

# *Curriculum Vitae*

## **Robin Côté**

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### **CAREER HIGHLIGHTS**

**Research:** ultracold physics & chemistry, quantum information science, mesoscopic systems.

- over 120 publications.
- impact (google scholar statistics): over 6,000 citations; h-index = 37; 10-index = 78.
- mentoring 8 Ph.D. graduated (major advisor), 10 Postdoctoral researchers.

**Grants:** over \$3,000,000 awarded in the last 5 yrs (DOE, NSF, ARO, AFOSR).

#### **Awards, honors, and achievements:**

- Fast track promotions: tenured in 5 yrs (2004), promoted to Full Prof. in 4 yrs (2008).
- Willis E. Lamb Award for Laser Science and Quantum Optics (2016).
- Member Connecticut Academy of Science and Engineering (2013).
- APS Outstanding Referee Award (lifetime award) (2008).
- Visiting Fellow at the Joint Institute for Laboratory Astrophysics, Boulder (2008).
- Fellow American Physical Society (APS) (2007).
- Cottrell Research Innovation Award from the Research Corporation (2001).
- ITAMP Postdoctoral Fellowship, Harvard-Smithsonian Center for Astrophysics (1996).

**Editor:** ICAP 2008 (Proceedings & Book of Abstracts); Guest-Editor J. Phys. B (2005 & 2015).

#### **Review panels and Laboratory assessments**

- Granting agencies programs: NSF (Theory & EMT); DOE (INCITE); NASA (CAL).
- Laboratories (assessed): *Laboratoire Aimé Cotton* (France: 2008); *Los Alamos National Laboratory (Quantum Information Program)* (USA: 2012).

**Organizer:** KITP Universality in Few-Body Systems (2016); ICAP (2008); DAMOP & March meeting (several sessions); Rydberg Physics (2004).

#### **Current Committees, Panels, and Advisory & Review Boards:**

- NASA Fundamental Physics Science Standing Review Board (CAL, Intl. Space Station).
- APS Panel on Public Affairs (POPA).
- DAMOP: Executive Committee; Fellowship Committee.
- Canadian Association of Physicists (CAP) Herzberg Medal Selection Committee.
- Intl. Conf. Photonic, Electronic and Atomic Collisions (ICPEAC) General Committee.
- Institute for Atomic, Molecular, and optical Physics (ITAMP) Advisory Board.
- Intl. Conf. on Atomic Physics (ICAP) International Advisory Committee.

## EDUCATION

**Harvard-Smithsonian Center for Astrophysics** Cambridge, MA  
ITAMP Postdoctoral Fellow (1996-1999). Explored theoretical aspects of ultracold physics (photoassociation, quantum degenerate gases, ultracold molecules).

**Massachusetts Institute of Technology** Cambridge, MA  
Ph.D. in Physics (1995). Thesis under Prof. A. Dalgarno (Harvard) and Prof. D. Kleppner (MIT) on “Ultra-Cold Collisions of Identical Atoms”.

**Université Laval** Québec, QC  
M.Sc. in Physics (1989). Thesis under Prof. L.J. Dubé on fractal geometry and dynamical systems in statistical mechanics: “Phénomènes Critiques et Géométrie Fractale”.

**Université du Québec à Rimouski (UQAR)** Rimouski, QC  
B.Sc. in Physics (1987). Specialized in Physical Oceanography and fluid dynamics. Analyzed tidal data of global oceans and major seas.

## ACADEMIC EXPERIENCE

**University of Connecticut** Storrs, CT  
Assistant (Aug. 1999), Associate (Aug. 2004), and Full Professor (Aug. 2008) of Physics.  
Associate Head (Fall 2014 – ).  
– Research: supervised undergraduate (7), graduate (8), and postdoctoral (10) researchers.  
– Teaching: graduate (Physics) and undergraduate courses (non-physics major students).

## AWARDS AND FELLOWSHIPS

- 2016: Awarded the Willis E. Lamb Award for Laser Science and Quantum Optics at the Physics of Quantum Electronics (PQE) meeting.
- 2013: Elected Member of the Connecticut Academy of Science and Engineering (CASE).
- 2008: Selected for the APS Outstanding Referee Award (APS lifetime award).
- 2008: Elected Visiting Fellow at JILA (Joint Institute for Laboratory Astrophysics, Boulder).
- 2007: Elected Fellow of the American Physical Society (APS).
- 2001: Received the Cottrell Research Innovation Award from the Research Corporation for Science Advancement (Arizona).
- 2000: Received the UConn Chancellor’s Research Excellence Award.
- 2000: Awarded the UConn Junior Faculty Summer Fellowship.
- 1996: Selected as the Postdoctoral Fellow at ITAMP (Institute for Theoretical Atomic, Molecular, and Optical Physics at Harvard: only one position offered per year).

## VISITING/ADJUNCT POSITIONS

- 2013 – 2014: Visiting Professor at the Institute for Quantum Computing (IQC) at the University of Waterloo (Ontario, Canada).
- 2010 – 2013: Summer Visiting Professor (Triangle de la Physique) at the Institut d’Optique, and Laboratoire Aimé Cotton (France).

