Keiran Thompson

Stanford University, SLAC - 2575 Sand Hill Road, Menlo Park, CA 94025, USA
415-812-4757 • keiran@stanford.edu

Experience

Research Associate — Stanford
Stanford University — November 2017 – present

Program Chair — Boston, US
PAPIs.io, international machine learning conference — July 2016 – October 2017

Founder — US/Australia/Europe
Datagami Inc., data science and machine learning cloud services startup — May 2013 – October 2016

Founder — Bay Area, US
Snowball Trading, consumer finance robo-advisory service — January 2015 – July 2016

Quantitative Analyst — London, UK
BNP Paribas, global investment bank — April 2008 – October 2012

Principal — Australia/UK
InnovationXchange, open innovation and technology transfer consultancy — March 2005 – March 2008

Additional Experience

University of Sydney. *Research Associate* — 2002–2004
Bullant Technology. *Kernel Engineer* — 2001–2002
The British School, Warsaw. *Science Teacher* — 2000–2001

Education

University of Illinois at Urbana-Champaign, postdoctoral fellow, 1997-98
Australian National University, PhD, Theoretical Chemistry, 1997
University of Sydney, BSc. (Hons), Pure Mathematics, 1992

Additional

- Languages: French, Polish
- Captain of Australian Fencing Team, Commonwealth Silver Medalist, National Champion, 2002
- Coach, Australian Fencing Team, 2013-14

Publications

Book Chapters

[1] M. J. T. Jordan, D. L. Crittenden, K. C. Thompson. Quantum effects in loosely bound complexes. *ACS Symposium Series* 953, p101 (2007)

[2] M. A. Collins and K. C. Thompson. Group Theory and the Global Function Shapes for Molecular Potential Energy Surfaces in *Chemical Group Theory: Techniques and Applications*, ed. D. Bonchev and D. H. Rouvray Gordon and Breach, Reading, p191 (1995)

Journal Articles

[1] Parrish R. M., Thompson K. C., Martinez T. J., *Large-Scale Functional Group Symmetry-Adapted Perturbation Theory on Graphical Processing Units*. Journal of Chemical Theory Computation, *in press*.

[2] Zhu X., Thompson K. C., Martinez T. J., Geodesic Interpolation for Reaction Pathways. Journal of Chemical Physics, in preparation

[3] Thompson K. C., Crittenden D. L., Kable S. A. and Jordan M. J. T. *Classical trajectory study of triplet acetaldehyde photodissociation on a CCSD(T) interpolated potential energy surface.* JOURNAL OF CHEMICAL PHYSICS 124, p44302 (2006)

[4] D. L. Crittenden, K. C. Thompson, M. J. T. Jordan. *On the extent of intramolecular hydrogen bonding in gas phase and hydrated 1,2-ethanediol.* JOURNAL OF PHYSICAL CHEMISTRY A 109, p2971 (2005)

[5] Thompson K. C., Crittenden D. L. and Jordan M. J. T. *CH5+: Chemistry's chameleon unmasked*. JOURNAL OF THE AMERICAN CHEMICAL SOCIETY 127(13), p4954 (2005)

[6] Crittenden D. L., Thompson K. C., Chebib M., Jordan M. J. T. *Efficiency considerations in the construction of interpolated potential energy surfaces for the calculation of quantum observables by diffusion Monte Carlo*. JOURNAL OF CHEMICAL PHYSICS 121 (20), p9844 (2004)

[7] Gallagher, S. H., Thompson, K. C., Armstrong, R. S., Lay, P. J., and Reed, S. C. *The unusual intensity behaviour of the 281-cm^{-1} resonance Raman band of C_{60} – a complex tale of vibronic coupling, symmetry reduction, solvatochromism and Jahn-Teller activity.* JOURNAL OF PHYSICAL CHEMISTRY A 108(26), p5564 (2004)

[8] Jordan, MJT and Thompson, K. C. *The response of a molecule to an external electric field: predicting structural and spectroscopic change*. CHEMICAL PHYSICS LETTERS 370, p14 (2003)

[9] Thompson, K. C. and Makri, N. *Rigorous forward-backward semiclassical formulation of many-body dynamics*. PHYSICAL REVIEW E 59, p4729 (1999)

[10] Thompson, K. C. and Makri, N. *Influence functionals with semiclassical propagators in combined forward-backward time*. JOURNAL OF CHEMICAL PHYSICS 110, p1343 (1999)

[11] Thompson, K. C. and Martinez, T. J. *Ab initio interpolated quantum dynamics on coupled electronic states with full configuration interaction wave functions*. JOURNAL OF CHEMICAL PHYSICS 110, p1376 (1999)

[12] Makri, N and Thompson, K. C. *Semiclassical influence functionals for quantum systems in anharmonic environments*. CHEMICAL PHYSICS LETTERS 291, p101 (1998)

[13] Thompson, K. C., Jordan, M. J. T., and Collins, M. A. *Polyatomic molecular potential energy surfaces by interpolation in local internal coordinates*. JOURNAL OF CHEMICAL PHYSICS 108, p8302 (1998)

[14] Thompson, K. C., Jordan, M. J. T., and Collins, M. A. *Molecular potential energy surfaces by interpolation in Cartesian coordinates*. JOURNAL OF CHEMICAL PHYSICS 108, p564 (1998)

[15] Thompson, K. C. and Collins, M. A. *Molecular potential-energy surfaces by interpolation: Further refinements*. JOURNAL OF THE CHEMICAL SOCIETY-FARADAY TRANSACTIONS 93, p871 (1997)

[16] JORDAN, M. J. T., THOMPSON, K. C., and COLLINS, M. A. *The utility of higher-order derivatives in constructing molecular potential energy surfaces by interpolation*. JOURNAL OF CHEMICAL PHYSICS 103, p9669 (1995)

[17] JORDAN, M. J. T., THOMPSON, K. C. and COLLINS, M. A. *Convergence of molecular potential energy surfaces by interpolation: application to the* $OH+H_2 \rightarrow H_2O+H$ *reaction*. JOURNAL OF CHEMICAL PHYSICS 102, p5647 (1995)

[18] CLARKE, D. L., THOMPSON, K. C. and GILBERT, R. G. *Supercollision events in weak collisional energy-transfer of highly excited species*. CHEMICAL PHYSICS LETTERS 182, p 357 (1991)