

Publications by Simon Bliudze

January 5, 2016

Most up-to-date list is available at <http://people.epfl.ch/simon.bliudze/publications>. The most important publications are marked with an asterisk “*” on the left of the publication number.

Journals

- [1] Borja Fernández Adiego, Dániel Darvas, Enrique Blanco Viñuela, Jean-Charles Tournier, Simon Bliudze, Jan Olaf Blech, and Víctor Manuel González Suárez. Applying model checking to industrial-sized PLC programs. *IEEE Transactions on Industrial Informatics*, 11(6):1400–1410, October 2015.
Impact Factor: 8.785.
- * [2] Eduard Baranov and Simon Bliudze. Offer semantics: Achieving compositionality, flattening and full expressiveness for the glue operators in BIP. *Science of Computer Programming*, 109(0):2–35, 2015. Selected Papers of the 6th Interaction and Concurrency Experience (ICE 2013).
Impact Factor: 0.715.
- * [3] Paul Attie, Eduard Baranov, Simon Bliudze, Mohamad Jaber, and Joseph Sifakis. A general framework for architecture composability. *Formal Aspects of Computing*, pages 1–25, 2015.
Impact Factor: 0.806.
- * [4] Simon Bliudze and Joseph Sifakis. Causal semantics for the algebra of connectors. *Formal Methods in System Design*, 36(2):167–194, June 2010.
19 citations by researchers other than my co-authors, according to Google Scholar.
Impact Factor: 0.875.
- * [5] Simon Bliudze and Daniel Krob. Modelling of complex systems: Systems as dataflow machines. *Fundamenta Informaticae*, 91:1–24, 2009.
25 citations by researchers other than my co-authors, according to Google Scholar.
Impact Factor: 0.717.
- * [6] Simon Bliudze and Joseph Sifakis. The algebra of connectors — Structuring interaction in BIP. *IEEE Transactions on Computers*, 57(10):1315–1330, 2008.
Over 60 citations by researchers other than my co-authors, according to Google Scholar.
Impact Factor: 1.659.
- [7] Simon Bliudze and Daniel Krob. A combinatorial approach to evaluation of reliability of the receiver output for BPSK modulation with spatial diversity. *Electronic Journal of Combinatorics*, 13(1):31 pages, January 2006. Paper #R2.
- [8] Simon Bliudze and Daniel Krob. Towards a functional formalism for modelling complex industrial systems. *ComplexUs, Special Issue: Complex Systems – European Conference – November 2005 – Selected Papers – Part 1*, 2(3–4):163–176, 2004/2005.

Conference proceedings

- [1] Qiang Wang, Simon Bliudze, Yan Lei, and Xiaoguang Mao. Automatic fault localization for BIP. In Xuandong Li, Zhiming Liu, and Wang Yi, editors, *1st Symposium on Dependable Software Engineering Theories, Tools and Applications*, volume 9409 of *Lecture Notes in Computer Science*, pages 277–283. Springer, October 2015.
- [2] Qiang Wang and Simon Bliudze. SeBip: a symbolic executor for BIP. In *20th International Conference on Engineering of Complex Computer Systems*, page 4 pages, 2015. To appear.
- [3] Qiang Wang and Simon Bliudze. Verification of component-based systems via predicate abstraction and simultaneous set reduction. In *10th International Symposium on Trustworthy Global Computing*, page 13 pages, 2015. To appear.
- [4] Joseph Sifakis, Saddek Bensalem, Simon Bliudze, and Marius Bozga. A theory agenda for component-based design. In Rocco De Nicola and Rolf Hennicker, editors, *Software, Services, and Systems*, volume 8950 of *Lecture Notes in Computer Science*, pages 409–439. Springer, 2015.
- [5] Anastasia Mavridou, Eduard Baranov, Simon Bliudze, and Joseph Sifakis. Configuration Logics: Modelling architecture styles. In *Formal Aspects of Component Software — 12th International Symposium, FACS 2015*, page 18 pages, 2015. To appear.
- [6] Kasper Dokter, Sung-Shik T. Q. Jongmans, Farhad Arbab, and Simon Bliudze. Relating BIP and Reo. In Sophia Knight, Ivan Lanese, Alberto Lluch-Lafuente, and Hugo Torres Vieira, editors, *Proceedings 8th Interaction and Concurrency Experience, ICE 2015, Grenoble, France, 4-5th June 2015.*, volume 189 of *EPTCS*, pages 3–20, 2015.
- [7] Simon Bliudze, Cimatti Alessandro, Jaber Mohamad, Mover Sergio, Roveri Marco, Saab Wajeb, and Qiang Wang. Formal verification of infinite-state BIP models. In Bernd Finkbeiner, Guguang Pu, and Lijun Zhang, editors, *13th International Symposium on Automated Technology for Verification and Analysis*, volume 9364 of *Lecture Notes in Computer Science*, pages 326–343. Springer, October 2015.
- [8] Mohamad Nouredine, Mohamad Jaber, Simon Bliudze, and Fadi A. Zaraket. Reduction and abstraction techniques for BIP. In Ivan Lanese and Eric Madelaine, editors, *Formal Aspects of Component Software - 11th International Symposium, FACS 2014, Bertinoro, Italy, September 10-12, 2014, Revised Selected Papers*, volume 8997 of *Lecture Notes in Computer Science*, pages 288–305. Springer, 2014.
- * [9] Simon Bliudze and Sébastien Furic. An operational semantics for hybrid systems involving behavioral abstraction. In *Proceedings of the 10th International Modelica Conference*, Linköping Electronic Conference Proceedings, pages 693–706, Linköping, 2014. Linköping University Electronic Press, Linköpings universitet.
- [10] Simon Bliudze, Joseph Sifakis, Marius Dorel Bozga, and Mohamad Jaber. Architecture internalisation in BIP. In *Proceedings of the 17th International ACM Sigsoft Symposium on Component-based Software Engineering*, CBSE '14, pages 169–178, New York, NY, USA, 2014. ACM.
- [11] Simon Bliudze, Anastasia Mavridou, Radoslaw Szymanek, and Alina Zolotukhina. Coordination of software components with BIP: Application to OSGi. In *Proceedings of the 6th International Workshop on Modeling in Software Engineering*, pages 25–30. ACM, 2014.
- [12] Paul Attie, Eduard Baranov, Simon Bliudze, Mohamad Jaber, and Joseph Sifakis. A general framework for architecture composability. In D. Giannakopoulou and G. Salaün, editors, *12th International Conference on Software Engineering and Formal Methods (SEFM 2014)*, number 8702 in LNCS, pages 128–143, Switzerland, 2014. Springer International Publishing.