- 2010 – 2011: Adjunct Research Professor in the Physics Department, Brown University.
- 2009 – 2010: Visiting Professor in the Physics Department, Brown University.
- 2009: Awarded a Chaire invitée from IFRAF (Institut Francilien de recherche sur les atomes froids) at Ecole Normale Supérieure and Institut d’Optique (France).
- 2008: Selected as Professeur invité (poste rouge) at the Laboratoire Charles Fabry, Institut d’Optique, Ecole Polytechnique (France).
- 2000: Visiting Professor at the Max-Planck Institute für Kernphysik in Heidelberg (Germany).

## STUDENT SCHOLARSHIPS, FELLOWSHIPS, AND AWARDS

Name	Location	Period
Los Alamos Fellowship	Los Alamos National Laboratory / University of New Mexico	1992
FCAR Doctoral Scholarship	Massachusetts Institute of Technology	1989-1992
NSERC Doctoral Scholarship	Massachusetts Institute of Technology	1989-1991
FCAR Master’s Scholarship	Université Laval	1987-1989
NSERC Master’s Scholarship	Université Laval	1987-1989
Academic Award, Dean’s list in Physics and Chemistry	Université du Québec à Rimouski	1987
NSERC Summer Scholarship	Université du Québec à Rimouski	1985-1986-1987

## PROFESSIONAL ASSOCIATIONS

Present or past member of the following associations:

American Physical Society (Fellow),  
 American Association of Physics Teachers,  
 Canadian Association of Physicists,  
 American Chemical Society.

## OTHER WORK AND TEACHING EXPERIENCE

**McKinsey & Company** Montréal, QC  
 Management Consultant (1995-1996). Solved problems related to strategies, organization, operation, and production at large North American firms in various industries. Examples are banking (Mortgage and Marketing divisions), food industry manufacturers, and telecommunications. The projects involved participating in teams with high-ranking management client teams.

**American Physical Society** Washington, DC  
*November 6-9 1999* : Workshop for New Physics Faculty. Participated in an intensive workshop to improve effectiveness in teaching Physics at both undergraduate and graduate levels. Learned latest educational techniques, and how to integrate new technologies in the classroom.

## SERVICES TO THE COMMUNITY (at large)

### Editor, Referee and Reviewer

- Editor of ICAP 2008 Proceedings, and Book of Abstracts.
- Guest-Editor for the Special Issue of the Journal of Physics B for Alex Dalgarno (2015-2016).
- Guest-Editor for the Special Issue of the Journal of Physics B on Rydberg Physics (2004-2005).
- Referee for Physical Review A, Physical Review Letters, European Journal of Physics, European Physics Letters, Optics Express, Physica Scripta, Journal of Chemical Physics, Chemical Physics Letters, Physical Chemistry Chemical Physics, and other journals.
- Reviewer of proposals to the National Science Foundation (N.S.F.) for various programs (Theory, AMO, PIF, EMT, MRI), the Department of Energy (D.O.E.) for various program (BES, INCITE, Career), the Army Research Office (A.R.O.), the Cottrell Research Corporation, the Binational Israel-USA BSF program, the European Science Foundation, and the UConn Research Foundation.

### Panels and Commissions

- NASA: Review Panel for the Cold Atom Laboratory (CAL) Program (2014).
- Outside panel member, evaluation of the *Quantum information program at Los Alamos National Laboratory*, Feb. 2012.
- NSF Panels: Theory Program & EMT Program.
- DOE: INCITE Program (to DOE supercomputing facilities).
- International member of the *Commission d'évaluation du Laboratoire Aimé Cotton* (France) in 2008.

**ITAMP Advisory Board:** Member (2012 – ) advising the Director of the Institute for Atomic, Molecular, and optical Physics (ITAMP) at the Harvard-Smithsonian Center for Astrophysics (CfA), and the Director of the CfA in matters related to ITAMP.

**NASA-PSSRB:** Member (2014 – ) of the NASA Fundamental Physics Science Standing Review Board (PSSRB) for the Cold Atom Laboratory (CAL) of the International Space Station (ISS).

### American Physical Society (APS)

- Elected (2014 – ) to the Panel on Public Affairs (POPA) which produces official statements and reports for the APS.
- Member of the POPA Energy & Environment Subcommittee (2014 – ).

**Canadian Association of Physicists (CAP):** International member of the Selection Committee (2013 – ) for the Herzberg Medal of Physics recognizing the achievements a canadian physicist in his/her early career (within 12 years of their Ph.D.).

### DAMOP

- elected member of the Executive Committee (2013 – ).
- member of the Fellowship Committee (2013 – 2015).
- Doctoral Thesis Award Committee: member (2007) and Chair (2008).

### International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC)

- Selected as member of the General Committee (2013 – ).

