

## **CSTCC2016**

## 27th Canadian Symposium on Theoretical and Computational Chemistry

July 10-15, 2016 University of Regina Regina, Saskatchewan

Confirmed speakers (updated March 2, 2016):

Paul Ayers, McMaster University, Canada
Axel Becke, Dalhousie University, Canada
Styliani Constas, University of Western Ontario, Canada
T. Daniel Crawford, Virginia Tech University, USA
Radu Iftimie, University of Montreal, Canada
Ahren W. Jasper, Sandia National Labs, USA
Erin Johnson, Dalhousie University, Canada
James T. Kindt, Emory University, USA
Steven J. Klippenstein, Argonne National Labs, USA
Andriy Kovalenko, National Research Council, Canada
Ronald M. Levy, Temple University, USA
Hiromi Nakai, Waseda University, Japan
Marco A. C. Nascimento, U. Federale Rio de Janiero, Brazil

Neil S. Ostlund, Chemical Semantics, Inc., USA Irina Paci, University of Victoria, Canada Ray Poirier, Memorial University, Canada Matthew I. J. Probert, University of York, U.K. Arvi Rauk, University of Calgary, Canada Ivan Saika-Voivod, Memorial University, Canada Dennis Salahub, University of Calgary, Canada George C. Schatz, Northwestern University, USA Jeremy Schofield, University of Toronto, Canada Georg Schreckenbach, University of Manitoba, Canada Michael Schuurman, National Research Council, Canada **Dvira Segal**, University of Toronto, Canada Tamar Seideman, Northwestern University, USA Viktor Staroverov, University of Western Ontario, Canada Mark Thachuk, University of British Columbia, Canada Ajit Thakkar, University of New Brunswick, Canada Mark E. Tuckerman, New York University, USA Tom Woo, University of Ottawa, Canada Josef Zwanziger, Dalhousie University, Canada

Last modified April 18, 2016 (AE)

	Monday	Tuesday	Wednesday	Thursday	Friday
9:00	Discussion Leader: J. S. Tse 9:00 Opening remarks, followed by Compute Canada presentation by R. K. Bowles	Discussion Leader: J. W. Hollett 9:00 Marco A. C. Nascimento Quantum Interference and the Nature of the Chemical Bond	Free time	Discussion Leader: A. J. Thakkar 9:00 T. Daniel Crawford Reduced Scaling Coupled Cluster Linear Response Theory	Discussion Leader: A. L. L. East 9:00 Neil S. Ostlund Applying the Semantic Web to Quantum Chemistry
9:40	9:40 George C. Schatz Self-assembled plasmonic structures	9:40 Raymond A. Poirier  Molecular Density and Radial density:  Properties of Atoms and Bonds in  Molecules		9:40 Paul W. Ayers Learning New, and Old, Chemical Concepts from Data	9:40 Matt I. J. Probert Quantum Dynamics of Hydrogen
10:20	10:20 Coffee break	10:20 Coffee break		10:20 Coffee break	10:20 Coffee break
10:50	Discussion Leader: E. R. Johnson 10:50 Josef W. Zwanziger Photoelasticity of glass	Discussion Leader: R. Fournier 10:50 Erin R. Johnson Dispersion-corrected DFT for Molecular Crystals and Polymorphism		Discussion Leader: M. E. Mandy 10:50 Styliani Consta Star morphologies of charged droplets beyond Rayleigh limit	Discussion Leader: R. K. Bowles  10:50 Ivan Saika-Voivod Inspiration from water: melting by cooling and the freezing of nanodroplets
11:30	11:30 Irina Paci Optical and dielectric properties of metal/polymer nanocomposites	11:30 Georg Schreckenbach Modelling of one- and two-dimensional systems: mineral surfaces, interfaces, polymers, two-dimensional materials		11:30 James T. Kindt Breaking the law of mass action: analyzing aggregation statistics from unbiased simulations of small systems	11:30 Tom K. Woo Materialsinformatics: Datamining and Machine Learning Recognition of High Performance Materials for Carbon Capture
12:10	Lunch break (catered)	Lunch break (catered)	12:50 CATC Honourary Lecture	Lunch break (catered)	Lunch break (catered)
			Introduction: Dennis Salahub		
1:10		Discussion Leader: A. L. L. East 1:10 Michael S. Schuurman Substituent Effects on Dynamics at Conical Intersections	Arvi Rauk From Small Molecules to Large: Twists and Turns	Discussion Leader: R. Z. Khaliullin  1:10 Axel D. Becke  Tests of a new approach to excited-state energy computations	Discussion Leader: R. C. Mawhinney 1:10 Hiromi Nakai Harmonic Solvation Model (HSM) to Evaluate Condensed-Phase Thermochemistry
1:50	Discussion Leader: P. G. Kusalik  1:50 Dennis R. Salahub  Multiscale Modeling of Chemical Reactions in Complex Environments	1:50 Ajit J. Thakkar Why and how should constrained dipole oscillator strength distributions be constructed?	Discussion Leader: A. Brown 1:50 Mark Thachuk Description and Control of Dissociation Channels in Gas-Phase Protein Complexes	1:50 Viktor N. Staroverov Origin of the step structure of molecular exchange-correlation potentials	1:50 Jeremy Schofield Simple microscopic models of complex systems
2:30	2:30 Andriy Kovalenko [cancelled – no show] [Dennis Salahub continued his talk after the ~ 20 minute power outage]	2:30 T. Seideman Sai Ramakrishna Current-driven dynamics in molecular- scale electronics [Sai is Tamar's research associate]	2:30 Ronald M. Levy Exploring Free Energy and Fitness Landscapes of Proteins for Molecular Recognition, Binding, and Allostery	2:30 Poster session B	2:30 Mark E. Tuckerman Exploration and generation of free energy landscapes of molecular crystals and oligopeptides
3:10	3:10 Coffee break	3:10 Poster Session A	3:10 Coffee break		3:10 Radu Iftimie Donor-Bridge-Acceptor Proton Transfer in Aqueous Solution
3:40	Discussion Leader: G. H. Peslherbe 3:40 Stephen J. Klippenstein From Theoretical Reaction Dynamics to Combustion Modeling		Discussion Leader: C. C. Pye 3:40 Dvira Segal Rene Fournier Global optimization-density functional theory study of tin oxide clusters	4:00 CATC Annual General Meeting	3:50 Afterparty at the Owl (campus pub) (cash bar)
4:20	4:20 Ahren W. Jasper Multistate trajectory and statistical theories of spin-forbidden kinetics		4:20 Hiromi Nakai [postponed to Friday 1:10 due to illness] [replaced by two 20-minute bonus talks by Ron Levy and Mark Tuckerman]		
5:00	•	<b>-</b>	·		

5:00

7:00-10:00 Sunday Reception & Registration 7:00 Banquet, DoubleTree Hilton ~8:00 banquet speaker: Raymond Francis, NASA Jet Propulsion Laboratory

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