

PUBLICATIONS of STÉPHANE LAFORTUNE
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Books

- B3 C. G. Cassandras and S. Lafortune, *Introduction to Discrete Event Systems - Second Edition*, Springer, 2008. ISBN 978-0-387-33332-8. (771+xxiii pages)
- B2 S. Lafortune, F. Lin, and D. Tilbury, Editors, *Proceedings of the 8th International Workshop on Discrete Event Systems - WODES'06*, July 10-12, 2006, Ann Arbor, Michigan, USA. IEEE.
- B1 C. G. Cassandras and S. Lafortune, *Introduction to Discrete Event Systems*, Kluwer Academic Publishers, 1999. ISBN 0-7923-8609-4. (823+xxii pages)

Articles in refereed publications (journals or transactions)

- J94 X. Yin and S. Lafortune, "On the Decidability and Complexity of Diagnosability for Labeled Petri Nets," *IEEE Transactions on Automatic Control*. In print.
- J93 X. Yin and S. Lafortune, "Synthesis of Maximally-Permissive Supervisors for the Range Control Problem," *IEEE Transactions on Automatic Control*. In print.
- J92 X. Yin and S. Lafortune, "A New Approach for the Verification of Infinite-Step and K-Step Opacity using Two-Way Observers," *Automatica*. Vol. 80, pp. 162-171, June 2017.
- J91 R. Ehlers, S. Lafortune, S. Tripakis, and M. Vardi, "Supervisory Control and Reactive Synthesis: A Comparative Introduction," *Discrete Event Dynamic Systems: Theory and Applications*. Vol. 27, No. 1, March 2017, pp. 1-44.
- J90 E. Dallal, A. Colombo, D. Del Vecchio, and S. Lafortune, "Supervisory Control for Collision Avoidance in Vehicular Networks Using Discrete Event Abstractions," *Discrete Event Dynamic Systems: Theory and Applications*. Vol. 27, No. 2, June 2017, pp. 209-260.
- J89 X. Yin and S. Lafortune, "Decentralized Supervisory Control with Intersection-Based Architecture," *IEEE Transactions on Automatic Control*. Vol. 61, No. 11, November 2016, pp. 3644-3650.
- J88 X. Yin and S. Lafortune, "A Uniform Approach for Synthesizing Property-Enforcing Supervisors for Partially-Observed Discrete-Event Systems," *IEEE Transactions on Automatic Control*. Vol. 61, No. 8, August 2016, pp. 2140-2154.
- J87 X. Yin and S. Lafortune, "Synthesis of Maximally Permissive Supervisors for Partially-Observed Discrete-Event Systems," *IEEE Transactions on Automatic Control*. Vol. 61, No. 5, May 2016, pp. 1239-1254.
- J86 Y.C. Wu and S. Lafortune, "Synthesis of Optimal Insertion Functions for Opacity Enforcement," *IEEE Transactions on Automatic Control*. Vol. 61, No. 3, March 2016, pp. 571-584.

- J85 J. Stanley, H. Liao, and S. Lafortune, "SAT-based Control of Concurrent Software for Deadlock Avoidance," *IEEE Transactions on Automatic Control*. Vol. 60, No. 12, December 2015, pp. 3269-3274.
- J84 Y. Wang, T.-S. Yoo, and S. Lafortune, "Erratum to: Diagnosis of discrete event systems using decentralized architectures," *Discrete Event Dynamic Systems: Theory and Applications*. Vol. 25, No. 4, December 2015, pp. 601-603.
- J83 X. Yin and S. Lafortune, "Codiagnosability and Coobservability under Dynamic Observations: Transformation and Verification," *Automatica*. Vol. 61, November 2015, pp. 241-252.
- J82 A. Ramirez-Trevino, M. Silva, and S. Lafortune, "Special issue on recent advances in control of discrete event systems," *Discrete Event Dynamic Systems: Theory and Applications*. Vol. 25, No. 1-2, June 2015, pp. 3-5.
- J81 X.-R. Cao and S. Lafortune, "Editorial: changes at J-DEDS," *Discrete Event Dynamic Systems: Theory and Applications*. Vol. 25, No. 1-2, June 2015, pp. 1-2.
- J80 P. N. Pena, H. J. Bravo, A. E. C. da Cunha, R. Malik, S. Lafortune, and J. E. R. Cury, "Verification of the Observer Property in Discrete Event Systems," *IEEE Transactions on Automatic Control*. Vol. 59, No. 8, August 2014, pp. 2176-2181.
- J79 Y.-C. Wu and S. Lafortune, "Synthesis of Insertion Functions for Enforcement of Opacity Security Properties," *Automatica*. Vol. 50, No. 5, May 2014, pp. 1336-1348.
- J78 E. Dallal and S. Lafortune, "On Most Permissive Observers in Dynamic Sensor Activation Problems," *IEEE Transactions on Automatic Control*. Vol. 59, No. 4, April 2014, pp. 966-981.
- J77 J. Zaytoon and S. Lafortune, "Overview of Fault Diagnosis Methods for Discrete Event Systems," *Annual Reviews in Control*. Vol. 37, No. 2, December 2013, pp. 308-320.
- J76 H. Liao, Y. Wang, J. Stanley, S. Lafortune, S. Reveliotis, T. Kelly, and S. Mahlke, "Eliminating Concurrency Bugs in Multithreaded Software: A New Approach Based on Discrete-Event Control," *IEEE Transactions on Control Systems Technology*. Vol. 21, No. 6, June 2013, pp. 2067-2082.
- J75 Y.C. Wu and S. Lafortune, "Comparative Analysis of Related Notions of Opacity in Centralized and Coordinated Architectures," *Discrete Event Dynamic Systems: Theory and Applications*. Vol. 23, No. 3, September 2013, pp. 307-339.
- J74 M.P. Cabasino, S. Lafortune, and C. Seatzu, "Optimal Sensor Selection for Ensuring Diagnosability in Labeled Petri Nets," *Automatica*. Vol. 49, No. 8, August 2013, pp. 2373-2383.
- J73 H. Liao, Y. Wang, H.K. Cho, J. Stanley, T. Kelly, S. Lafortune, S. Mahlke, and S. Reveliotis, "Concurrency Bugs in Multithreaded Software: Modeling and Analysis Using Petri Nets," *Discrete Event Dynamic Systems: Theory and Applications*, Vol. 23, No. 2, June 2013, pp. 157-195.
- J72 H. Liao, S. Lafortune, S. Reveliotis, Y. Wang, and S. Mahlke, "Optimal Liveness-Enforcing Control of a Class of Petri Nets Arising in Multithreaded Software," *IEEE Transactions on Automatic Control*. Vol. 58, No. 5, May 2013, pp. 1123-1138.

- J71 L.K. Carvalho, S.T.S. Lima, M.V. Moreira, J.C. Basilio, and S. Lafortune, “Robust diagnosis of discrete-event systems against permanent loss of observations,” *Automatica*. Vol. 49, No. 1, January 2013, pp. 223-231.
- J70 M.P. Cabasino, A. Giua, S. Lafortune, and C. Seatzu, “A New Approach for Diagnosability Analysis of Petri Nets using Verifier Nets,” *IEEE Transactions on Automatic Control*, Vol. 57, No. 12, December 2012, pp. 3104–3117.
- J69 J. Raisch, A. Giua, T. Moor, and S. Lafortune, “Special Issue on Recent Trends in Discrete Event Systems,” *Discrete Event Dynamic Systems: Theory and Applications*, Vol. 22, No. 4, December 2012, pp. 381-382. (Editorial accompanying special issue edited by the authors for this journal.)
- J68 J.C. Basilio, S.T.S. Lima, S. Lafortune, and M.V. Moreira, “Computation of Minimal Event Bases that Ensure Diagnosability,” *Discrete Event Dynamic Systems: Theory and Applications*, Vol. 22, No. 3, September 2012, pp. 249-292.
- J67 A. Nazeem, S.A. Reveliotis, Y. Wang, and S. Lafortune, “Designing compact and maximally permissive deadlock avoidance policies for complex resource allocation systems through classification theory: the linear case.” *IEEE Transactions on Automatic Control*, Vol. 56, No. 8, August 2011, pp. 1818-1833.
- J66 W. Wang, A. Girard, S. Lafortune, and F. Lin, “On Codiagnosability and Coobservability with Dynamic Observations.” *IEEE Transactions on Automatic Control*, Vol. 56, No. 7, July 2011, pp. 1551-1556.
- J65 A. Paoli, M. Sartini, and S. Lafortune, “Active fault tolerant control of discrete event systems using online diagnostics.” *Automatica*. Vol. 47, No. 4, April 2011, pages 639-649.
- J64 W. Wang, S. Lafortune, F. Lin, and A. Girard, “Minimization of Dynamic Sensor Activation in Discrete Event Systems for the Purpose of Control.” *IEEE Transactions on Automatic Control*, Vol. 55, No. 11, November 2010, pp. 2447-2461.
- J63 W. Wang, S. Lafortune, A. Girard, and F. Lin, “Optimal Sensor Activation for Diagnosing Discrete Event Systems.” *Automatica*, Vol. 46, No. 7, July 2010, pp. 1165–1175.
- J62 R. Hill, J. Cury, M. de Queiroz, D. Tilbury, and S. Lafortune, “Multiple-Level Hierarchical Interface-Based Supervisory Control.” *Automatica*, Vol. 46, No. 7, July 2010, pp. 1152-1164.
- J61 R. Hill, D. Tilbury, and S. Lafortune, “Modular Supervisory Control with Equivalence-Based Abstraction and Covering-Based Conflict Resolution.” *Discrete Event Dynamic Systems: Theory and Applications*, Vol. 20, No. 1, March 2010, pp. 138-185.
- J60 P. Pena, A. Cunha, J. Cury, and S. Lafortune, “Metodologia e Ferramenta de Apoio ao Teste de Não-Conflito no Controle Modular de Sistemas a Eventos Discretos.” *Revista Controle & Automação*, Vol. 21, No. 1, Jan-Feb. 2010, pp. 58-68.
- J59 T. Kelly, Y. Wang, S. Lafortune, S. Mahlke, “Eliminating Concurrency Bugs with Control Engineering.” *IEEE Computer*, Vol. 42, No. 12, December 2009, pp. 52-60.
- J58 P. Pena, J. Cury, and S. Lafortune, “Verification of Nonconflict of Supervisors Using Abstractions.” *IEEE Transactions on Automatic Control*. Vol. 54, No. 12, December 2009, pp. 2803–2815.