## **SERVICES TO THE COMMUNITY (cont'd)**

### **International Conference on Atomic Physics (ICAP)**

- Member of the International Advisory Committee (since 2009).
- Co-Chair of the organizing committee of ICAP 2008, held at UConn in the Summer 2008.

### **APS March Meeting 2011 (Dallas TX)**

- Organizer of session H6 *Ultracold molecules and Quantum Many Body Physics*.
- Chair of session B6 *Few-body Aspects of Cold Atomic Gases*.

**CLEO Europe-EQEC 2011:** Member of the Technical Program Committee.

### **TAMOC**

Chair (2008-2010) of the Theoretical Atomic, Molecular, and Optical Community, a forum for communication among AMO theorists and with the AMO community at large within the American Physical Society's (APS) Division of Atomic, Molecular, and Optical Physics (DAMOP).

**NLS 2008:** Organizer of the session on *Cold Molecules* of the New Laser Science meeting in Rochester (NY), October 10-12 2008.

### **ARO Workshop 2005**

Co-organizer with S. Yelin (UConn), D. DeMille (Yale) and J. Doyle (Harvard) of a Workshop sponsored by ARO on *Polar Molecules for Quantum Computing*, Arlington, September 1 2005.

### **Rydberg Atoms 2004**

Co-organizer of the Workshop on Rydberg Atoms sponsored by the Max-Planck Institute held in Dresden during April 19th - May 14th 2004. Editor of associated Journal of Physics B Special Issue.

### **DAMOP 2004 (Tucson, AZ)**

Chair of the Invited Session S1 - *Cold and Bose-Condensed Molecules*. 29 May 2004.

### **UConn/ITAMP Open House**

Co-organizer of the joint open house, September 13, 2003 (Cambridge, MA), February 5, 2005 (Storrs, CT), October 28, 2006 (Cambridge, MA), and March 1, 2008 (Storrs, CT).

### **CM2002 Les Houches**

Member of the Scientific Committee of CM2002: Cold Molecules and Bose-Einstein Condensation. International workshop held at Les Houches (France), March 3-8, 2002.

### **DAMOP 2000**

Member of the local organizing committee of the *31<sup>st</sup> Annual Meeting* of the Division of Atomic, Molecular, and Optical Physics (DAMOP) of the American Physical Society (APS), held at the University of Connecticut in Storrs, from June 14-June 17, 2000.

### **Organization of ITAMP Cold Atom Topical Group**

During my appointment at ITAMP, I have been in charge of the ITAMP Cold Atom Topical Group. I organized informal meetings (bi-weekly basis) on different aspects of ultracold atomic physics.

## SERVICES TO THE UCONN COMMUNITY

### Member of the UConn following committees:

- Committee on the Future of the Physics Department (2014 – ),
- Outreach Activities Committee (Spring 11 - present),
- Promotion-Tenure-Reappointment Committee (Fall 04 - Spring 07, Fall 09 - present (Chair '10)),
- Development and Alumni Committee (Fall 03 - present, Chair: Fall 08 - present),
- Advisory Committee (Fall 07- Spring 11),
- Quantum Information Committee (Chair: Fall 09 - present),
- Hascoe Distinguished Lectures Organizing Committee (Fall 03 - Spring 12),
- Computer Committee (Fall 99 - present),
- Dean's Committee on committees (Fall 05 - Spring 07),
- Faculty position Search Committee (Fall 03 - Fall 04, Spring 11),
- Preliminary Exam Committee (Spring 00 - Fall 05).

### QISS (Quantum Information Seminar Series)

Organizer of this multidisciplinary series brings together members of Physics, Chemistry, Computer Science, Mathematics, and Electrical Engineering departments since 2001.

### REU program

- Summer 2000-2003: initiated seven undergraduate students to research in theoretical AMO physics (coaching on how to use analytical and numerical tools, write and debug computer codes, and write their findings in a scientific fashion).
- Summer 1999: I gave the talk “The life of Robin ... a true story” describing the various stages and choices in my professional life, and discussed the many facets of teaching and research in physics.

## RESEARCH GRANTS

### • Current

**National Science Foundation** (09/01/2014 - 08/31/2017) **\$225,000**

(PI) PHY-1415560 PIF Program: *Molecular ions: an hybrid atom-ion platform to generate quantum states*. Research grant to investigate the use of ultracold ions and atoms to engineer non-trivial quantum states, and implement quantum gates.

**Department of Defense** (07/01/2014 - 06/30/2019) **\$6,250,000**

(Co-PI) MURI (ARO: Topic 7 – Ultracold Molecular Ion Reactions): *Precision Chemical Dynamics and Quantum Control of Ultracold Molecular Ion Reactions* (\$602,000 of the total \$6,250,000). Members – UCLA: E. Hudson (PI) – Georgia Tech: K. Brown – Emory U.: M. Heaven – Temple U.: S. Kotochigova – Northwestern U.: Brian Odom – Wayne State U.: A. Suits.

