

**PUBLICATIONS of STÉPHANE LAFORTUNE**  
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April 29, 2016

**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)**

- J91 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*. In print.
- J90 R. Ehlers, S. Lafortune, S. Tripakis, and M. Vardi, "Supervisory Control and Reactive Synthesis: A Comparative Introduction," *Discrete Event Dynamic Systems: Theory and Applications*. In print.
- J89 X. Yin and S. Lafortune, "Decentralized Supervisory Control with Intersection-Based Architecture," *IEEE Transactions on Automatic Control*. In print.
- 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*. In print.
- J87 X. Yin and S. Lafortune, "Synthesis of Maximally Permissive Supervisors for Partially-Observed Discrete-Event Systems," *IEEE Transactions on Automatic Control*. In print.
- J86 Y.C. Wu and S. Lafortune, "Synthesis of Optimal Insertion Functions for Opacity Enforcement," *IEEE Transactions on Automatic Control*. In print.
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- 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.
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- 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.
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- BC13 S. Lafortune, "Diagnosis of Discrete Event Systems," in *Encyclopedia of Systems & Control*, J. Baillicul 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.

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

- 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.



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- 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.
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- 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.
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- 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 2014 IFAC World Congress*, August 2014. (8 pages)
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- 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)

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- 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 “Diagnosticqueur”: 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.