

## CURRICULUM VITAE

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### Experience

- Professor of Mathematics, McGill University. 2005-
- Associate Professor, Mathematics, McGill University. 2001-2005
- Visiting Associate Professor, Mathematics, Johns Hopkins University. 2000-2001
- Assistant Professor, Mathematics, University of Ottawa. 1995-2000
- Postdoctoral Fellow, IMA, University of Minnesota. 1994-1995
- Visiting Assistant Professor, Mathematics, University of Kentucky. Spring 1994
- Postdoctoral Fellow, Mathematics, University of Toronto. 1991-1994
- Ph. D. Mathematics, California Institute of Technology. 1991  
Advisor: Prof. Barry Simon.  
Thesis title: "Solutions to Some Problems in Mathematical Physics."
- B. S. Mathematics, University of Belgrade. 1987

## Publications

1. V. Jakšić, J. Segert, “On the Adiabatic Theorem, Landau-Zener Formula, and the Geometry of Isospectral Hamiltonians,” in *Rigorous Results in Quantum Dynamics*, J. Dittrich, P. Exner Ed., World Scientific Publishing Co. 1991.
2. V. Jakšić, S. Molčanov, B. Simon, “Eigenvalue Asymptotics of the Neumann Laplacian of Regions and Manifolds with Cusps,” *J. Funct. Anal.*, **106** (1992) (pp. 56-79).
3. V. Jakšić, “On the Spectrum of Neumann Laplacian of Long-Range Horns: A Note on the Davies-Simon Theorem,” *Proc. Amer. Math. Soc.*, **119** (1993) (pp. 663-669).
4. V. Jakšić, J. Segert, “Exponential Approach to the Adiabatic Limit and the Landau-Zener Formula,” *Rev. Math. Phys.*, **4** (1993) (pp. 529-574).
5. V. Jakšić, J. Segert, “Landau-Zener Formula for Two-Level Systems,” *J. Math. Phys.*, **34** (1993) (pp. 2807-2820).
6. Y. Gordon, V. Jakšić, S. Molčanov, B. Simon, “Spectral Properties of Random Schrödinger Operators with Unbounded Potentials,” *Commun. Math. Phys.*, **157** (1993) (pp. 23-50).
7. V. Jakšić, K. Jung, M. Klein, R. Seiler “Corrections to Quantized Charge Transport in Quantum Hall Systems,” *Algebra i Analiz*, **6** (1994) (pp. 264-272).
8. V. Jakšić, C.-A. Pillet, “On a Model for Quantum Friction I. Fermi’s Golden Rule and Dynamics at Zero Temperature,” *Ann. Inst. Henri Poincaré*, **62** (1995) (pp. 47-68).
9. V. Jakšić, C.-A. Pillet, “On a Model for Quantum Friction II. Fermi’s Golden Rule and Dynamics at Positive Temperature,” *Commun. Math. Phys.*, **176** (1996) (pp. 619-644).
10. V. Jakšić, C.-A. Pillet, “On a Model for Quantum Friction III. Ergodic Properties of the Spin - Boson system,” *Commun. Math. Phys.*, **178** (1996) (pp. 627-651).
11. V. Jakšić, C.-A. Pillet, “Ergodic Properties of the Langevin Equation,” *Lett. Math. Phys.*, **41** (1997) (pp. 49-57).
12. V. Jakšić, C.-A. Pillet, “Spectral Theory of Thermal Relaxation,” *J. Math. Phys.*, **38**, (1997), (pp. 1757-1780).
13. V. Jakšić, C.-A. Pillet, “From Resonances to Master Equations,” *Ann. Inst. Henri Poincaré A*, **67**, (1997), (pp. 425-447).
14. V. Jakšić, S. Molchanov, L. Pastur “On the Propagation Properties of Surface Waves,” *Wave Propagation in Complex Media*, IMA Vol. Math. Appl. **96**, (1998), (pp. 143-154).
15. V. Jakšić, S. Molchanov, “On the Spectrum of the Surface Maryland Model”, *Lett. Math. Phys.*, **45**, (1998), (pp. 185-193).
16. V. Jakšić, C.-A. Pillet, “Ergodic Properties of Classical Dissipative Systems I,” *Acta Mathematica*, **181**, 1998, (pp. 245-282).
17. V. Jakšić, S. Molchanov, “On the Surface Spectrum in Dimension Two,”, *Helv. Phys. Acta*, **71**, (1998), (pp. 629-657).
18. V. Jakšić, S. Molchanov, “Localization for One Dimensional Long-Range Random Hamiltonians,” *Rev. Math. Phys.*, **11**, (1999), (pp. 103-135).
19. V. Jakšić, C.-A. Pillet, “Spectral Theory of Thermal Relaxaton (towards Liouvillean spectroscopy),” *XIIth International Congress of Mathematical Physics (ICMP ’97) (Brisbane)*, 357–363.