**Department of Defense** (06/25/2013 - 06/24/2016) **\$449,310**

(PI) Grant from the Army Research Office (ARO: Chemistry Division): *Controlling Ultracold Chemical Reactions*. Research grant to study chemical reactive processes in the ultracold regime, and devise ways to control them, *e.g.*, by using Rydberg-dressed interactions.

**Department of Energy** (11/01/2011-10/31/2015) **\$306,000**

(PI) Grant from the Office of Basic Research: *Formation of Ultracold Molecules*. Continuing research grant to investigate various avenues to form ultracold molecules, both homonuclear and heteronuclear molecules; photoassociation, Feshbach resonances, etc.

### • Completed: : Quantum Information Science & Nanoscience

**National Science Foundation** (09/18/2008-09/17/2011) **\$550,488**

(Co-PI) Grant CCF-0835735 CDI Type-I: *Quantum Diffusion and Quantum Random Walks in Physical Systems*. Research grant to investigate the links between quantum random walk and quantum diffusion in realistic systems. \$275,244 of the total (PI: Alex Russell) .

**National Science Foundation** (09/01/2008-08/31/2011) **\$225,000**

(Co-PI) Grant PHY-0803619: *Molecular arrays for dipole-based quantum information processing*. Research on a new platform (polar molecules) for quantum information processing. \$112,500 of the total (PI: S. Yelin).

**Army Research Office** (10/01/2006-09/31/2009) **\$225,000**

(PI) Broad Agency Announcement W911NF-05-R-0009: *Robust quantum computing using molecules with switchable dipoles*. (Short-Term, Innovative Concept Proposal (STIC)). \$112,500 of the total (Co-PI: S. Yelin).

**National Science Foundation** (08/23/2005-08/22/2009) **\$300,000**

(PI) Grant CCF-0523431: *Quantum Information Processing with Quantum Random Walks*. Research grant to investigate the use Quantum Random Walks with realistic systems such as Rydberg atoms in an optical lattice, taking into account physical constraints such as variations in the position of lattice sites, or multiple walkers. \$150,000 of the total (Co-PI's: A. Russell).

**National Science Foundation** (09/01/2006-08/31/2008) **\$148,000**  
(Co-PI) Grant PHY-0555553: *Dipolar switching for robust quantum computation with polar molecules*. Research on a new platform for quantum information processing, i.e. polar molecules. \$74,000 of the total (PI: S. Yelin).

**UConn Research Foundation** (Sept. 2001- May. 2006) **\$2,000**  
(PI) Grant title: *Quantum Information Seminar Series (QISS)*. Grant to start a new interdisciplinary seminar series on quantum information.

**Cottrell Research Corporation** (June 2001- May 2003) **\$35,000**  
(PI) Research Innovation Awards Program: *Quantum information processing with neutral atoms: study of ultrafast quantum gates using ultracold Rydberg atoms*. Research grant to study theoretical aspects of quantum information processing with Rydberg atoms.

**National Science Foundation** (08/01/2000-07/31/2005) **\$499,986**  
(PI) Information Technology Research Program: *Quantum Information Processing with Ultracold Rydberg Atoms*. Research grant to investigate the use of ultracold Rydberg atoms to realize entangled states and quantum phase gates for quantum computing. \$200,000 of the total (Co-PI's: P.L. Gould, E.E. Eyler).

**UConn Research Foundation Large Grant Competition** (2000 - 2001) **\$22,908**  
(PI) Grant title: *Quantum Computing with Rydberg Atoms*. Research grant to study how ultracold Rydberg atoms can be used to create universal quantum gates.

• **Completed: : Ultracold Systems**

**National Science Foundation** (09/01/2011-08/31/2015) **\$261,000**  
(PI) Grant PHY-1101254: *Scattering in ultracold samples*. Research grant to investigate scattering properties of ultracold atoms with other ultracold atoms or ions, taking into account the effect of external fields.

**Department of Defense** (06/01/2009 - 01/31/2015) **\$7,000,000**  
(Co-PI) MURI (AFOSR: Topic 12 – Ultracold Molecules): *Production, Manipulation, and Applications of Ultracold Molecules* (\$444,480 of the total \$7,000,000). Members – UConn: S. Yelin (PI), P. Gould, E. Eyler, and W. Stwalley – Harvard: J. Doyle and E. Demler – MIT: W. Ketterle and I. Chuang – Yale: D. DeMille – Temple: S. Kotochigova – JILA: J. Bohn, J. Ye, D. Jin, and H. Lewandowski.

**Department of Energy** (08/01/2008-10/31/2011) **\$306,000**  
(PI) Grant from the Office of Basic Research: *Formation of Ultracold Molecules*. Continuing research grant to investigate various avenues to form ultracold molecules, both homonuclear and heteronuclear molecules; photoassociation, Feshbach resonances, etc.



**National Science Foundation** (09/01/2007-08/31/2011) **\$210,000**  
(PI) Grant PHY-0653449: *Probing fundamental physics with ultracold systems*. Research grant to investigate the use of ultracold atoms to probe fundamental physics, especially through ultracold atom-atom and atom-ion collisions where external fields are important.