- J57 S. Genc and S. Lafortune, "Predictability of Event Occurrences in Partially-Observed Discrete-Event Systems," *Automatica*, Vol. 45, No. 2, February 2009, pp. 301–311.
- J56 W. Wang, S. Lafortune, and F. Lin, "Minimization of Communication of Event Occurrences in Acyclic Discrete Event Systems," *IEEE Transactions on Automatic Control*, Vol. 53, No. 9, October 2008, pp. 2197–2202.
- J55 W. Wang and S. Lafortune, "An Algorithm for Maximizing Covered Area," *International Journal of Control*, Vol. 81, No. 9, September 2008, pp. 1493- 1505.
- J54 W. Wang, S. Lafortune, and F. Lin, "On the Minimization of Communication in Networked Systems with a Central Station," *Discrete Event Dynamic Systems: Theory and Applications*, Vol. 18, No. 3, September 2008, pp. 415-443.
- J53 A. Paoli and S. Lafortune, "Diagnosability Analysis of a Class of Hierarchical State Machines," *Discrete Event Dynamic Systems: Theory and Applications*, Vol. 18, No. 3, September 2008, pp. 385-413.
- J52 S. Lafortune, F. Lin, and D. Tilbury, "Special Issue on WODES'06," *Discrete Event Dynamic Systems: Theory and Applications*, Vol. 17, No. 4, December 2007, pp. 423-424.
(Editorial accompanying special issue edited by the authors for this journal.)
- J51 W. Wang, S. Lafortune, and F. Lin, "An Algorithm for Calculating Indistinguishable States and Clusters in Finite-State Automata with Partially Observable Transitions," *Systems & Control Letters*, Vol. 56, No. 9-10, September-October 2007, pp. 656-661.
- J50 F. Lin, K. Rudie, and S. Lafortune, "Minimal Communication for Essential Transitions in a Distributed Discrete-Event System," *IEEE Transactions on Automatic Control*, Vol. 52, No. 8, August 2007, pp. 1495-1502.
- J49 Y. Wang, T.-S. Yoo, and S. Lafortune, "Diagnosis of Discrete Event Systems using Decentralized Architectures," *Discrete Event Dynamic Systems: Theory and Applications*, Vol. 17, No. 2, June 2007, pp. 233-263.
- J48 S. Genc and S. Lafortune, "Distributed Diagnosis of Place-Bordered Petri Nets," *IEEE Transactions on Automation Science and Engineering*, Vol. 4, No. 2, April 2007, pp. 206-219.
- J47 T.-S. Yoo and S. Lafortune, "Solvability of Centralized Supervisory Control under Partial Observation," *Discrete Event Dynamic Systems: Theory and Applications*, Vol. 16, No. 4, December 2006, pp. 527-553.
- J46 K. Rohloff and S. Lafortune, "The Verification and Control of Interacting Similar Discrete-Event Systems," *SIAM Journal on Control and Optimization*, Vol. 45, No. 2, pp. 634-667, 2006.
- J45 O. Contant, S. Lafortune, and D. Teneketzis, "Diagnosability of Discrete Event Systems with Modular Structure," *Discrete Event Dynamic Systems: Theory and Applications*, Vol. 16, No. 1, January 2006, pp. 9-37.
- J44 T.-S. Yoo and S. Lafortune, "Decentralized Supervisory Control with Conditional Decisions: Supervisor Synthesis," *IEEE Transactions on Automatic Control*, Vol. 50, No. 8, August 2005, pp. 1205-1211.

- J43 A. Paoli and S. Lafortune, "Safe Diagnosability for Fault Tolerant Supervision of Discrete Event Systems," *Automatica*, Vol. 41, August 2005, pp. 1335-1347.
- J42 K. Rohloff and S. Lafortune, "PSPACE-Completeness of Modular Supervisory Control Problems," *Discrete Event Dynamic Systems: Theory and Applications*, Vol. 15, No. 2, June 2005, pp. 145-167.
- J41 T.-S. Yoo and S. Lafortune, "Decentralized Supervisory Control with Conditional Decisions: Supervisor Existence," *IEEE Transactions on Automatic Control*. Vol. 49, No. 11, November 2004, pp. 1886-1904.
- J40 O. Contant, S. Lafortune, and D. Teneketzis, "Diagnosis of Intermittent Faults," *Discrete Event Dynamic Systems: Theory & Applications*, Vol. 14, No. 2, April 2004, pp. 171-202.
- J39 K. Rohloff, T.-S. Yoo, and S. Lafortune, "Deciding Coobservability is PSPACE-complete," *IEEE Transactions on Automatic Control*, Vol. 48, No. 11, November 2003, pp. 1995-1999.
- J38 R. Debouk, S. Lafortune, and D. Teneketzis, "On the Effect of Communication Delays in Failure Diagnosis of Decentralized Discrete Event Systems," *Discrete Event Dynamic Systems: Theory and Applications*, Vol. 13, No. 3, July 2003, pp. 263-289.
- J37 K. Rohloff and S. Lafortune, "On the Synthesis of Safe Control Policies in Decentralized Control of Discrete Event Systems," *IEEE Transactions on Automatic Control*, Vol. 48, No. 6, June 2003, pp. 1064-1068.
- J36 K. Rudie, S. Lafortune, and F. Lin, "Minimal Communication in a Distributed Discrete-Event System," *IEEE Transactions on Automatic Control*, Vol. 48, No. 6, June 2003, pp. 957-975.
- J35 H. Marchand, O. Boivineau, and S. Lafortune, "Optimal Control of a Class of Partially-Observed Discrete Event Systems," *Automatica*, vol. 38, no. 11, November 2002, pp. 1935-1943.
- J34 R. Debouk, S. Lafortune, and D. Teneketzis, "On an optimization problem in sensor selection," *Discrete Event Dynamic Systems: Theory and Applications*, Vol. 12, No. 4, October 2002, pp. 417-445.
- J33 T.-S. Yoo and S. Lafortune, "Polynomial-Time Verification of Diagnosability of Partially-Observed Discrete Event Systems," *IEEE Transactions on Automatic Control*. Vol. 47, No. 9, September 2002, pp. 1491-1495.
- J32 T.-S. Yoo and S. Lafortune, "NP-Completeness of Sensor Selection Problems Arising in Partially-Observed Discrete Event Systems," *IEEE Transactions on Automatic Control*. Vol. 47, No. 9, September 2002, pp. 1495-1499.
- J31 W. Stark, H. Wang, A. Worthen, S. Lafortune, and D. Teneketzis, "Low-Energy Wireless Communication Network Design," *IEEE Wireless Communications*, Vol. 9, No. 4, August 2002, pp. 60-72.
- J30 T.-S. Yoo and S. Lafortune, "A General Architecture for Decentralized Supervisory Control of Discrete-Event Systems," *Discrete Event Dynamic Systems: Theory & Applications*, Vol. 12, No. 3, July 2002, pp. 335-377.
- J29 H. Marchand, O. Boivineau, and S. Lafortune, "On the Synthesis of Optimal Schedulers in Discrete Event Control Problems with Multiple Goals," *SIAM Journal on Control and Optimization*, Vol. 39, No. 2, 2001, pp. 512-532.

