Publications de Nasrine DAMOUCHE

1 Journaux Internationaux avec Comité de Lecture

— **N. DAMOUCHE**, M. MARTEL and A. CHAPOUTOT. **Numerical Program Optimization by Automatic Improvement of the Accuracy of Computations**, International Journal of Intelligent Engineering Informatics, (Control, Decision and Information Technologies, CODIT'18-special issue), 2018.

— **N. DAMOUCHE**, M. MARTEL and A. CHAPOUTOT. **Improving the numerical accuracy of programs by automatic transformation**, International Journal on Software Tools for Technology Transfer, STTT, Volume 19(4), 2017. Springer. DOI : 10.1007/s10009-016-0435-0.

2 Conférences Internationales avec Comité de Lecture

— **N. DAMOUCHE**. **Specification of Incremental Requirements Upstream of System Design**, 6^{th} International Conference on System Reliability and Safety, ICSRS, 2022.

— M. Cietto, **N. DAMOUCHE**, P. De Saqui-Sannes, O. Aïello, E. Razafimahazo and R. A. Vingerhoeds.**Modeling Inclusive Systems in SysML**. IEEE International Symposium on Systems Engineering (ISSE). 2022.

— P. De Saqui-Sannes, R. Vingerhoeds, **N. Damouche**, M. Cietto, O. Aiello, E. Razafimahazo. **Mind Maps Upstream SysML Diagrams**, 16^{th} International Conference on Systems, **SYSCON**. 2022.

— **N. DAMOUCHE** and M. MARTEL. **Mixed Precision Tuning with Salsa**, 3^{rd} International Conference on Pervasive and Embedded Computing and Communication Systems, PECCS, 2018.

— **N. DAMOUCHE** and M. MARTEL. **On the Impact of Numerical Accuracy Optimization on General Performances of Programs**, 5^{th} IEEE International Conference on Control, Decision and Information Technologie, CoDIT, 2018.

— **N. DAMOUCHE**, F. BENMOUHOUB and M. MARTEL. **Improving the Numerical Accuracy of High Performance Computing Programs by Process Specialization**, International Workshop on Trusted Numerical Computations, TNC, 2018.

— **N. DAMOUCHE**, M. MARTEL. **Salsa : An automatic tool improve the accuracy of programs**, 6th International Workshop on Automated Formal Methods, AFM, Kalpa Publications, 2017.

— **N. DAMOUCHE**, M. MARTEL and A. CHAPOUTOT. **Numerical Accuracy Improvement by Interprocedural Program Transformation**, 20th International Workshop on Software and Compilers for Embedded Systems, SCOPES, 2017.

— **N. DAMOUCHE**, M. MARTEL, P. PANCHEKHA, Ch. QIU, A. SANCHEZ-STERN and Z. TATLOCK. **Toward a Standard Benchmark Format and Suite for Floating-Point Analysis**, 9^{th} International Workshop on Numerical Software Verification, NSV, 2016. Vol 10152 for LNCS, Springer. DOI : 10.1007/978-3-319-54292-8 6.

— **N. DAMOUCHE**, M. MARTEL and A. CHAPOUTOT. **Data-Types Optimization for Floating-Point Formats by Program Transformation**, 3^{rd} IEEE International Conference on Control, Decision and Information Technologies, CoDIT, 2016. IEEE. DOI : 10.1109/CoDIT.2016.7593626.

— **N. DAMOUCHE**, M. MARTEL and A. CHAPOUTOT. **Numerically Accurate Code Generation**, Poster paper, 14^{th} IEEE/ACM International Symposium on Code Generation and Optimization, CGO, 2016. *ACM New York.*

— **N. DAMOUCHE**, M. MARTEL and A. CHAPOUTOT. **Impact of Accuracy Optimization on the Convergence of Numerical Iterative Methods**, 25^{th} International Symposium on Logic-Based Program Synthesis and Transformation, LOPSTR, 2015. Vol 9527 of LNCS. Springer. DOI : 10.1007/978-3-319-27436-2.

— **N. DAMOUCHE**, M. MARTEL and A. CHAPOUTOT. **Intra-Procedural Optimization of the Numerical Accuracy of Programs**, 20^{th} International Workshop on Formal Methods for Industrial Critical Systems, FMICS, 2015. Vol 9128 of LNCS. Springer.

— **N. DAMOUCHE**, M. MARTEL and A. CHAPOUTOT. **Transformation of a PID Controller for Numerical Accuracy**, 7^{th} International Workshop on Numerical Software Verification, NSV, 2014. Vol 317 of ENTCS. DOI : 10.1016/j.entcs.2015.10.006.

— **N. DAMOUCHE**, M. MARTEL and A. CHAPOUTOT. **Optimizing the Accuracy of a Rocket Trajectory Simulation by Program Transformation**, 12^{th} ACM International Conference on Computing Frontiers, CF, 2015. DOI : 10.1145/2742854.2742894.

3 Autres Publications

3.1 Actes de Conférences Internationales

— **N. DAMOUCHE**. Édition d'actes de conférences pour NSV'2018 avec Alexandre Chapoutot (ENSTA ParisTech, France) et Alessandro Pinto (United Technologies Research Cente, Berkeley, USA).
— **N. DAMOUCHE**. Édition d'actes de conférences pour TNC'2018 avec Matthieu Martel (Université de Perpignan, France) et Julien Alexandre-Dit-Sandretto (ENSTA ParisTech).

3.2 Manuscrit de Thèse

— **N. DAMOUCHE**. Improving the Numerical Accuracy of Floating-Point Programs with Automatic Code Transformation Methods.

3.3 Actes de Journées Nationales

— **N. DAMOUCHE**, X. THIRIOUX, M. MARTEL and H. BENMAGHNIA. **Dépliage de Boucles Versus Précision Numérique**, Actes des Journées nationales Approches Formelles dans l'Assistance au Développement de Logiciels, AFADL, 2019.
— **N. DAMOUCHE**, M. MARTEL and A. CHAPOUTOT. **Amélioration à la Compilation de la Précision de Programmes Numériques**, Actes des Journées nationales du Groupement de Recherche Génie de la Programmation et du Logiciel, GDR-GPL, 2016.

3.4 Poster

— **N. Damouche**, X. Thirioux. Parameterized Gauge Functions for Numerical Precision Tuning in Dataflow Lan-guages, FEANICSES : Jeune Chercheuse–Jeune Chercheur project, 19-21 Juin, Toulouse, France. 2019.
— **N. Damouche**, M. Martel. Numerically Accurate Code Generation, 14thIEEE/ACM International Symposium on Code Generation and Optimization, CGO. 2015.

3.5 Rapports Techniques

— Rapport sur l'état d'avancement de la coordination du projet Concorde. **N. Damouche**, R. Vingerhoeds, Th. Loquen. 2023.
— Comptes rendus des réunions de coordination du projet Concorde. **N. Damouche**, R. Vingerhoeds, Th. Loquen. 2023.
— Towards cheaper static WCET analysis : incremental building of a static analyzer. **N. Damouche**, E. Jenn, Th. Carles, H. Cassé, W.-T. Sun. 2020.
— Estimation WCET : Caractérisation PLB, GLB, PSPR. **N. Damouche**. 2019.

4 Développement de Logiciel

— **Salsa** - Réalisation de logiciel pour l'amélioration de la précision des calculs numériques de programmes informatiques basé sur les méthodes d'analyse statique par interprétation abstraite.