**Department of Energy** (08/01/2005-07/31/2008) **\$306,000**  
(PI) Grant from the Office of Basic Research: *Formation of Ultracold Molecules*. Research grant to investigate various avenues to form ultracold molecules, both homonuclear and heteronuclear molecules; photoassociation, Feshbach resonances, etc.

**National Science Foundation** (09/01/2004-08/31/2007) **\$180,000**  
(PI) Grant PHY-0355030: *Ultracold Atoms to Probe Fundamental Physics*. Research grant to investigate the use of ultracold atoms to probe fundamental physics, especially through ultracold collisions where hyperfine interactions and magnetic fields are important.

**National Science Foundation** (09/01/2002-08/31/2004) **\$80,000**  
(PI) Grant PHY-0140290: *Ultracold Atoms for Probing Fundamental Physics*. Research grant to investigate the use of ultracold atoms to probe fundamental physics.

**UConn Research Foundation Large Grant Competition** (Jan. - Dec. 2003) **\$14,617**  
(PI) Grant title: *Ultracold atomic samples doped with charged particles*. Research grant to study how atomic samples doped with ions behave at ultralow temperatures.

**National Science Foundation** (09/01/1999-08/31/2002) **\$90,000**  
(PI) Grant PHY-9970757: *Ultracold Atoms to Probe Fundamental Physics*. Research grant to investigate the use of ultracold atoms to probe fundamental physics, and create quantum optics devices.

**UConn Research Foundation Annual Equipment Award** (Spring 2000) **\$16,066**  
(Co-PI) Grant title: *A seed for a Physics Simulation Farm using Commodity Processors and Internet 2 Communications*. Research grant to construct a computer farm with large scale data analysis and parallel computing (PI: R. Jones, Co-PI: J. Javanainen).

## LIST OF CONTRIBUTIONS

# of citations: 6100, h-index: 37 (source: Google Scholar, August 31, 2015)

### Publications

123. I. Simbotin and R. Côté. “Jost function description of near threshold resonances for coupled-channel scattering.” *Chemical Physics* (In Press, available on line July 2 2015).
122. Jia Wang, Marko Gacesa, and Robin Côté, “Rydberg Electrons in a Bose-Einstein Condensate.” *Phys. Rev. Lett.* **114**, 243003 (2015).
121. Ionel Simbotin and Robin Côté, “Effect of nuclear spin symmetry in cold and ultracold reactions: D + para/ortho-H<sub>2</sub>.” *New J. Phys.* **17**, 065003 (2015).
120. R. Côté “Ten Years of Nature Physics - Jack of all trades.” *News & Views, Nature Phys.* **11**, 219-220, March 2015.
119. Jia Wang, Jason N. Byrd, Ion Simbotin, and R. Côté, “Tuning ultracold chemical reactions via Rydberg-dressed interactions.” *Phys. Rev. Lett.* **113**, 025302 (2014).
118. I. Simbotin, S. Ghosal, and R. Côté, “Threshold resonance effects in reactive processes.” *Phys. Rev. A* **89**, 040701(R) (2014).
117. Marko Gacesa and Robin Côté, “Photoassociation of ultracold molecules near a Feshbach resonance as a probe of the electron-proton mass ratio variation.” *J. Mol. Spect.* **300**, pp. 124-130 (June 2014).
116. Robin Côté, “Ultracold Molecules: Their Formation and Application to Quantum Computing.” *Advances in Chemical Physics* **154**, Chap. 7, pp. 403-448 John Wiley and Sons (New York) (2014).
115. W. W. Smith, D.S. Goodman, I. Sivarajah, J.E. Wells, S. Banerjee, R. Côté, H.H. Michels, J.A. Montgomery Jr., and F.A. Narducci, “Experiments with an ion-neutral hybrid trap: cold charge-exchange collisions.” *Appl. Phys. B* **114**, Issue 1-2, pp 75-80 (2014).
114. M. Gacesa, S. Ghosal, J.N. Byrd, and R. Côté, “Feshbach-optimized photoassociation of ultracold <sup>6</sup>Li<sup>87</sup>Rb molecules with short pulses.” *Phys. Rev. A* **88**, 063418 (2013).
113. Jason N. Byrd, H. Harvey Michels, John A. Montgomery, Jr., and Robin Côté, “Associative detachment of rubidium hydroxide.” *Phys. Rev. A* **88**, 032710 (2013).
112. Nolan Samboy and Robin Côté, “Rubidium Rydberg linear macrotrimers.” *Phys. Rev. A* **87**, 032512 (2013).
111. Jason N. Byrd, John A. Montgomery, Jr., and Robin Côté, “Controllable Binding of Polar Molecules and Metastability of One-Dimensional Gases with Attractive Dipole Forces.” *Phys. Rev. Lett.* **109**, 083003 (2012).