- J28 G. Barrett and S. Lafortune, "Decentralized supervisory control with communicating controllers", *IEEE Transactions on Automatic Control*, vol. 45, no. 9, September 2000, pages 1620-1638.
- J27 Y.-L. Chen, S. Lafortune, and F. Lin, "Design of nonblocking modular supervisors using event priority functions," *IEEE Transactions on Automatic Control*, vol. 45, no. 3, March 2000, pages 432-452.
- J26 Y.L. Chen, S. Lafortune, and F. Lin, "Incremental Model Evolution and Reusability of Supervisors for Discrete Event Systems," *Automatica*, vol. 36, no. 2, February 2000, pp. 243-259.
- J25 R. Debouk, S. Lafortune, and D. Teneketzis, "Coordinated Decentralized Protocols for Failure Diagnosis of Discrete Event Systems," *Discrete Event Dynamic Systems: Theory and Applications*, vol. 10, no. 1/2, January 2000, pp. 33-86.
- J24 I. Porche and S. Lafortune, "Adaptive look-ahead optimization of traffic signals." *Intelligent Transportation Systems Journal*, vol. 4, no. 3-4, June 1999, pp. 209-254.
- J23 G. Barrett and S. Lafortune, "Bisimulation, the supervisory control problem and strong model matching of finite state machines." *Discrete Event Dynamic Systems: Theory and Applications*, vol. 8, no. 4, December 1998, pp. 377-429.
- J22 M. Sampath, S. Lafortune, and D. Teneketzis, "Active diagnosis of discrete event systems." *IEEE Transactions on Automatic Control*, vol. 43, no. 7, July 1998, pp. 908-929.
- J21 R. Sengupta and S. Lafortune, "An optimal control theory for discrete event systems," *SIAM Journal on Control and Optimization*, vol. 36, no. 2, March 1998, pp. 488-541.
- J20 N. Ben Hadj-Alouane, S. Lafortune, and F. Lin, "Centralized and distributed algorithms for on-line synthesis of maximal control policies under partial observation," *Discrete Event Dynamic Systems: Theory and Applications*, vol. 6, no. 4, October 1996, pp. 379-427.
- J19 M. Sampath, R. Sengupta, S. Lafortune, K. Sinnamohideen, and D. Teneketzis, "Failure diagnosis using discrete event models," *IEEE Transactions on Control Systems Technology*, vol. 4, no. 2, pp. 105-124, March 1996.
- J18 M. Sampath, R. Sengupta, S. Lafortune, K. Sinnamohideen, and D. Teneketzis, "Diagnosability of discrete event systems," *IEEE Transactions on Automatic Control*, vol. 40, no. 9, pp. 1555-1575, September 1995.
- J17 B. A. Rashap, M. E. Elta, H. Etamad, J. P. Fournier, J. S. Freudenberg, M. D. Giles, J. W. Grizzle, P. T. Kabamba, P. P. Khargonekar, S. Lafortune, J. R. Moyne, D. Teneketzis, and F. L. Terry, Jr., "Control of semiconductor manufacturing equipment: Real-time feedback control of a reactive ion etcher," *IEEE Transactions on Semiconductor Manufacturing*, vol. 8, no. 3, August 1995, pp. 286-297.
- J16 N. Ben Hadj-Alouane, S. Lafortune, and F. Lin, "Variable lookahead supervisory control with state information," *IEEE Transactions on Automatic Control*, vol. 39, no. 12, December 1994, pp. 2398-2410.
- J15 S. L. Chung, S. Lafortune, and F. Lin, "Supervisory control using variable lookahead policies," *Discrete Event Systems: Theory and Applications*, vol. 4, no. 3, July 1994, pp. 237-268.

- J14 S. Lafortune, R. Sengupta, D. E. Kaufman and R. L. Smith, "Dynamic system-optimal traffic assignment using a state space model," *Transportation Research – B*, vol. 27B, no. 6, December 1993, pp. 451–472.
- J13 S. L. Chung, S. Lafortune and F. Lin, "Recursive computation of limited lookahead supervisory controls for discrete event systems," *Discrete Event Dynamic Systems: Theory and Applications*, vol. 3, no. 1, March 1993, pp. 71-100.
- J12 S. L. Chung, S. Lafortune and F. Lin, "Limited lookahead policies in supervisory control of discrete event systems," *IEEE Transactions on Automatic Control*, vol. 37, no. 12, December 1992, pp. 1921-1935.
- J11 R. Sengupta and S. Lafortune, "A graph-theoretic optimal control problem for terminating discrete event processes," *Discrete Event Dynamic Systems: Theory and Applications*, vol. 2, no. 2, pp. 139-172, November 1992.
- J10 E. Chen and S. Lafortune, "On nonconflicting languages that arise in supervisory control of discrete event systems," *Systems & Control Letters*, vol. 17, no. 2, pp. 105-113, August 1991.
- J9 E. Chen and S. Lafortune, "Dealing with blocking in supervisory control of discrete event systems," *IEEE Transactions on Automatic Control*, vol. 36, no. 6, pp. 724–735, June 1991.
- J8 S. Lafortune and F. Lin, "On tolerable and desirable behaviors in supervisory control of discrete event systems," *Discrete Event Dynamic Systems: Theory and Applications*, vol. 1, no. 1, pp. 61–92, May 1991.
- J7 S. Lafortune and H. Yoo, "Some results on Petri net languages," *IEEE Transactions on Automatic Control*, vol. 35, no. 4, pp. 482–485, April 1990.
- J6 S. Lafortune and E. Chen, "The infimal closed controllable superlanguage and its application in supervisory control," *IEEE Transactions on Automatic Control*, vol. 35, no. 4, pp. 398–405, April 1990.
- J5 H. Yoo and S. Lafortune, "An intelligent search method for query optimization by semijoins," *IEEE Transactions on Knowledge and Data Engineering*, vol. 1, no. 2, pp. 226–237, June 1989.
- J4 J. T. Park, T. J. Teorey and S. Lafortune, "A knowledge-based approach to multiple query processing," *Data & Knowledge Engineering*, vol. 3, pp. 261-284, February 1989.
- J3 S. Lafortune, "Modeling and analysis of transaction execution in database systems," *IEEE Transactions on Automatic Control*, vol. 33, no. 5, pp. 439–447, May 1988.
- J2 S. Lafortune and E. Wong, "A state transition model for distributed query processing," *ACM Transactions on Database Systems*, vol. 11, no. 3, pp. 294–322, September 1986.
- J1 P. E. Caines and S. Lafortune, "Adaptive control with recursive identification for stochastic linear systems," *IEEE Transactions on Automatic Control*, vol. 29, no. 4, pp. 312–321, April 1984.

Chapters in Books

- BC13 S. Lafortune, “Diagnosis of Discrete Event Systems,” in *Encyclopedia of Systems & Control*, J. Bailieul and T. Samad (Eds.), Springer. 2015.
- BC12 S. Lafortune, R. Hill, and A. Paoli, “Fault diagnosis of manufacturing systems using finite state automata,” in *Formal Methods in Manufacturing*, J. Campos, C. Seatzu, and X. Xie, Eds, Series on Industrial Information Technology, CRC Press/Taylor and Francis. Chapter 21, pp. 601-626. 2014.
- BC11 S. Lafortune, “Discrete Event Systems: Untimed Models and their Analysis,” in *Encyclopedia of Computer Science & Engineering*, B.W. Wah, Ed., Vol. 2, pp. 967-975, Wiley. Posted 13 June 2008. Published January 2009. DOI:10.1002/9780470050118.ecse113.
- BC10 S. Lafortune, “On Decentralized and Distributed Control of Partially-Observed Discrete Event Systems,” in “Advances in Control Theory and Applications”, C. Bonivento, A. Isidori, L. Marconi, and C. Rossi, Eds., *Lecture Notes in Control and Information Sciences*, Vol. 353, Springer, 2007, pp. 171-184.
- BC9 S. Lafortune, “Supervisory Control of Discrete Event Systems,” in “Control Systems, Robotics and Automation,” edited by H. Unbehauen, in *Encyclopedia of Life Support Systems (EOLSS)*, developed under the auspices of the UNESCO, Eolss Publishers, Oxford, UK, 2004, [<http://www.eolss.net>].
- BC8 S. Lafortune, “Models for Discrete Event Systems,” in “Control Systems, Robotics and Automation,” edited by H. Unbehauen, in *Encyclopedia of Life Support Systems (EOLSS)*, developed under the auspices of the UNESCO, Eolss Publishers, Oxford, UK, 2004, [<http://www.eolss.net>].
- BC7 S. Lafortune, T.-S. Yoo, and K. Rohloff, “Recent Advances on the Control of Partially-Observed Discrete-Event Systems,” in *Synthesis and Control of Discrete Event Systems*, B. Caillaud, X. Xie, P. Darondeau, and L. Lavagno, Eds., Kluwer Academic Press, 2002.
- BC6 C. G. Cassandras and S. Lafortune, “Discrete Event Systems: The State of the Art and New Directions,” Chapter 1 of *Applied and Computational Control, Signals, and Circuits, Volume 1*, B. N. Datta (Ed.), Birkhäuser Boston, 1999, pp. 1–65.
- BC5 C. G. Cassandras, S. Lafortune, and G. J. Olsder, “Introduction to the modelling, control and optimization of discrete event systems,” in *Trends in Control – A European Perspective*, A. Isidori, Editor, Springer, 1995, pp. 217–291. (Invited paper.)
- BC4 S. L. Chung, S. Lafortune and F. Lin, “Supervisory control with variable lookahead policies: Illustrative example,” in *Discrete Event Systems: Modeling and Control*, S. Balemi, P. Kozák, and R. Smedinga, Editors, Birkhäuser Verlag Basel, Switzerland, 1993, pp. 207-214.
- BC3 R. Sengupta and S. Lafortune, “Extensions to the theory of optimal control of discrete event systems,” in *Discrete Event Systems: Modeling and Control*, S. Balemi, P. Kozák, and R. Smedinga, Editors, Birkhäuser Verlag Basel, Switzerland, 1993, pp. 153-160.
- BC2 S. Lafortune and E. Chen, “On controllable languages in supervisory control of discrete event systems,” in *Realization and Modelling in System Theory*, M.A. Kaashoek, J. H. van Schuppen and A.C.M. Ran, Editors, pp. 541–548, Birkhäuser Boston Publishers, 1990.
- BC1 S. Lafortune, “On transaction execution in database systems,” in *Analysis and Control of Nonlinear Systems*, C. I. Byrnes, C. F. Martin and R. E. Saeks, Editors, pp. 331-336, Elsevier Science Publishers B. V. (North-Holland), 1988.

