

## Some missing references (updated April 2009)

### Early references on Metastability: Transition State Theory in chemical reactions

A. Marcelin Ann. Chim. Phys. **3**, 158, 1915. (\*)

H. Eyring and M. Polanyi. Z. Physik. Chem. B. **12**,279, 1931.

H. Eyring. *The activated complex in chemical reactions*. J. Chem. Phys. **3**, 107—115, 1935.

H. A. Kramers. *Brownian motion in a field of force and the diffusion model of chemical reactions*. *Physica*, (Utrecht) **7**, 284—304, 1940.

E.P. Wigner 1937 J. Chem. Phys.,5, 720

E. P. Wigner 1938 Trans. Faraday Soc. 34 29

For a discussion on some of these works, the reader might be referred to:

- N. G. van Kampen, *Stochastic Processes in Physics and Chemistry*, North-Holland, Amsterdam, 1981

- Charles Jaffé, Shinnosuke Kawai, Jesús Palacían, Patricia Yanguas, T. Uzer. *A New Look at the Transition State: Wigner's Dynamical Perspective Revisited*. (available on the web)

- T. Uzer, Charles Jaffé, Jesús Palacían, Patricia Yanguas, Stephen Wiggins. *The geometry of reaction dynamics*. *Nonlinearity* **15**, 957—992, 2002

**Freidlin and Wentzell theory:** While discussing Freidlin and Wentzell theory, we missed an important early reference where metastability has been discussed:

M. I. Freidlin. Sublimiting Distributions and Stabilization of Solutions of Parabolic Equations with a Small Parameter, *Soviet Math. Dokl.* **235**, 5, pp. 1042-1045, 1977

### Chapter 1:

A. de Acosta. On large deviations of empirical measures in the tau topology, *J. Appl. Prob.* **31A**, 41-47, 1994.

### Chapter 3:

A. Meda, P. Ney. A conditioned law of large numbers for Markov additive chains *Studia Sc. Math. Hungarica* **34**, 305-316. 1998.

A. Meda, P. Ney. The Gibbs conditioning principle for Markov chains In: *Perplexing Problems in Probability, Festschrift in Honor of Harry Kesten*. Serie Progress in Probability **44**, 385-398. Ed: M. Bramson y R. Durrett. Birkhäuser. 1999.

### Chapter 5:

M.Cottrell, J. Claude Fort, G. Malgouyres. Large Deviations and Rare Events in the Study of Stochastic Algorithms. *IEEE Trans. On Autom. Control* **AC-28**, 9. 907—920, 1983.

## Chapters 6 and 7:

L. Miclo. About relaxation time of finite generalized Metropolis algorithms. *Ann. Appl. Probab.* **12**, 4, 1492–1515, 2002.

L. Miclo. Comportement de specters d'opérateurs de Schrödinger à basse température. *Bull. Sci. Math.*, 119, 529—553, 1995.

J. Lauwers, A. Verbeure. Metastability in the BCS model. *J. Phys. A. Math. Gen.* 34, 5517—5530, 2001.

## Recent surveys, not available at time of the publication of the book:

F. den Hollander. Metastability under stochastic dynamics. *Stochastic Processes and their Applications*, Volume 114, Issue 1, November 2004, Pages 1-26

A. Bovier. *Metastability: A potential theoretic approach*. Proceedings of the ICM, Madrid, Spain 2006

F. den Hollander. *Metastability under stochastic dynamics*. Three lectures given at the 5th Prague Summer School on Mathematical Statistical Physics, 2006. (available on the page of the School)

A. Bovier. *Metastability*. Lectures given at the 5th Prague Summer School on Mathematical Statistical Physics, 2006 (available on the page of the School)

## Other recent references: (to be updated soon)

S. Herrmann, P. Imkeller. The exit problem for diffusions with time-periodic drift and stochastic resonance. *Ann. Appl. Probab.* **15**, no. 1A, 39–68, 2005.

P. Imkeller, I. Pavlyukevich. Metastable behaviour of small noise Lévy-driven diffusions. (arXiv: math.PR/0601771)

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It seems this is a reference to be quoted, though the authors could not get hold of it, and are grateful if some friend can get it.