110. Jason N. Byrd, John A. Montgomery, Jr., and Robin Côté, “Long-range forces between polar alkali-metal diatoms aligned by external electric fields.” *Phys. Rev. A* **86**, 032711 (2012).
109. Sandipan Banerjee, John A. Montgomery, Jr., Jason N. Byrd, H. Harvey Michels, and Robin Côté, “Ab initio potential curves for the X  $^2\Sigma_u^+$ , A  $^2\Pi_u$ , and B  $^2\Sigma_g^+$  states of  $\text{Ca}_2^+$ .” *Chem. Phys. Lett.* **542**, 138-142 (2012).
108. Jason N. Byrd, H. Harvey Michels, John A. Montgomery, Jr., and Robin Côté, “Long-range three-body atom-diatom potential for doublet  $\text{Li}_3$ .” *Chem. Phys. Lett.* **529**, 23 (2012).
107. Jason N. Byrd, H. Harvey Michels, John A. Montgomery, Robin Côté, and William C. Stwalley, “Structure, energetics, and reactions of alkali tetramers.” *J. Chem. Phys.* **136**, 014306 (2012).
106. E. Kuznetsova, T. Bragdon, R. Côté, and S. Yelin, “Cluster-state generation using van der Waals and dipole-dipole interactions in optical lattices.” *Phys. Rev. A* **85**, 012328 (2012).
105. Jason N. Byrd, Robin Côté, and John A. Montgomery, “Long-range interactions between like homonuclear alkali metal diatoms.” *J. Chem. Phys.* **135**, 244307 (2011).
104. Elena Kuznetsova, S. F. Yelin, and Robin Côté, “An atom-molecule platform for quantum computing.” *Quantum Inf. Process.* **10**, pp. 821838 (2011).
103. Nolan Samboy and Robin Côté, “Rubidium Rydberg macrodimers.” *J. Phys. B* **44**, 184006 (2011).
102. Elena Kuznetsova, Robin Côté, and S. F. Yelin, “Coherent laser manipulation of ultracold molecules.” In *Femtosecond-Scale Optics, Chap. 3*, pp. 53-86, Editor Anatoli V. Andreev, InTech Open Access Publisher (2011). ISBN 978-953-308-56-9, (<http://www.intechopen.com/books/femtosecond-scale-optics>).
101. Nolan Samboy, Jovica Stanojevic, and Robin Côté, “Formation and properties of Rydberg macrodimers.” *Phys. Rev. A* **83**, 050501(R) (2011).
100. Ion Simbotin, Subhas Ghosal, and Robin Côté, “A case study in ultracold reactive scattering:  $\text{D} + \text{H}_2$ .” *Phys. Chem. Chem. Phys.* **13**, pp. 19148-19155 (2011).
99. Peng Zhang, Alexander Dalgarno, Robin Côté, and Enrico Bodo, “Charge exchange in collisions of beryllium with its ion.” *Phys. Chem. Chem. Phys.* **13**, pp. 19026-19035 (2011).
98. Marko Gacesa, Hans-Reinhard Müller, Robin Côté, and Vasili Kharchenko “Polarization of the charge-exchange X-rays induced in the Heliosphere.” *Astrophysical J. Lett.* **L 21**, 732 (2011).
97. T.V. Tscherbil Z. Pavlovic, H.R. Sadeghpour, R. Côté, and A. Dalgarno, “Collisions of trapped molecules with slow beams.” *Phys. Rev. A* **82**, 022704 (2010).
96. J.N. Byrd, J.A. Montgomery, Jr., and R. Côté, “Structure and thermochemistry of  $\text{K}_2\text{Rb}$ ,  $\text{KRb}_2$ , and  $\text{K}_2\text{Rb}_2$ .” *Phys. Rev. A* **82**, 010502 (2010).

95. S. Banerjee, J.N. Byrd, R. Côté, H.H. Michels, and J.A. Montgomery Jr., “Ab initio potential curves for the  $X^2\Sigma_u^+$  and  $B^2\Sigma_g^+$  states of  $\text{Be}_2^+$ : Existence of a double minimum.” *Chem. Phys. Lett.* **496**, 208 (2010).
94. J. Deiglmayr, A. Grochola, M. Repp, R. Wester, M. Weidemüller, O. Dulieu, P. Pellegrini, and R. Côté, “Corrigendum: Influence of a Feshbach resonance on the photoassociation of LiCs [2009 New J. Phys. 11 055034].” *New J. Phys.* **12**, 079802 (2010).
93. R. Côté, E. Juarros, and Kate Kirby, “Formation of polar molecules in a single quantum state.” *Phys. Rev. A* **81**, 060704 (2010).
92. Z. Pavlovic, H.R. Sadeghpour, R. Côté, and B.O. Roos, “A molecule with large magnetic and electric dipole moments: CrRb.” *Phys. Rev. A* **81**, 052706 (2010).
91. J. Stanojevic and R. Côté, “Many-body dynamics of Rydberg excitation using the  $\Omega$ -expansion.” *Phys. Rev. A* **81**, 053406 (2010).
90. E. Kuznetsova, M. Gacesa, S. F. Yelin, and R. Côté, “Phase gate and readout with an atom-molecule hybrid platform.” *Phys. Rev. A* **81**, 030301 (2010).
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### **Major manuscripts in preparation**

- R. Côté and Alex Dalgarno, “Ultracold Physics.” Textbook for advance graduate students. In preparation.
- R. Côté and M. Weidemüller, “Few- and many-body physics with ultracold Rydberg gases.” In preparation, invited review paper for Reviews of Modern Physics.