Articles in refereed conference or symposium proceedings (includes invited papers)

- C146 S. Lafortune and F. Lin, “From Diagnosability to Opacity: A Brief History of Diagnosability or Lack Thereof,” in *Proceedings of the 20th IFAC World Congress*, July 2017.
- C145 X. Yin, M. Morrison, S. Sheng, and S. Lafortune, “DPO-SYNT: Discrete Control Synthesis for Partially-Observed Systems,” in *Proceedings of the 20th IFAC World Congress*, July 2017.
- C144 R.C. Hill and S. Lafortune, “Scaling the Formal Synthesis of Supervisory Control Software for Multiple Robot Systems,” in *Proceedings of the 2017 American Control Conference*.
- C143 X. Yin and S. Lafortune, “On the Maximally-Permissive Range Control Problem in Partially-Observed Discrete Event Systems,” in *Proceedings of the 55th IEEE Conference on Decision and Control*, December 2016.
- C142 R. Hill and S. Lafortune, “Hierarchical Planning within a Supervisory Control Context,” in *Proceedings of the 55th IEEE Conference on Decision and Control*, December 2016.
- C141 Y.-C. Wu, G. Lederman, and S. Lafortune, “Enhancing opacity of stochastic discrete event systems using insertion functions,” in *Proceedings of the 2016 American Control Conference*, July 2016, pp. 2053–2060.
- C140 Y.-C. Wu, V. Raman, S. Lafortune, and S.A. Seshia, “Obfuscator Synthesis for Privacy and Utility,” in *Proceedings of the 8th NASA Formal Methods Symposium*, Lecture Notes in Computer Science, Vol. 9690, Springer, June 2016, pp. 133-149.
- C139 X. Yin and S. Lafortune, “On Two-Way Observer and Its Application to the Verification of Infinite-Step and K-Step Opacity,” in *Proceedings of the 13th International Workshop on Discrete Event Systems*, June 2016.
- C138 X. Yin and S. Lafortune, “On Maximal Permissiveness in Partially-Observed Discrete Event Systems: Verification and Synthesis,” in *Proceedings of the 13th International Workshop on Discrete Event Systems*, June 2016.
- C137 L.K. Carvalho, Y.-C. Wu, R.H. Kwong, and S. Lafortune, “Detection and Prevention of Actuator Enablement Attacks in Supervisory Control Systems,” in *Proceedings of the 13th International Workshop on Discrete Event Systems*, June 2016.
- C136 Y.-C. Wu and S. Lafortune, “Synthesis of Opacity-Enforcing Insertion Functions That Can Be Publicly Known,” in *Proceedings of the 54th IEEE Conference on Decision and Control*, pp. 3506 - 3513, December 2015.
- C135 X. Yin and S. Lafortune, “Minimization of Sensor Activation in Decentralized Fault Diagnosis of Discrete Event Systems,” in *Proceedings of the 54th IEEE Conference on Decision and Control*, December 2015.
- C134 X. Yin and S. Lafortune, “A General Approach for Solving Dynamic Sensor Activation Problems for a Class of Properties,” in *Proceedings of the 54th IEEE Conference on Decision and Control*, December 2015.

- C133 X. Yin and S. Lafortune, “On the Relationship between Codiagnosability and Coobservability under Dynamic Observations,” in *Proceedings of the 2015 American Control Conference*, July 2015, pp. 390-395.
- C132 X. Yin and S. Lafortune, “A New Approach for Synthesizing Opacity-Enforcing Supervisors for Partially-Observed Discrete-Event Systems,” in *Proceedings of the 2015 American Control Conference*, July 2015, pp. 377-383.
- C131 X. Yin and S. Lafortune, “Synthesis of Maximally Permissive Non-blocking Supervisors for Partially Observed Discrete Event Systems,” in *Proceedings of the 53rd IEEE Conference on Decision and Control*, December 2014, pp. 5156–5162.
- C130 A. Butez, S. Lafortune, and Y. Wang, “State-Partition-Based Control of Discrete Event Systems for Enforcement of Regular Language Specifications,” in *Proceedings of the 19th IFAC World Congress*, August 2014. (8 pages)
- C129 X. Yin and S. Lafortune, “A General Approach for Synthesis of Supervisors for Partially-Observed Discrete-Event Systems,” in *Proceedings of the 19th IFAC World Congress*, August 2014. (7 pages)
- C128 R. Ehlers, S. Lafortune, S. Tripakis, and M. Vardi, “Bridging the Gap between Supervisory Control and Reactive Synthesis: Case of Full Observation and Centralized Control,” in *Proceedings of the 12th International Workshop on Discrete Event Systems*, May 2014. (6 pages)
- C127 Y.-C. Wu, K.A. Sankararaman, and S. Lafortune, “Ensuring Privacy in Location-Based Services: An Approach Based on Opacity Enforcement,” in *Proceedings of the 12th International Workshop on Discrete Event Systems*, May 2014. (6 pages)
- C126 E. Dallal, A. Colombo, D. Del Vecchio, and S. Lafortune, “Supervisory Control for Collision Avoidance in Vehicular Networks with Imperfect Measurements,” in *Proceedings of the 52nd IEEE Conference on Decision and Control*, December 2013, pp. 6298-6303.
- C125 S. Lafortune, Y. Wang, S. Reveliotis, “Eliminating Concurrency Bugs in Multithreaded Software: An Approach Based on Control of Petri Nets,” in *Proceedings of the 34th International Conference on Application and Theory of Petri Nets and Concurrency*, Lecture Notes in Computer Science, Vol. 7927, Springer, 2013, pp. 21-28.
- C124 E. Dallal, A. Colombo, D. Del Vecchio, and S. Lafortune, “Supervisory Control for Collision Avoidance in Vehicular Networks Using Discrete Event Abstractions,” in *Proceedings of the 2013 American Control Conference*, June 2013. (7 pages)
- C123 H.K. Cho, Y. Wang, H. Liao, T. Kelly, S. Lafortune, and S. Mahlke, “Practical Lock/Unlock Pairing for Concurrent Programs,” in *Proceedings of the 2013 International Symposium on Code Generation and Optimization (CGO’13)*, February 2013. (12 pages)
- C122 Y.-C. Wu and S. Lafortune, “Enforcement of Opacity Properties Using Insertion Functions,” in *Proceedings of the 51st IEEE Conference on Decision and Control*, December 2012, pp. 6722-6728.
- C121 Y. Wang, P. Liu, T. Kelly, S. Lafortune, S. Reveliotis, and C. Zhang, “On Atomicity Enforcement in Concurrent Software via Discrete Event Systems Theory,” in *Proceedings of the 51st IEEE Conference on Decision and Control*, December 2012, pp. 7230–7237.

- C120 Y. Wang, J. Stanley, and S. Lafortune, “Explicit Storage and Analysis of Billions of States using Commodity Computers,” in *Proceedings of the 11th International Workshop on Discrete Event Systems*, October 2012. (8 pages)
- C119 M. P. Cabasino, S. Lafortune, and C. Seatzu, “Optimal Sensor Selection for Ensuring Diagnosability in Labeled Bounded Petri Nets,” in *Proceedings of the 11th International Workshop on Discrete Event Systems*, October 2012. (6 pages)
- C118 T. Moor, C. Baier, T.-S. Yoo, F. Lin, and S. Lafortune, “On the Computation of Supremal Sublanguages Relevant to Supervisory Control,” in *Proceedings of the 11th International Workshop on Discrete Event Systems*, October 2012. (6 pages)
- C117 E. Dallal and S. Lafortune, “A Framework for Optimization of Sensor Activation using Most Permissive Observers,” in *Proceedings of the 50th IEEE Conference on Decision and Control and European Control Conference*, December 2011, pp. 2711-2717.
- C116 H. Liao, J. Stanley, Y. Wang, S. Lafortune, S. Reveliotis, and S. Mahlke, “Deadlock-Avoidance Control of Multithreaded Software: An Efficient Siphon-based Algorithm for Gadara Petri Nets,” in *Proceedings of the 50th IEEE Conference on Decision and Control and European Control Conference*, December 2011, pp. 2711-2717.
- C115 H. Liao, H. Zhou, and S. Lafortune, “Simulation Analysis of Multithreaded Programs under Deadlock-Avoidance Control,” in *Proceedings of the 2011 Winter Simulation Conference*, December 2011. (12 pages)
- C114 E. Dallal and S. Lafortune, “Efficient Computation of Most Permissive Observers in Dynamic Sensor Activation Problems,” Invited paper and presentation at the *Second International Workshop on Logical Aspects of Fault-Tolerance (LAFT)*, held in conjunction with the *26th Annual Symposium on Logic in Computer Science (LICS 2011)*, Toronto, Canada, June 2011.
- C113 H. Liao, S. Lafortune, S.A. Reveliotis, Y. Wang, and S. Mahlke, “Synthesis of Maximally-Permissive Liveness-Enforcing Control Policies for Gadara Petri Nets,” in *Proceedings of the 49th IEEE Conference on Decision and Control*, December 2010, pp. 2797-2804.
- C112 E. Dallal and S. Lafortune, “On Most Permissive Observers in Dynamic Sensor Optimization Problems for Discrete Event Systems,” in *Proceedings of the 48th Annual Allerton Conference on Communication, Control, and Computing*, September 2010, pp. 318-324.
- C111 S. Lima, J. Basilio, S. Lafortune, and M. Moreira, “Diagnose Centralizada de Falhas de Sistemas a Eventos Discretos Robusta à Perda Permanente de Sensores,” in *Proceedings of the 18th Brazilian Conference on Automation (CBA 2010)*, September 2010. (8 pages)
- C110 S. Lima, J. Basilio, S. Lafortune, and M. Moreira, “Bases Mínimas Para a Diagnose de Falhas de Sistemas a Eventos Discretos. Parte II: Algoritmo de Busca,” in *Proceedings of the 18th Brazilian Conference on Automation (CBA 2010)*, September 2010. (8 pages)
- C109 S. Lima, J. Basilio, S. Lafortune, and M. Moreira, “Bases Mínimas Para a Diagnose de Falhas de Sistemas a Eventos Discretos. Parte I: Eventos Elementares Para a Diagnose e Trajetórias Primas,” in *Proceedings of the 18th Brazilian Conference on Automation (CBA 2010)*, September 2010. (8 pages)

