avec B-. – *Technique et science informatique* 17, 9 (1998), p. 20 pages.
- [30] D. CANSELL, D. MÉRY, S. MERZ. – -Diagrams Refinement for the Design of Reactive Systems-. – *Journal of Universal Computer Science* 7, 2 (2000), pp. 159–174.
- [31] J.-R. ABRIAL, D. CANSELL, D. MÉRY. – -A Mechanically Proved and Incremental Development of IEEE 1394 Tree Identify Protocol-. – *Formal Asp. Comput.* 14, 3 (2003), pp. 215–227.
- [32] D. CANSELL, D. MÉRY. – -Foundations of the B Method-. – *Computers and Artificial Intelligence* 22, 3-4 (2003), pp. 221–256.
- [33] D. MÉRY, D. CANSELL, C. PROCH, D. ABRAHAM, P. DITSCH. – -The challenge of QoS for digital television services-. – *EBU Technical Review* (avril 2005).
- [34] D. CANSELL, D. MÉRY. – -Formal and Incremental Construction of Distributed Algorithms: On the Distributed Reference Counting Algorithm-. – *Theoretical Computer Science* 364, 3 (2006), pp. 318–337.
- [35] D. CANSELL, J. P. GIBSON, D. MÉRY. – -Refinement: A Constructive Approach to Formal Software Design for a Secure e-voting Interface-. – *Electr. Notes Theor. Comput. Sci.* 183 (2007), pp. 39–55.
- [36] D. CANSELL, D. MÉRY. – -Incremental Parametric Development of Greedy Algorithms-. – *Electr. Notes Theor. Comput. Sci.* 185 (2007), pp. 47–62.
- [37] D. MÉRY, S. MERZ. – -Specification and Refinement of Access Control-. – *Journal of Universal Computer Science* 13, 8 (2007), pp. 1073–1093.
- [38] D. CANSELL, D. MÉRY, C. PROCH. – -System-on-chip design by proof-based refinement-. – *International Journal on Software Tools for Technology Transfer* 11, 3 (mars 2009), pp. 217–238. – The original publication is available at [www.springerlink.com](http://www.springerlink.com).
- [39] D. MÉRY. – -A Simple Refinement-based Method for Constructing Algorithms-. – *ACM SIGCSE Bulletin* 41, 2 (juin 2009), pp. 51–59.