- [13] Borja Fernandez Adiego, Enrique Blanco Vinuela, Jean-Charles Tournier, Victor M. Gonzalez Suarez, and Simon Bliudze. Model-based automated testing of critical PLC programs. In *Industrial Informatics (INDIN), 2013 11th IEEE International Conference on*, pages 722–727. IEEE, 2013.
- [14] Eduard Baranov and Simon Bliudze. Extended connectors: Structuring glue operators in BIP. In *ICE 2013*, volume 131 of *EPTCS*, pages 20–35, 2013.
- [15] Simon Bliudze, Xavier Fornari, and Mathieu Jan. From model-based to real-time execution of safety-critical applications: Coupling SCADE with OASIS. In *Embedded Real Time Software and Systems*, ERTS2, page 10 pages, February 2012.
- [16] Simon Bliudze. Towards a theory of glue. In *ICE 2012: Distributed coordination, execution models, and resilient interaction*, volume 104 of *EPTCS*, pages 48–66, December 2012.
- [17] Simon Bliudze and Joseph Sifakis. Synthesizing glue operators from glue constraints for the construction of component-based systems. In Sven Apel and Ethan Jackson, editors, *10th International Conference on Software Composition*, volume 6708 of *LNCS*, pages 51–67. Springer, 2011.
- [18] Simon Bliudze. Compositional timing analysis: power plant protection system case study. In *Proceedings of the 1st International Workshop on Worst-Case Traversal Time*, WCTT’11, pages 27–34, New York, NY, USA, November 2011. ACM.
- [19] Mohamad Jaber, Ananda Basu, and Simon Bliudze. Symbolic implementation of connectors in BIP. In *ICE 2010: Structured Interactions*, volume 12 of *EPTCS*, pages 41–55, September 2009.
- * [20] Simon Bliudze and Joseph Sifakis. A notion of glue expressiveness for component-based systems. In Franck van Breugel and Marsha Chechik, editors, *CONCUR 2008*, volume 5201 of *LNCS*, pages 508–522. Springer, 2008.
Over 60 citations by researchers other than my co-authors, according to Google Scholar.
- [21] Simon Bliudze and Joseph Sifakis. Causal semantics for the Algebra of Connectors (extended abstract). In Frank de Boer and Marcello Bonsangue, editors, *FMCO 2007*, number 5382 in *LNCS*, pages 179–199, Berlin Heidelberg, 2008. Springer-Verlag.
- * [22] Simon Bliudze and Joseph Sifakis. The Algebra of Connectors — Structuring interaction in BIP. In *Proceedings of the EMSOFT’07*, pages 11–20, Salzburg, Austria, October 2007. ACM SigBED.
Over 50 citations by researchers other than my co-authors, according to Google Scholar.
- [23] Simon Bliudze and Daniel Krob. Performance evaluation of demodulation with diversity — a combinatorial approach III: Threshold analysis. In Camil Demetrescu, Robert Sedgewick, and Roberto Tamassia, editors, *Proc. of the 7th Workshop on Algorithm Engineering and Experiments and the 2nd Workshop on Analytic Algorithmics and Combinatorics*, pages 195–205. SIAM, January 2005.
- [24] Simon Bliudze, Nicolas Billy, and Daniel Krob. On optimal Hybrid ARQ control schemes for HSDPA with 16QAM. In *Proc. of IEEE Int. Conf. on Wireless and Mobile Computing, Networking and Communications*, volume 1, pages 121–127, August 2005.

Invited presentations

- [1] Simon Bliudze and Sébastien Furic. On the soundness of behavioural abstraction in hybrid systems. Invited talk at the *2nd International Workshop on Simulation at the System Level*, October 2014.

PhD thesis

- [1] Simon Bliudze. *A Framework for Studying Complex Industrial Systems: An Example Based on the UMTS Infrastructure*. PhD thesis, École Polytechnique, 91128 Palaiseau cedex, France, June 2006.