- C108 M. Sartini, A. Paoli, R. Hill, and S. Lafortune, “A methodology for modular model-building in discrete automation,” in *Proceedings of the 15th IEEE International Conference on Emerging Technologies and Factory Automation – ETFA’2010*, September 2010. (8 pages)
- C107 P. Pena, J. Cury, R. Malik, and S. Lafortune, “Efficient Computation of Observer Projections using OP-Verifiers,” in *Proceedings of the 10th International Workshop on Discrete Event Systems*, August 2010. (8 pages)
- C106 S. Lima, J. Basilio, S. Lafortune, and M. Moreira, “Robust diagnosis of discrete-event systems subject to permanent sensor failures,” in *Proceedings of the 10th International Workshop on Discrete Event Systems*, August 2010. (6 pages)
- C105 A. Nazeem, S. Reveliotis, Y. Wang, and S. Lafortune. “Optimal deadlock avoidance for complex resource allocation systems through classification theory,” in *Proceedings of the 10th International Workshop on Discrete Event Systems*, August 2010. (8 pages)
- C104 Y. Wang, H.K. Cho, H. Liao, A. Nazeem, T. Kelly, S. Lafortune, S. Mahlke, and S. Reveliotis, “Supervisory Control of Software Execution for Failure Avoidance: Experience from the Gadara Project,” in *Proceedings of the 10th International Workshop on Discrete Event Systems*, August 2010. (8 pages)
- C103 W. Wang, S. Lafortune, F. Lin, and A. Girard, “An online algorithm for minimal sensor activation in discrete event systems,” in *Proceedings of the 48th IEEE Conference on Decision and Control*, December 2009, pp. 2242–2247.
- C102 M.P. Cabasino, A. Giua, S. Lafortune, and C. Seatzu, “Diagnosability analysis of unbounded Petri nets,” in *Proceedings of the 48th IEEE Conference on Decision and Control*, December 2009, pp. 1267–1272.
- C101 Y. Wang, H. Liao, S. Reveliotis, T. Kelly, S. Mahlke, and S. Lafortune, “Gadara Nets: Modeling and Analyzing Lock Allocation for Deadlock Avoidance in Multithreaded Software,” in *Proceedings of the 48th IEEE Conference on Decision and Control*, December 2009, pp. 4971 - 4976.
- C100 Y. Wang, H. Liao, A. Nazeem, S. Reveliotis, T. Kelly, S. Mahlke, and S. Lafortune, “Maximally Permissive Deadlock Avoidance for Multithreaded Computer Programs,” in *Proceedings of the 2009 IEEE Conference on Automation Science and Engineering*, August 2009, pp. 37-41. (Extended abstract)
- C99 W. Wang, A. Girard, S. Lafortune, and F. Lin, “The Verification of Codiagnosability in the Case of Dynamic Observations,” in *Proceedings of the 2009 European Control Conference*, August 2009, pp. 2578-2583.
- C98 W. Wang, S. Lafortune, A. Girard, and F. Lin, “Dynamic Sensor Activation for Event Diagnosis,” in *Proceedings of the 2009 American Control Conference*, June 2009, pp. 4753-4758.
- C97 J. C. Basilio and S. Lafortune, “Robust Codiagnosability of Discrete Event Systems,” in *Proceedings of the 2009 American Control Conference*, June 2009, pp. 2202-2209.
- C96 Y. Wang, S. Lafortune, T. Kelly, M. Kudlur, and S. Mahlke, “The Theory of Deadlock Avoidance via Discrete Control,” in *Proceedings of the 36th Annual ACM SIGPLAN – SIGACT Symposium on Principles of Programming Languages (POPL’09)*, January 2009, pp. 252–276.

- C95 Y. Wang, T. Kelly, M. Kudlur, S. Lafortune, and S. Mahlke, “Gadara: Dynamic Deadlock Avoidance for Multithreaded Programs,” in *Proceedings of the 8th USENIX Symposium on Operating Systems Design and Implementation (OSDI’08)*, December 2008, pp. 281–294.
- C94 W. Wang, S. Lafortune, and F. Lin, “Optimal Sensor Activation in Controlled Discrete Event Systems,” in *Proceedings of the 47th IEEE Conference on Decision and Control*, December 2008, pp. 877-882.
- C93 P.N. Pena, A.E.C. Cunha, J.E.R. Cury, and S. Lafortune, “Teste de Não-conflito de Supervisores Modulares Usando o OP-Verificador,” in *Proceedings of the 2008 Brazilian Conference on Automation (CBA 2008)*, September 2008. (6 pages)
- C92 H. Marchand, T. Jéron, S. Genc, and S. Lafortune, “Predictability of Sequence Patterns in Discrete Event Systems,” in *Proceedings of the 17th IFAC World Congress*, Seoul, Korea, 2008. (6 pages)
- C91 A. Paoli, M. Sartini, and S. Lafortune, “A Fault Tolerant Architecture for Supervisory Control of Discrete Event Systems,” in *Proceedings of the 17th IFAC World Congress*, Seoul, Korea, 2008. (6 pages)
- C90 R. Hill, D. Tilbury, and S. Lafortune, “Modular Supervisory Control with Equivalence-Based Conflict Resolution,” in *Proceeding of the 2008 American Control Conference*, June 2008. (8 pages)
- C89 P. Pena, J. Cury, and S. Lafortune, “Polynomial-Time Verification of the Observer Property in Abstractions,” in *Proceeding of the 2008 American Control Conference*, June 2008. (6 pages)
- C88 P.N. Pena, A.E.C. Cunha, J.E.R. Cury, and S. Lafortune, “New Results on the Nonconflict Test of Modular Supervisors,” in *Proceeding of the 9th International Workshop on Discrete Event Systems*, May 2008. (6 pages)
- C87 R. Hill, D.M. Tilbury, and S. Lafortune “Covering-Based Supervisory Control of Partially Observed Discrete Event Systems for State Avoidance,” in *Proceeding of the 9th International Workshop on Discrete Event Systems*, May 2008. (6 pages)
- C86 Y. Wang, T. Kelly, M. Kudlur, S. Mahlke, and S. Lafortune, “The Application of Supervisory Control to Deadlock Avoidance in Concurrent Software,” in *Proceeding of the 9th International Workshop on Discrete Event Systems*, May 2008, pp. 287-292.
- C85 W. Wang, S. Lafortune, and F. Lin, “Minimization of Communication in Distributed Discrete Event Systems,” in *Proceedings of the 2007 European Control Conference*, July 2007. (8 pages)
- C84 Y. Wang, T. Kelly, and S. Lafortune, “Discrete Control for Safe Execution of IT Automation Workflows,” in *Proceedings of the European Conference on Computer Systems (EuroSys’07)*, March 2007. (10 pages)
- C83 Y. Wang, T. Kelly, and S. Lafortune, “Discrete Control for Dependable IT Automation,” in *Proceedings of the Second Workshop on Hot Topics in System Dependability (HotDep’06)*, November 2006. (2 pages)
- C82 W. Wang, S. Lafortune, and F. Lin, “A Polynomial Algorithm for Minimizing Communication in a Distributed Discrete Event System with a Central Station,” in *Proceedings of the 45th IEEE Conference on Decision and Control*, December 2006. (7 pages)