### **Invited talks, lectures, seminars, and workshop presentations**

163. R. Côté “AM4: Ultracold Collisions.” Invited presentations at the conference *Dynamics of Molecular Collisions XXV: 50 Years of Reaction Dynamics*, Asilomar Conference Center, Pacific Grove, California, July 16, 2015.
162. R. Côté “Rydberg Electrons in a Bose-Einstein Condensate.” Seminar at the Universidad Computense, Madrid (Spain), Monday, July 6, 2015.

161. R. Côté “Rydberg Electrons in a Bose-Einstein Condensate.” Physics Seminar, Physics Department, University of British Columbia (Canada) Tuesday June 23, 2015.
160. R. Côté “Few- and many-body physics with ultracold Rydberg gases.” Seminar at the Pennsylvania State University, State College (PA) Thursday, January 26, 2015.
159. R. Côté “Rydberg Electrons in a Bose-Einstein Condensate.” Plenary Talk at the 45th Winter Colloquium on *The Physics of Quantum Electronics*, Monday January 5 2015, , Snowbird, Utah, January 4-8, 2015.
158. R. Côté “Rydberg Electrons in a Bose-Einstein Condensate.” Seminar at the University of Massachusetts - Boston, Boston (MA) Thursday, December 11, 2014.
157. R. Côté “Charge exchange between isotopes in ultracold atom-ion systems” Invited talk at the *Precision Chemical Dynamics and Quantum Control of Ultracold Molecular Ion Reactions MURI Review* (organized by ARO), UCLA, November 21, 2014.
156. R. Côté “Near-threshold resonances in ultracold Chemistry” Invited talk at the *High-Resolution Quantum Control of Chemical Reaction MURI Review* (organized by ARO), UCLA, November 20, 2014.
155. R. Côté “Controlling ultracold chemical reactions via Rydberg-dressed interactions.” Seminar at the Universidad Complutense, Madrid (Spain), Wednesday, July 30, 2014.
154. R. Côté “Controlling ultracold chemical reactions via Rydberg-dressed interactions.” Seminar at the Laboratoire Aimé Cotton, Orsay (France), Thursday, July 24, 2014.
153. R. Côté “Controlling ultracold chemical reactions via Rydberg-dressed interactions.” Seminar at IFRAF (Institut Francilien de recherche sur les atomes froids), Ecole Normale Supérieure, Paris, July 21 2014.
152. R. Côté “Ultracold reactions involving atoms and ions.” Colloquium, Physics Department, University of Freiburg Germany, July 14, 2014.
151. R. Côté “Probing the electron-proton mass ratio variation with AMO systems.” Invited talk at the Workshop *New ideas in low-energy tests of fundamental physics*, Perimeter Institute (June 16-19 2014), Waterloo (Ontario, Canada), June 19 2014.
150. R. Côté “Ultracold atom-ion interactions.” Invited talk at the Workshop *A Symposium on Science @ ITAMP*, ITAMP (Institute for Theoretical Atomic, Molecular, and optical Physics), Harvard-Smithsonian Center for Astrophysics, Cambridge, May 5 2014.
149. R. Côté “Control of reactive systems using Rydberg dressing.” AMO Seminar, Physics Department, University of Rochester (NY), Monday April 7, 2014.
148. R. Côté “Ultracold atom-ion interactions.” Invited Talk at the Workshop on *Trapped Ions Meet Cold Atoms*, 557. Wilhelm und Else Heraeus-Seminar, Bad Honnef (Germany), March 27, 2014.

