List of Publications[1]

Bastien Chopard

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Books

1. B. Chopard and M. Droz, *Cellular Automata Modeling of Physical Systems*, Cambridge University Press, Collection Aléa, 1998 341 pages

2. B. Chopard and M. Droz, *Cellular Automata Modeling of Physical Systems*, Tsinghua University Press, 2003, Chinese translation.

3. B. Chopard and M. Tommassini, *Métaheuristique pour l'optimisation*, 2017, Press Universitaire de Perpignan.

4. B. Chopard and M. Tommassini, *Metaheuristics for optimization*, 2018, Springer.

Chapter in book

1. B. Chopard and P. Sloot, in *Algorithmic beauty of seaweeds, Sponges and Corals*, J.A Kaandrop and J. E. Kuebler, Springer Verlag Berlin Heidelberg, 2001.

2. B. Chopard, *Cellular Automata Modeling of Physical Systems*, pp 865-892 Springer Encyclopedia of Complexity and Systems Science, 2009, ISBN 978-0-387-75888-6

3. B. Chopard, *Basics of Grid refinement in Lattice Boltzmann*, in Lectures on Lattice Boltzmann Methods for complex fluid flows, Stefano Ubertini et al (Edt), p. 120, Science4 Press, ISBN 9788896504000. 2009

4. B. Chopard, *High performance computing in Lattice Boltzmann models*, in Lectures on Lattice Boltzmann Methods for complex fluid flows, Stefano Ubertini et al (Edt), p. 120, Science4 Press, ISBN 9788896504000. 2009.

5. Alfons G. Hoekstra, Alfonso Caiazzo, Eric Lorenz, Jean-Luc Falcone, and Bastien Chopard. *Complex Automata: multi-scale Modeling with coupled Cellular Automata*, in Modelling Complex Systems by Cellular Automata, chapter 3, Springer Verlag, 2010.

6. Alfons G. Hoekstra, Bastien Chopard, Pat Lawford *Multiscale Modelling and Simulation*, in Computational Medicine: modelling the human body, chapter 7. Peter Coveney, Vanessa Diaz-Zuccarini, Peter Hunter and Marco Viceconti Edts. Oxford University Press, 2014.

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7. B. Chopard, *Cellular Automata and lattice Boltzmann modeling of physical systems*, Handbook of Natural Computing, Rozenberg, Grzegorz; Bäck, Thomas; Kok, Joost N. (Eds.) Springer, pp. 287–331, 2013

8. Xavier Meyer, Bastien Chopard and Paul Albuquerque *Linear programming on a GPU: a case study*, in Designing Scientific Applications on GPUs. Raphael Couturier Edt. Chapman & Hall/CRC Numerical Analysis and Scientific Computing Series. 2013

9. Alexandru Mizeranschi, Derek Groen, Joris Borgdorff, Alfons G. Hoekstra, Bastien Chopard and Werner Dubitzky. *Anatomy and Physiology of Multiscale Modeling and Simulation in Systems Medicine.* in System Medicine, Volume 1386 of the series Methods in Molecular Biology, pp 375-404, Springer Protocols, 2015. http://rd.springer.com/protocol/10.1007/978-1-4939-3283-2_17

Proceedings and Edited book

1. Cellular Automata, 5th Int. Conf. on Cellular Automata for research and Industry (ACRI 2002), Geneva, Switzerland, Oct 2002. S. Bandini, B. Chopard and M. Tomassini Eds, LNCS 2493, 2002.

2. Cellular Automata, 6th Int. Conf. on Cellular Automata for research and Industry (ACRI 2004), Amsterdam, The Netherlands, Oct. 2004. PMA Sloot, B. Chopard and A. Hoekstra Eds, LNCS 3305, 2004.

3. Cellular Automata, 7th Int. Conf. on Cellular Automata for research and Industry (ACRI 2006), Perpignan, France, Sept 20-23, 2006, S. El Yacoubi, B. Chopard and S. Bandini Eds, LNCS 4173, 2006.

4. International Journal of Multiscale Computational Engineering, Vol 4 (2), 2006. V. Krzhizhanovska, B. Chopard, Y. Gorbachev, Guest Editors

5. Dicrete Simulation of Fluid Dynamics, DSFD 2006, Geneva. Int. J. Mod. Phys. C, Vol 18 (4), B. Chopard and M. Droz, Guest Editors.

6. Focus on Recent Advances in Particle Methods for Fluid Dynamics, Special Issue in J. Stat. Mech. Theo. Exp (JSTAT), Paulo C Philippi and Bastien Chopard Eds, 2009 (http://www.iop.org/EJ/journal/-page=extra.focus6/jstat)

7. Multi-scale systems in fluids and soft matter: approaches, numerics and applications. Serguey Karabasov, Dmitry Nerukh, Alfons Hoekstra, Bastien Chopard and Peter Coveney Edts. Phil. Trans. Royal Soc. A. Vol 372, no 2021. 2014

Journals

1. B. Chopard and P. Bouvier *Covariance d'échelle et approximation post-newtoniennes dans le cadre de la relativité générale*, Archives des Sciences **35**, 251 (1982).

2. B. Chopard and M. Droz *Cellular automata approach to non equilibrium phase transitions in a surface reaction model: static and dynamic properties*, J. Phys. A **21**, 205, (1988).

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6. B. Chopard, M. Droz and M. Kolb, *Cellular Automata approach to nonequilibrium diffusion and gradient percolation*, J. Phys. **A22**, 1609-1619, (1989).

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9. B. Chopard and M. Droz, *Microscopic Study of the Properties of the Reaction Front in an $A + B \to C$ Reaction-Diffusion Process*, Europhysics Letters **15**, 459-464, (1991).

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