- C81 S. Genc and S. Lafortune, "Diagnosis of Patterns in Partially-Observed Discrete-Event Systems," in *Proceedings of the 45th IEEE Conference on Decision and Control*, December 2006. (7 pages)
- C80 P. Pena, J. Cury, and S. Lafortune, "Detecção de Conflito na Síntese Modular de Supervisores: Uma Abordagem Baseada em Abstrações," in *Proceedings of the IFAC XVI Brazilian Automation Conference*, Salvador, Bahia, Brazil, October 2006, pp. 977-982.
- C79 P. Pena, J. Cury, and S. Lafortune, "New Results on Testing Modularity of Local Supervisors using Abstractions," in *Proceedings of the 11th IEEE International Conference on Emerging Technologies and Factory Automation*, Prague, Czech Republic, September 2006, pp. 950-956.
- C78 A. Paoli and S. Lafortune, "A New Algorithm for Diagnosability Analysis of a Class of Hierarchical State Machines," in *Proceedings of the 2006 International Symposium on Nonlinear Theory and its Applications - NOLTA2006*. Bologna, Italy, September 2006. (4 pages)
- C77 A. Paoli and S. Lafortune, "On the Diagnosability of a Class of Hierarchical State Machines," in *Proceedings of the 6th IFAC Symposium on Fault Detection, Supervision and Safety of Technical Processes - SAFEPROCESS'06*, Beijing, China, August 2006. (6 pages)
- C76 S. Genc and S. Lafortune, "Predictability in Discrete-Event Systems under Partial Observation," in *Proceedings of the 6th IFAC Symposium on Fault Detection, Supervision and Safety of Technical Processes - SAFEPROCESS'06*, Beijing, China, August 2006. (6 pages)
- C75 P. Pena, J. Cury, and S. Lafortune, "Testing Modularity of Local Supervisors: An Approach Based on Abstractions," in *Proceedings of the 8th International Workshop on Discrete Event Systems*, Ann Arbor, Michigan, USA, July 2006, pp. 107-112.
- C74 L. Ricker, S. Lafortune, and S. Genc, "DESUMA: A Tool Integrating GIDDES and UMDDES," in *Proceedings of the 8th International Workshop on Discrete Event Systems*, Ann Arbor, Michigan, USA, July 2006, pp. 392-393.
- C73 Y. Wang, S. Lafortune, and T.-S. Yoo, "Decentralized Diagnosis of Discrete Event Systems using Unconditional and Conditional Decisions," in *Proceedings of the 44th IEEE Conference on Decision and Control*, December 2005, pp. 6298-6304.
- C72 S. Lafortune, Y. Wang, and T.-S. Yoo, "Diagnostic décentralisé des systèmes à événements discrets," in *Compte-rendu du Colloque International sur la Modélisation des Systèmes Réactifs (MSR'05)*, Grenoble, France, October 5-7, 2005, published in *Journal Européen des Systèmes Automatisés (RS-JESA)*, Lavoisier, 2005, pp. 95-110.
- C71 S. Genc and S. Lafortune, "A Distributed Algorithm for On-line Diagnosis of Place-bordered Petri Nets", in *Proc. 16th International Federation of Automatic Control (IFAC) World Congress*, Prague, Czech Republic, July 2005. (6 pages)
- C70 K. Rohloff and S. Lafortune, "Symmetry Reductions for a Class of Discrete-Event Systems," in *Proceedings of the 43rd IEEE Conference on Decision and Control*, December 2004. (7 pages)
- C69 Y. Wang, T.-S. Yoo and S. Lafortune, "New Results on Decentralized Diagnosis of Discrete Event Systems," in *Proc. 42nd Annual Allerton Conference on Communication, Control, and Computing*, Allerton, Illinois, Oct. 2004. (Invited paper.)

- C68 O. Contant, S. Lafortune, and D. Teneketzis, "Diagnosis of modular discrete event systems," in *Proc. 2004 IFAC International Workshop on Discrete Event Systems - WODES'04*, Reims, France, Sept. 2004, pp. 337–342.
- C67 A. Paoli and S. Lafortune, "Safe Diagnosability of Discrete Event Systems," in *Proceedings of the 42nd IEEE Conference on Decision and Control*, December 2003. (7 pages)
- C66 K. Rohloff and S. Lafortune, "The Control and Verification of Similar Agents Operating in a Broadcast Network Environment," in *Proceedings of the 42nd IEEE Conference on Decision and Control*, December 2003. (7 pages)
- C65 K. Rohloff and S. Lafortune, "Supervisor Existence for Modular Discrete-Event Systems," in *Proceedings of the 2nd IFAC Conference on Control Systems Design*, Bratislava, Slovakia, September 2003. (x pages)
- C64 K. Rohloff and S. Lafortune, "Recent Results on Computational Issues in Supervisory Control," in *Proceedings of the ICATPN Workshop on Discrete Event Systems and Control*, 24th International Conference on Applications and Theory of Petri Nets (ICATPN 2003), Eindhoven, The Netherlands, June 2003, pp. 15-35. (Invited plenary talk and paper.)
- C63 S. Genc and S. Lafortune, "Distributed Diagnosis of Discrete-Event Systems Using Petri Nets," *Proceedings of the 24th International Conference on Applications and Theory of Petri Nets (ICATPN)*, Eindhoven, The Netherlands, June 2003, in *Lecture Notes in Computer Science*, Vol. LNCS 2679, Springer-Verlag, 2003, pp. 316-336.
- C62 O. Contant, S. Lafortune, and D. Teneketzis, "Failure diagnosis of discrete event systems: The case of intermittent faults," in *Proceedings of the 41st IEEE Conference on Decision and Control*, December 2002, pp. 4006-4011.
- C61 K. Rohloff and S. Lafortune, "On the computational complexity of the verification of modular discrete-event systems," in *Proceedings of the 41st IEEE Conference on Decision and Control*, December 2002, pp. 16-21.
- C60 T.-S. Yoo and S. Lafortune, "Decentralized Supervisory Control: A New Architecture with a Dynamic Decision Fusion Rule," in *Proceedings of the 2002 International Symposium on Discrete Event Systems - WODES'2002*, October 2002, pp. 11-17.
- C59 H. Marchand, O. Boivineau, and S. Lafortune, "Optimal Control of Discrete Event Systems Under Partial Observation," in *Proceedings of the 40th IEEE Conference on Decision and Control*, December 2001. (6 pages)
- C58 S. Lafortune, "Commande Décentralisée des Systèmes à Événements Discrets," in *Compte-rendu du Colloque International sur la Modélisation des Systèmes Réactifs*, Toulouse, France, October 17-19, 2001. (5 pages) (Invited plenary lecture and paper.)
- C57 S. Lafortune, "Control of Partially-Observed Discrete-Event Systems: The State of the Art and Some New Results," in *Proceedings of the Symposium on the Control of Discrete Event Systems - SCODES'01*, Paris, France, July 23, 2001. (5 pages) (Invited plenary lecture and paper.)

- C56 S. Lafortune, D. Teneketzis, M. Sampath, R. Sengupta, and K. Sinnamohideen, "Failure diagnosis of dynamic systems: An approach based on discrete event systems," in *Proceedings of the 2001 American Control Conference*, June 2001, pp. 2058-2071.
- C55 T.-S. Yoo and S. Lafortune, "On the computational complexity of some problems arising in partially-observed discrete-event systems," in *Proceedings of the 2001 American Control Conference*, June 2001, pp. 307-312.
- C54 G. Barrett and S. Lafortune, "On the Separation of Estimation and Control in Discrete-Event Systems," in *Proceedings of the 39th IEEE Conference on Decision and Control*, December 2000, pp. 2258-2259.
- C53 R. Debouk, S. Lafortune, and D. Teneketzis, "On the Effect of Communication Delays in Failure Diagnosis of Decentralized Discrete Event Systems," in *Proceedings of the 39th IEEE Conference on Decision and Control*, December 2000, pp. 2245-2251.
- C52 T.-S. Yoo and S. Lafortune, "New Results on Decentralized Supervisory Control of Discrete-Event Systems," in *Proceedings of the 39th IEEE Conference on Decision and Control*, December 2000, pp. 1-6.
- C51 W. Stark, H. Wang, A. Worthen, P. Liang, R. Gupta, A. Hero, S. Lafortune, and D. Teneketzis, "Low Energy Wireless Communication Network Design," in *Proceedings of the 38th Allerton Conference on Communication, Control and Computing*, October 2000, pp. 785-794.
- C50 T.-S. Yoo and S. Lafortune, "A General Architecture for Decentralized Supervisory Control of Discrete-Event Systems," in *Discrete event systems: Analysis and Control*, R. Boel and G. Stremersch, Editors, Kluwer Academic Publishers, 2000, pp. 111-118. (This book contains the *Proceedings of the International Workshop on Discrete Event Systems - WODES 2000*, Ghent, Belgium, August 2000.)
- C49 R. Debouk, S. Lafortune, and D. Teneketzis, "A Diagnostic Protocol for Discrete Event Systems with Decentralized Information," in *Proceedings of DX-00, Eleventh International Workshop on Principles of Diagnosis*, Morelia, Mexico, June 2000, pp. 41-48.
- C48 G. Barrett and S. Lafortune, "Some Issues Concerning Decentralized Control Problems with Communication," in *Proceedings of the 38th IEEE Conference on Decision and Control*, December 1999. (7 pages)
- C47 R. Debouk, S. Lafortune, and D. Teneketzis "On an Optimization Problem in Sensor Selection for Failure Diagnosis," in *Proceedings of the 38th IEEE Conference on Decision and Control*, December 1999. (6 pages)
- C46 K. Rudie, S. Lafortune, and F. Lin, "Minimal Communication in a Distributed Discrete-Event Control System," in *Proceedings of the 1999 American Control Conference*, San Diego, June 1999, pp. 1965-1970.
- C45 G. R. Barrett and S. Lafortune, "On the Synthesis of Communicating Controllers with Decentralized Information Structures for Discrete-Event Systems," in *Proceedings of the 37th IEEE Conference on Decision and Control*, Tampa, FL, December 1998, pp. 3281-3286. *Winner of Best Student Paper Award at the conference.*