20. V. Jakšić, S. Molchanov, "Localization of Surface Spectra," *Commun. Math. Phys.*, **208**, (1999), (pp. 153-172).
21. V. Jakšić, S. Molchanov, "Wave Operators for the Surface Maryland Model," *J. Math. Phys.*, **41**, (2000), (pp. 4452-4463).
22. V. Jakšić, Y. Last, "Spectral Structure of Anderson Type Hamiltonians," *Invent. Math.*, **141**, (2000), (pp. 561-577).
23. V. Jakšić, S. Molchanov, "A Note on the Regularity of Solutions of Linear Homological Equations", *Applicable Analysis*, **75**, (2000), (pp. 371-377).
24. V. Jakšić, Y. Last, "Corrugated Surfaces and A.C. Spectrum," *Rev. Math. Phys.*, **12**, (2000), (pp. 1465-1505).
25. J. Dereziński, V. Jakšić, "Spectral Theory of Pauli-Fierz Operators", *J. Func. Anal.*, **180**, (2001), (pp. 243-327).
26. V. Jakšić, C.-A. Pillet, "On Entropy Production in Quantum Statistical Mechanics", *Commun. Math. Phys.*, **217**, (2001), (pp. 285-293).
27. V. Jakšić, Y. Last, "Surface States and Spectra", *Commun. Math. Phys.*, **218**, (2001), (pp. 459-477).
28. V. Jakšić, "Spectral Theory of Corrugated Surfaces", *Journées Équations aux Dérivées Partielles*, Plestin-les-greves, Groupement de Recherche 1151 du CNRS, X1-X13.
29. V. Jakšić, C.-A. Pillet, "A Note on Eigenvalues of Liouvilleans" *J. Stat. Phys.*, **105**, (2001), (pp. 937-941).
30. V. Jakšić, C.-A. Pillet, "Non-Equilibrium Steady States for Finite Quantum Systems Coupled to Thermal Reservoirs", *Commun. Math. Phys.*, **226**, (2002), (pp. 131-162)
31. V. Jakšić, C.-A. Pillet, "Mathematical Theory of Non-Equilibrium Quantum Statistical Mechanics" *J. Stat. Phys.*, **108**, (2002), (pp. 787-829).
32. V. Jakšić, C.-A. Pillet, "A Note on the Entropy Production Formula", *Contemp. Math.*, **327**, (2003), (pp. 175-180).
33. J. Dereziński, V. Jakšić, "Return to Equilibrium for Pauli-Fierz Systems", *Ann. Henri Poinc.*, **4**, (2003), (pp. 739-793).
34. J. Dereziński, V. Jakšić, C.-A. Pillet, "Perturbation Theory of  $W^*$ -dynamics, Liouvilleans and KMS-states", *Rev. Math. Phys.*, **15**, (2003), (pp. 447-489).
35. V. Jakšić, Y. Last, "Scattering from Subspace Potentials for Schrodinger Operators on Graphs", *Markov Processes and Related Fields*, **9**, (2003) (pp. 661-674).
36. J. Dereziński, V. Jakšić, "On the Nature of Fermi Golden Rule for Open Quantum Systems", *J. Stat. Phys.*, **116**, (2004), (pp. 411-423).
37. V. Jakšić, Y. Last, "A new proof of Poltoratskii's theorem", *J. Func. Anal.*, **215**, (2004), (pp. 103-110).
38. V. Jakšić, Y. Last, "Simplicity of Singular Spectrum in Anderson type Hamiltonians", *Duke Math. J.*, **133**, (2006), (pp. 185-204).
39. V. Jakšić, "Topics in Spectral Theory", *Open Quantum Systems I. The Hamiltonian Approach*. Lecture Notes in Mathematics, Springer, **1880** (2006) (pp. 235-312)