- [40] D. MÉRY. – -Refinement-Based Guidelines for Algorithmic Systems-. – *International Journal of Software and Informatics* 3, 2-3 (septembre 2009), pp. 197–239.
- [41] D. MÉRY, N. K. SINGH. – -Functional Behavior of a Cardiac Pacing System-. – *International Journal of Discrete Event Control Systems (IJDECS)* (décembre 2010).
- [42] D. MÉRY, N. K. SINGH. – -A generic framework: from modeling to code-. – *Innovations in Systems and Software Engineering (ISSE)* (septembre 2011), pp. 1–9.
- [43] M. TOUNSI, M. MOSBAH, D. MÉRY. – -Proving Distributed Algorithms by Combining Refinement and Local Computations-. – *Electronic Communications of the EASST* 35 (novembre 2011), pp. ISSN 1863–2122.
- [44] D. MÉRY, N. K. SINGH. – -Formal Specification of Medical Systems by Proof-Based Refinement-. – *ACM Transactions in Embedded Computing Systems* 12, 1 (janvier 2013), p. 15.
- [45] M. B. ANDRIAMIARINA, D. MÉRY, N. K. SINGH. – -Revisiting Snapshot Algorithms by Refinement-based Techniques (Extended Version)-. – *Computer Science and Information Systems* (2014).
- [46] D. MÉRY, B. SCHÄTZ, A. WASSYNG. – -The Pacemaker Challenge: Developing Certifiable Medical Devices (Dagstuhl Seminar 14062)-. – *Dagstuhl Reports* 4, 2 (2014), pp. 17–37.
- [47] Y. A. AMEUR, D. MÉRY. – -Making explicit domain knowledge in formal system development-. – *Sci. Comput. Program.* 121 (2016), pp. 100–127.
- [48] M. TOUNSI, M. MOSBAH, D. MÉRY. – -From Event-B specifications to programs for distributed algorithms-. – *IJAACS* 9, 3/4 (2016), pp. 223–242.
- [49] F. FAKHFAKH, M. TOUNSI, M. MOSBAH, D. MÉRY, A. H. KACEM. – -Proving Distributed Coloring of Forests in Dynamic Networks-. – *Computación y Sistemas* 21, 4 (2017).
- [50] D. MÉRY. – -Playing with state-based models for designing better algorithms-. – *Future Generation Comp. Syst.* 68 (2017), pp. 445–455.
- [51] D. MÉRY, M. POPPLETON. – -Towards an integrated formal method for verification of liveness properties in distributed systems: with application to population protocols-. – *Software and System Modeling* 16, 4 (2017), pp. 1083–1115.
- [52] N. K. SINGH, Y. A. AMEUR, R. GENIET, D. MÉRY, P. A. PALANQUE. – -On the Benefits of Using MVC Pattern for Structuring Event-B Models of WIMP Interactive Applications-. – *Interact. Comput.* 33, 1 (2021), pp. 92–114.
- [53] L. BELLATRECHE, C. ORDONEZ, D. MÉRY, M. GOLFARELLI, E. H. ABDELWAHED. – -The central role of data repositories and data models in Data Science and Advanced Analytics-. – *Future Gener. Comput. Syst.* 129 (2022), pp. 13–17.
- [54] D. MÉRY, S. QIN. – -Selected papers from The 13th International Symposium on Theoretical Aspects of Software Engineering 29 July - 1 August 2019, Guilin, China-. – *Sci. Comput. Program.* 218 (2022), p. 102804.
- [55] D. MÉRY, A. RASCHKE. – -Selected papers from the Rigorous State-Based Methods 7th International Conference, ABZ 2020, Ulm, Germany, May 27-29, 2020-. – *Sci. Comput. Program.* 216 (2022), p. 102780.

- [56] N. K. SINGH, Y. AÏT-AMEUR, I. MENDIL, D. MÉRY, D. NAVARRE, P. PALANQUE, M. PANTEL. – -F3FLUID: A formal framework for developing safety-critical interactive systems in FLUID-. – *Journal of Software: Evolution and Process* (2022). – Early View = Online Version of Record before inclusion in an issue : e2439.
- [57] I. MENDIL, Y. AÏT-AMEUR, N. K. SINGH, G. DUPONT, D. MÉRY, P. A. PALANQUE. – -Formal domain-driven system development in Event-B: Application to interactive critical systems-. – *J. Syst. Archit.* 135 (2023), p. 102798.
- [58] A. RASCHKE, D. MÉRY. – -An automotive case study-. – *Int. J. Softw. Tools Technol. Transf.* 26, 3 (2024), pp. 327–330.

## General Papers for Popularization

- [59] *Formal methods for concurrency, parallelism and distribution*, 23. – octobre 1995. ERCIM News, numéro 23, 2 pages.
- [60] *Spécification de services et gestion des interactions*. – avril 1997. Lettre B, Numéro 2, pages 6-7.
- [61] *Un système d'analyse de la qualité: de la norme au produit en passant par le raffinement*, 73. – CNAM - Paris, France, 2005, 44–50p.
- [62] *Spécification d'exigences physico-physiologiques d'interaction homme-machine en ingénierie système*, Mars 2013, 104. – mars 2013, 29–39p. 10 pages.

## Book chapters

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## 7 Preprints

- Preprint on the Event-B modelling language at the following link.
- Preprint on the Design of Correct by Construction Sequential Algorithms at the following link.

## 8 TLA<sup>+</sup> Corner

The following link provides a list of TLA<sup>+</sup> mpdels that are used in my lectures or in my publications.

## 9 Event-B Corner

The following link provides a list of Event-B mpdels that are used in my lectures or in my publications.