- C44 R. Debouk, S. Lafortune, and D. Teneketzis, “Coordinated Decentralized Protocols for Failure Diagnosis of Discrete Event Systems,” in *Proceedings of the 37th IEEE Conference on Decision and Control*, Tampa, FL, December 1998, pp. 3763-3768.
- C43 H. Marchand, O. Boivineau, and S. Lafortune, “On the Synthesis of Optimal Schedulers in Discrete Event Control Problems with Multiple Goals,” in *Proceedings of the IEEE International Conference on Systems, Man and Cybernetics*, San Diego, CA, October 1998. (6 pages)
- C42 G. R. Barrett and S. Lafortune, “A Novel Framework for Decentralized Supervisory Control with Communication,” in *Proceedings of the IEEE International Conference on Systems, Man and Cybernetics*, San Diego, CA, October 1998, pp. 617-620.
- C41 R. Debouk, S. Lafortune, and D. Teneketzis, “Coordinated Decentralized Protocols for Failure Diagnosis of Discrete Event Systems,” in *Proceedings of the IEEE International Conference on Systems, Man and Cybernetics*, San Diego, CA, October 1998, pp. 3010-3011.
- C40 R. Debouk, S. Lafortune, and D. Teneketzis, “A Coordinated Decentralized Protocol for Failure Diagnosis of Discrete Event Systems,” in *Proceedings of the International Workshop on Discrete Event Systems - WODES'98*, Cagliari, Italy, August 1998, IEE Press (London, England), pp. 138-143.
- C39 I. Porche and S. Lafortune, “Coordination of Local Adaptive Traffic Signal Controllers,” in *Proceedings of the 1998 American Control Conference*, Philadelphia, PA, June 1998. (5 pages)
- C38 Y.-L. Chen, S. Lafortune, and F. Lin, “How to reuse supervisors when discrete event system models evolve,” in *Proceedings of the 36th IEEE Conference on Decision and Control*, San Diego, CA, December 1997, pp. 2064–2069.
- C37 M. Sampath, S. Lafortune, and D. Teneketzis, “Active diagnosis of discrete event systems,” in *Proceedings of the 36th IEEE Conference on Decision and Control*, San Diego, CA, December 1997, pp. 2976–2983.
- C36 I. Porche and S. Lafortune, “Dynamic Traffic Control: Decentralized and Coordinated Methods,” in *Proceedings of the 1997 IEEE Conference on Intelligent Transportation Systems*, Boston, MA, November 1997. (6 pages)
- C35 Y.-L. Chen, S. Lafortune, and F. Lin, “Resolving feature interactions using modular supervisory control with priorities,” in *Feature Interactions in Telecommunication Networks IV*, P. Dini, R. Boutaba, and L. Logrippo, Editors, IOS Press, 1997, pp. 108–122. This book contains the proceedings of the *1997 IEEE Fourth International Workshop on Feature Interactions in Networks and Distributed Systems* held in Montréal, June 1997.
- C34 J. G. Thistle, R. P. Malhamé, H.-H. Hoang, and S. Lafortune, “Feature interaction modelling, detection and resolution: A supervisory control approach,” in *Feature Interactions in Telecommunication Networks IV*, P. Dini, R. Boutaba, and L. Logrippo, Editors, IOS Press, 1997, pp. 93–107. This book contains the proceedings of the *1997 IEEE Fourth International Workshop on Feature Interactions in Networks and Distributed Systems* held in Montréal, June 1997.
- C33 G. R. Barrett and S. Lafortune, “Using bisimulation to solve discrete event control problems,” in *Proceedings of the 1997 American Control Conference*, Albuquerque, NM, June 1997, pp. 2337–2341.

- C32 Y.-L. Chen, S. Lafortune, and F. Lin, "Priority assignment algorithms for resolving blocking in modular control of discrete event systems," in *Proceedings of the 35th IEEE Conference on Decision and Control*, Kobe, Japan, December 1996, pp. 2743-2748.
- C31 G. Barrett and S. Lafortune, "A bisimulation approach to the supervisory control of discrete event systems," in *Proceedings of the Thirty-Fourth Annual Allerton Conference on Communication, Control, and Computing*, October 1996. (10 pages). (Invited paper.)
- C30 I. Porche, M. Sampath, R. Sengupta, Y.-L. Chen, and S. Lafortune, "A decentralized scheme for real-time optimization of traffic signals," in *Proceedings of the 1996 IEEE Conference on Control Applications*, Dearborn, MI, September 15-18, 1996, pp. 582-589.
- C29 M. Sampath, S. Lafortune, and D. Teneketzis, "A language-based approach to failure diagnosis of discrete event systems," in *Proceedings of the IEE WODES '96 International Workshop on Discrete Event Systems*, Edinburgh, UK, August 1996, pp. 261-271. (Invited paper.)
- C28 Y.-L. Chen, S. Lafortune, and F. Lin, "Modular supervisory control with priorities for discrete event systems," in *Proceedings of the 34th IEEE Conference on Decision and Control*, New Orleans, December 1995, pp. 409-415.
- C27 N. Ben Hadj-Alouane, S. Lafortune, and F. Lin, "Think globally, communicate, act locally: On-line parallel/distributed supervisory control," in *Proceedings of the 33rd IEEE Conference on Decision and Control*, December 1994, pp. 3661-3666.
- C26 M. Sampath, R. Sengupta, S. Lafortune, K. Sinnamohideen, and D. Teneketzis, "Failure diagnosis using discrete event models," in *Proceedings of the 33rd IEEE Conference on Decision and Control*, December 1994, pp. 3110-3116.
- C25 M. Sampath, R. Sengupta, S. Lafortune, K. Sinnamohideen, and D. Teneketzis, "A discrete event systems approach to failure diagnosis," in *Working Papers of DX-94, Fifth International Workshop on Principles of Diagnosis*, G. M. Provan, Editor, October 1994, pp. 269-277.
- C24 M. Sampath, R. Sengupta, S. Lafortune, K. Sinnamohideen, and D. Teneketzis, "Diagnosability of discrete event systems," in *Proceedings of the 11th International Conference on Analysis and Optimization of Systems*, G. Cohen and J.-P. Quadrat, Editors, Lecture Notes in Control and Information Sciences, vol. 199, Springer-Verlag, 1994, pp. 73-79.
- C23 N. Ben Hadj-Alouane, S. Lafortune, and F. Lin, "A distributed on-line algorithm for supervisory control under partial observation," *Proceedings of the 1994 Conference on Information Sciences and Systems*, Princeton, March 1994; extended abstract (3 pages). (Invited paper.)
- C22 R. Sengupta and S. Lafortune, "A deterministic optimal control theory for discrete event systems," *Proceedings of the 32nd IEEE Conference on Decision and Control*, San Antonio, TX, December 1993, pp. 1182-1187.
- C21 A. J. Lee, E. A. Rundensteiner, S. Thomas and S. Lafortune, "An information model for genome map representation and assembly," *Proceedings of the ACM Second International Conference on Information and Knowledge Management (CIKM'93)*, Washington, DC, November 1993, pp. 675-684.

- C20 N. Ben Hadj-Alouane, S. Lafortune and F. Lin, "Control of partially observed discrete event systems with maximal variable lookahead policies," in *Proceedings of the Thirty-first Annual Allerton Conference on Communication, Control, and Computing*, September 29 – October 1, 1993, pp. 898–907. (Invited paper.)
- C19 M. Elta, J. P. Fournier, J. S. Freudenberg, M. D. Giles, J. W. Grizzle, P. T. Kabamba, P. P. Khargonekar, S. Lafortune, S. M. Meerkov, B. P. Rashap, F. L. Terry, Jr., and T. Vincent, "Real-time feedback control of reactive ion etching," Preprints, *SPIE Conference on Microelectronic Processes, Sensors, and Control*, September 1993, paper number 2091-50 (14 pages).
- C18 S. L. Chung, S. Lafortune and F. Lin, "Supervisory control using variable lookahead policies," *Proceedings of the 1993 American Control Conference*, June 2-4, San Francisco, pp. 1203–1208.
- C17 M. Elta, H. Etamad, J. S. Freudenberg, M. D. Giles, J. W. Grizzle, P. T. Kabamba, P. P. Khargonekar, S. Lafortune, S. M. Meerkov, J. R. Moyné, B. P. Rashap, D. Teneketzis, and F. L. Terry, Jr., "Applications of control to semiconductor manufacturing: Reactive ion etching," *Proceedings of the 1993 American Control Conference*, June 2-4, San Francisco, pp. 2990–2997.
- C16 S. L. Chung, S. Lafortune and F. Lin, "Recursive computation of limited lookahead supervisory controls for discrete event systems," *Proceedings of the 31st IEEE Conference on Decision and Control*, Tucson, AZ, December 16-18, 1992, pp. 3764-3769.
- C15 S. L. Chung, S. Lafortune and F. Lin, "Supervisory control with variable lookahead policies: Illustrative example," in *Collection of Extended Abstracts, Joint Workshop on Discrete Event Systems WODES'92*, Prague, Czechoslovakia, pp. 121–124.
- C14 S. L. Chung, S. Lafortune and F. Lin, "Supervisory control using variable lookahead policies," in *Collection of Extended Abstracts, Joint Workshop on Discrete Event Systems WODES'92*, Prague, Czechoslovakia, pp. 23–26.
- C13 R. Sengupta and S. Lafortune, "Extensions to the theory of optimal control of discrete event systems," in *Collection of Extended Abstracts, Joint Workshop on Discrete Event Systems WODES'92*, Prague, Czechoslovakia, pp. 75–78.
- C12 S. Lafortune, R. Sengupta, D. Kaufman, and R. L. Smith, "A dynamical system model for traffic assignment in networks," *Proceedings of the 1991 Conference on Vehicle Navigation & Information Systems*, pp. 701-708, Dearborn, MI, October 20-23, 1991. (Proceedings published by the *Society of Automotive Engineers*.)
- C11 R. Sengupta and S. Lafortune, "Optimal control of a class of discrete event systems," *Preprints, IFAC International Symposium on Distributed Intelligence Systems*, pp. 25-30, Arlington, VA, August 13-15, 1991. (Invited paper.)
- C10 S. Lafortune and E. Chen, "A relational algebraic approach to the representation and analysis of discrete event systems," *Proceedings of the 1991 American Control Conference*, pp. 2893-2898, Boston, MA, June 26-28, 1991.
- C9 S. Lafortune and F. Lin, "On tolerable and desirable behaviors in supervisory control of discrete event systems," *Proceedings of the 29th IEEE Conference on Decision and Control*, pp. 3434-3439, Honolulu, HI, December 5-7, 1990.