40. V. Jakšić, E. Kritchevski, C.-A. Pillet, " Mathematical Theory of the Wigner-Weisskopf Atom", *Large Coulomb Systems. Lecture Notes on Mathematical Aspects of QED.* Lecture Notes in Physics, **695** (2006) (pp. 147-218).
41. W. Aschbacher, V. Jakšić, Y. Pautrat Y., C.-A. Pillet, "Topics in Non-Equilibrium Quantum Statistical Mechanics", *Open Quantum Systems III. Recent Developments.* Lecture Notes in Mathematics, Springer, **1882** (2006) (pp. 1-66)
42. V. Jakšić, C.-A. Pillet, Y. Ogata, "The Green-Kubo Formula and the Onsager Reciprocity Relations in Quantum Statistical Mechanics", *Commun. Math. Phys.* **265** (2006), (pp. 721- )
43. V. Jakšić, C.-A. Pillet, Y. Ogata, "Linear Response Theory for Thermally Driven Open Quantum Systems", *J. Stat. Phys.* **123** (2006), (pp. 547- )
44. V. Jakšić, C.-A. Pillet, Y. Ogata, "The Green-Kubo Formula for the Spin-Fermion System", *Commun. Math. Phys.* **268** (2006) (pp. 369-401).
45. V. Jakšić, C.-A. Pillet, Y. Ogata, "The Green-Kubo Formula for Locally Interacting Open Quantum Systems", *Ann. Henri Poincaré* **8** (2007) (pp. 1013-1036)
46. W. Aschbacher, V. Jakšić, Y. Pautrat Y., C.-A. Pillet, "Transport Properties of Quasi-Free Fermions", *J. Math. Phys.* **48** (2007) (pp. 032101-032129).
47. V. Jakšić, C.-A. Pillet, "On the Strict Positivity of Entropy Production", *Contemporary Mathematics*, **447** (2007) (pp. 153-163).
48. V. Jakšić, Y. Pautrat, C.-A. Pillet, "Central Limit Theorem for Locally Interacting Fermi Gas", *Commun. Math. Phys.* **285** (2009) (pp. 175-217).
49. V. Jakšić, P. Poulin, "Scattering from Sparse Potentials: a Deterministic Approach", *Analysis and Mathematical Physics. Trends in Mathematics.* (2009) (pp. 205-210).
50. V. Jakšić, Y. Pautrat, C.-A. Pillet, "A Non-Commutative Levy-Cramer Continuity Theorem", *Markov Processes and Related Fields*, **16** (2010) (pp. 59-78).
51. V. Jakšić, Y. Pautrat, C.-A. Pillet, "A Quantum Central Limit Theorem for Sums of IID Random Variables", *Journal of Mathematical Physics*, **51** (2010) (8 pages).
52. V. Jakšić, C.-A. Pillet, L. Rey-Bellet, "Entropic Fluctuations in Statistical Mechanics I. Classical Dynamical Systems", *Nonlinearity*, **24** (2011) (pp. 699-763).
53. V. Jakšić, C.-A. Pillet, Five contributions to Modern Encyclopedia of Mathematical Physics, in press: *Entropy Production, Linear Response Theory, NESS in Quantum Statistical Mechanics, Nonequilibrium Steady States, Quantum Koopmanism.*
54. V. Jakšić, Y. Ogata, C.-A. Pillet, R. Seiringer, "Quantum Hypothesis Testing and Non-Equilibrium Statistical Mechanics", *Rev. Math. Phys.*, **24** (6) (2012) (pp. 1-67).
55. V. Jakšić., Y. Ogata, Y. Pautrat Y., C.-A. Pillet C.-A., "Entropic Fluctuations in Quantum Statistical Mechanics. An Introduction", *Quantum Theory from Small to Large Scales: Lecture Notes of the Les Houches Summer School: Volume 95, August 2010*, Oxford University Press, USA (2012) (pp. 213-410).
56. V. Jakšić, C.-A. Pillet, "Entropic Functionals in Quantum Statistical Mechanics", *International Congress of Mathematical Physics (ICMP '12)(Aalborg)*, World Scientific, Singapore, (2013) (pp. 336-343).

57. L. Bruneau, V. Jakšić, C.-A. Pillet, "Landauer-Büttiker Formula and Schrödinger Conjecture", *Commun. Math. Phys.*, **319** (2) (2013) (pp. 501-513).
58. P. Grech, V. Jakšić, M. Westrich, "The Spectral Structure of the Electronic Black Box Hamiltonian", *Lett. Math. Phys.*, **103** (10) (2013) (pp. 1135-1147).
59. V. Jakšić, B. Landon, C.-A. Pillet, "Entropic Fluctuations in XY chains and Reflectionless Jacobi Matrices", *Annales Henri Poincaré*, **14** (7) (2013) (pp. 1775-1800).
60. V. Jakšić, C.-A. Pillet, M. Westrich, "Entropic Fluctuations of Quantum Dynamical Semigroups", *J. Stat. Phys.*, **154** (1) (2014) (pp. 153-187).
61. V. Jakšić, B. Landon, A. Panati, "A Note on the Notion of Reflectionless for Jacobi Matrices", *Commun. Math. Phys.*, **332** (2014) (pp. 827-838).
62. V. Jakšić, C.-A. Pillet, "A Note on the Landauer Principle in Quantum Statistical Mechanics", *J. Math. Phys.*, **55** (2014) (pp. 75210-75210:21).
63. V. Jakšić, V. Nersesyan, C.-A. Pillet, A. Shirikyan, "Large deviations and Gallavotti Cohen Principle for Dissipative PDE's with Rough Noise", *Commun. Math. Phys.*, **336** (2015) (pp. 131-170 ).
64. L. Bruneau, V. Jakšić, C.-A. Pillet, Y. Last, "Landauer-Büttiker Formula and Thouless Conductance", *Commun. Math. Phys.*, **338** (2015) (pp. 347-366).
65. V. Jakšić, J. Panangaden, A. Panati, C-A. Pillet , "Energy Conservation, Counting Statistics, and Return to Equilibrium", *Lett. Math. Phys.*, **105** (2015), (pp. 917-938).
66. V. Jakšić, V. Nersesyan, C.-A. Pillet, A. Shirikyan, "Large Deviations from a Stationary Measure for a Class of Dissipative PDE's with Random Kicks", to appear in *Comm. Pure Appl. Math.*
67. N. Benedikter, V. Jakšić, M. Porta , C. Saffirio, B. Schlein B., "Mean-Field Evolution of Fermionic Mixed States", to appear in *Comm. Pure Appl. Math.*
68. T. Benoist, V. Jakšić., A. Panati, Y. Pautrat, C-A. Pillet, "Full Statistics of Energy Conservation in Two Times Measurement Protocols", to appear in *Phys. Rev. E*.
69. V. Jakšić, V. Nersesyan, C.-A. Pillet, A. Shirikyan, "Large Deviations and Mixing for Dissipative PDE's with Unbounded Random Kicks", *submitted*.