- C8 E. Chen and S. Lafortune, “Dealing with blocking in supervisory control of discrete event systems,” *Proceedings of the 28th IEEE Conference on Decision and Control*, pp. 117–122, Tampa, FL, December 13-15, 1989.
- C7 H. Yoo and S. Lafortune, “A general approach to query optimization in distributed database systems,” *Proceedings of the 1988 Conference on Information Sciences and Systems*, pp. 438-439, Princeton, March 16-18, 1988. (Invited paper.)
- C6 S. Lafortune, “A model for communication in the distributed evaluation of a control strategy,” *Proceedings of the 25th IEEE Conference on Decision and Control*, pp. 214-218, Athens, Greece, December 10-12, 1986.
- C5 S. Lafortune and M. P. Polis, “Computer aided design of energy efficient metro tunnel trajectories,” *Proceedings of the Third Symposium on Computer-Aided Control System Design (CACSD)*, pp. 158–164, Arlington, VA, September 24-26, 1986.
- C4 S. Lafortune and E. Wong, “A state model for the concurrency control problem in database management systems,” *Proceedings of the 24th IEEE Conference on Decision and Control*, pp. 441–442, Ft. Lauderdale, FL, December 11-13, 1985.
- C3 P. E. Caines and S. Lafortune, “Adaptive control with recursive identification for stochastic linear systems: Multivariate case,” *Proceedings of the 21st IEEE Conference on Decision and Control*, pp. 978-983, Orlando, FL, December, 1982.
- C2 P. E. Caines and S. Lafortune, “Adaptive control with recursive identification for stochastic linear systems: Univariate case,” *Proceedings of the Sixth IFAC Symposium on Identification and System Parameter Estimation*, pp. 570–574, Arlington, VA, June 7-11, 1982.
- C1 P. E. Caines and S. Lafortune, “Simultaneous recursive identification and adaptive control of stochastic linear systems,” *Proceedings of the 1982 Conference on Information Sciences and Systems*, p. 212, Princeton, NJ, March 17-19, 1982.

Other: Selected abstracts, invited conference or workshop presentations/reports

- O24 Y.-C. Wu and S. Lafortune, “Enforcement of Opacity by Judicious Event Insertions.” Invited presentation at the *Workshop in Honor of the 70th Birthday of Peter Caines*, Carleton University, Ottawa, May 28, 2015.
- O23 K. Chatterjee, S. Lafortune, N. Markey, and W. Thomas, Eds., “Non-Zero-Sum Games and Control (Dagstuhl Seminar 15061),” *Dagstuhl Reports*, Vol. 15, No. 2, Schloss Dagstuhl–Leibniz-Zentrum fuer Informatik, Dagstuhl, Germany, 2015.
- O22 Y. Wang, S. Lafortune, and S. Reveliotis, “The Application of Discrete Event Systems Theory to Concurrency Bug Elimination.” Abstract presented at the *9th IEEE International Conference on Automation Science and Engineering (CASE 2013)*, August 2013.
- O21 S. Lafortune, “Synthesis of Run-time Controllers for Software Execution.” Presentation at Special Session at the *2013 American Control Conference*, June 2013.

- O20 S. Lafortune, “Monitoring and Control of Discrete Event Systems: Some Key Results and Recent Research.” Invited plenary lecture presented at the *Brazilian Conference on Automation*, Juiz de Fora, Brazil, September 2008.
- O19 S. Lafortune, “Diagnostic des Systèmes à Événements Discrets – L’approche “Diagnostiqueur”: Passé, Présent, Futur.” Invited plenary lecture presented at the international workshop *Modélisation des Systèmes Réactifs* – MSR 2007, October 17-19, Lyon, France.
- O18 S. Lafortune, “From Decentralized to Distributed Control of Partially-Observed Discrete-Event Systems: A Critical Review of the State of the Art.” Invited presentation at the *Special CASY Workshop on “Advances in Control Theory and Applications”* held at the University of Bologna Residential Centre of Bertinoro, Italy, May 22-26, 2006.
- O17 S. Lafortune, “Decentralized Supervisory Control of Discrete Event Systems.” In *Collection of Abstracts 05241, Proceedings of Dagstuhl Seminar on Synthesis and Planning*, H. Kautz, W. Thomas, and M. Vardi, Eds., Internationales Begegnungs- und Forschungszentrum (IBFI), Schloss Dagstuhl, Germany, 2006. Available at <http://drops.dagstuhl.de/opus/volltexte/2006/453>. (Invited participant and speaker at seminar which took place June 13-17, 2005.)
- O16 S. Lafortune and S. Genc, “A Distributed Algorithm for On-line Fault Detection and Isolation.” Invited presentation at the *International Colloquium for the 25th Anniversary of GERAD: Groupe d’études et de recherche en analyse des décisions*, University of Montréal, May 12-13, 2005.
- O15 Y. Wang, S. Lafortune, and T.-S. Yoo, “Decentralized Architectures for Diagnosis and Control of Discrete-Event Systems.” Invited presentation at the *Workshop in Honor of the 60th Birthday of Peter Caines*, McGill University, Montréal, May 13, 2005.
- O14 K. Rohloff and S. Lafortune, “The Verification and Control of Interacting Similar Discrete-Event Systems.” Presented at the *BIRS Workshop on Decentralized Discrete Event Systems: Structure, Communication and Control*, held at the Banff International Research Station, Banff Centre, Canada, May 13-15, 2004.
- O13 T.-S. Yoo and S. Lafortune, “Decentralized Supervisory Control with Conditional Decisions.” Invited presentation at the *Second Canada-USA (CANUSA) Workshop on Discrete Event Systems*, held in Kingston, Canada, June 13-14, 2002.
- O12 T.-S. Yoo and S. Lafortune, “Centralized and Decentralized Control of Partially-Observed Discrete-Event Systems: The State of the Art and Some New Results.” Invited lecture presented at the *ARO Workshop 2000 on Intelligent Systems*, sponsored by the Army Research Office, 8-9 December 2000, The Australian National University, Canberra, Australia.
- O11 S. Lafortune and M. Sampath, “A Discrete Event Systems Approach to Failure Diagnosis: Theory & Applications.” Invited plenary lecture presented at *DX-00: International Workshop on Principles of Diagnosis*, Morelia, Mexico, June 8-10, 2000.
- O10 I. Porche and S. Lafortune, “Why Adaptive Signal Control is Critical in an ATIS Environment,” *CORS/INFORMS Spring 1998 Conference*, April 26-29, Montréal, Canada. (Abstract in Final Program.)

- O9 S. Lafortune, "Failure Diagnosis of Discrete Event Systems." Invited plenary lecture at the *1996 International Workshop on Discrete Event Systems - WODES'06*, Edinburgh, Scotland, August 19-21.
- O8 R. Sengupta and S. Lafortune, "Optimal control of stochastic discrete event systems." Presented at the *1996 Conference on the Mathematical Theory of Networks and Systems (MTNS)*, June 24-26, St. Louis.
- O7 S. L. Chung, S. Lafortune and F. Lin, "Control of discrete event systems using limited lookahead policies." In *Book of Abstracts, 1992 SIAM Conference on Control and its Applications*, Minneapolis, MN, September 17-19, 1992. (Invited presentation.)
- O6 S. L. Chung, S. Lafortune and F. Lin, "Limited lookahead policies in supervisory control." In *Book of Abstracts, Workshop on Discrete Event Systems*, Amherst, MA, June 21-23, 1991.
- O5 S. Lafortune and E. Chen, "Supervisory control of discrete event systems with blocking." In *Book of Abstracts, SIAM Conference on Control in the 90's*, p. A62, San Francisco, CA, May 17-19, 1989.
- O4 S. Lafortune and E. Chen, "On relational algebra and discrete event systems." In *Book of Abstracts, Optimization Days*, p. D4.1, Montréal, Canada, May 4-5, 1989. (Invited presentation.)
- O3 S. Lafortune and E. Wong, "A new locking protocol that achieves all serializable executions." Presented at the *Seventh Annual Conference of the Industrial Liaison Program*, College of Engineering, University of California at Berkeley, March 13-14, 1985.
- O2 P. E. Caines and S. Lafortune, "Recursive identification with e-optimal adaptive control of stochastic linear systems." In *Book of Abstracts, Optimization Days*, pp. 78-79, Montréal, Canada, May 13-14, 1982.
- O1 S. Lafortune, "Interactive design of tunnel trajectories for a metro system." Presented at the *Canadian Communications and Power Conference*, Montréal, Canada, October 15-17, 1980.