147. R. Côté “Ultracold Physics and its application, from chemistry, to quantum information, to astrophysics.” Colloquium, Physics Department, University of Waterloo (ON), Canada, January 9, 2014.
146. R. Côté “Production of ultracold polar molecules & Control of chemical reactions” Invited talk at the *Ultracold Molecules MURI Review* (organized by AFOSR), BROCC, Arlington (VA), November 20, 2013.
145. R. Côté “Quantum information processing with switchable interactions.” AMO Seminar, Physics Department, University of Toronto (ON), Canada, November 4, 2013.
144. R. Côté “Dan and I ” Invited talk at the *Symposium Celebrating Daniel Kleppner’s 80th Birthday*, Massachusetts Institute of Technology, Cambridge (MA), October 15, 2013.
143. R. Côté “Threshold resonances in ultracold chemical reactions.” Invited Talk (Progress Report) at the XXVIII International Conference On Photonic, Electronic and Atomic Collision (ICPEAC 2013), Lanzhou (China) July 26, 2013.
142. R. Côté “Controlling chemical reactions via long-range interactions.” Seminar, Laboratoire Charles Fabry de l’Institut d’Optique, Ecole Polytechnique (France), July 11 2013.
141. R. Côté “Controlling chemical reactions via long-range interactions.” Seminar at the Laboratoire Aimé Cotton, Orsay (France), Thursday, July 3, 2013.
140. R. Côté “Controlling chemical reactions via long-range interactions.” Seminar at the Universidad Computense, Madrid (Spain), Tuesday, July 1, 2013.
139. R. Côté “Controlling chemical reactions via long-range interactions.” Seminar at the Department of Physics & Engineering Physics, Stevens Institute of Technology (Hoboken), Wednesday, May 1, 2013.
138. R. Côté “Quantum information processing with switchable interactions.” Colloquium at the Institute for Quantum Computing (IQC), University of Waterloo (Ontario, Canada), Monday, April 8, 2013.
137. R. Côté “Controlling chemical reactions via long-range interactions.” Invited talk at the Workshop on *New Science with Ultracold Molecules*, Kavli Institute for Theoretical Physics (KITP), U. California at Santa Barbara, Thursday, March 14, 2013.
136. R. Côté “Ultracold Physics and its application, from chemistry, to quantum information, to astrophysics.” Colloquium, Physics Department, U. Oklahoma, Thursday, January 31, 2013.
135. R. Côté “Formation of Ultracold Molecules.” Invited talk, AMOS, DOE contractor meeting, Bolger Center, Tuesday, October 30 2012.
134. R. Côté “Interactions between bi-alkali dimers.” Invited talk at the *Ultracold Molecules MURI Review* (organized by AFOSR), M.I.T., Tuesday, October 24, 2012.
133. R. Côté “AMO Theory at UConn.” Lecture to the Physics Graduate Students Association, University of Connecticut, Friday, October 5, 2012.

132. R. Côté “Ultracold Physics and its application, from chemistry, to quantum information, to astrophysics.” Colloquium at the Physics Department, Temple University, Monday, October 1, 2012.
131. R. Côté “Rydberg macro-dimers and trimers.” Invited talk, Workshop of the *Coherence European Network* on Rydberg Physics, Gif-sur-Yvette, Friday, July 20, 2012.
130. R. Côté “Formation et contrôle des molécules dipolaires ultrafroides (Formation and control of ultracold polar molecules).” Seminar at the Laboratoire Aimé Cotton, Orsay (France), Thursday, July 12, 2012.
129. R. Côté “Molécules polaires ultrafroides dans un état quantique défini (Ultracold polar molecules in specific quantum states).” Invited talk at the *Mini-colloque MC11: Formation de molécules ultrafroides: avancées récentes et perspectives*, Friday (9:45AM) July 6, 2012: Part of the PAMO-JMS 2012 (annual) meeting at the Campus du Saulcy, Université de Lorraine, Metz (France), July 3–6, 2012.
128. R. Côté “Controlling charge exchange between atoms and ions.” Seminar at the Universidad Computense, Madrid (Spain), Tuesday, July 3, 2012.
127. R. Côté “Meta-stable gases with attractive dipole forces, and formation of large ultracold molecules.” Atomic Physics Seminar, Yale, Tuesday April 3 2012.
126. R. Côté “Alkaline-earth molecular ions.” Invited talk at the ARO *Molecular Ion Workshop*, Georgia Institute of Technology, Atlanta (GA), March 5 2012.
125. R. Côté “Meta-stable 1-D gases of polar molecules with attractive dipole forces.” AMO seminar, Los Alamos National Laboratory, T4-Theory Division, Los Alamos (NM), February 16 2012.
124. R. Côté “Meta-stable 1-D gases of polar molecules with attractive dipole forces.” Talk at the 42nd Winter Colloquium on *The Physics of Quantum Electronics*, Tuesday January 3 2012, , Snowbird, Utah, January 2-7, 2012.
123. R. Côté “Ultracold Molecules and Chemistry.” Invited talk at the Workshop *Topical Group: Fundamental Science with Ultracold Molecules*, ITAMP (Institute for Theoretical Atomic, Molecular, and optical Physics), Harvard-Smithsonian Center for Astrophysics, Cambridge, October 3 2011.
122. R. Côté “Long-Range Interaction between Polar Molecules: the case of KRb.” Talk at the *Ultracold Molecules MURI Review*, M.I.T., Tuesday, September 28 2011.
121. R. Côté “Meta-stable 1-D gases of polar molecules with attractive dipole forces.” Seminar at IFRAF (Institut Francilien de recherche sur les atomes froids), Ecole Normale Supérieure, Paris, July 21 2011.
120. R. Côté “Meta-stable 1-D gases of polar molecules with attractive dipole forces.” Seminar, Laboratoire Charles Fabry de l’Institut d’Optique, Ecole Polytechnique (France), July 20 2011.

119. R. Côté “Meta-stable 1-D gases of polar molecules with attractive dipole forces.” Seminar at Physikalisches Institut, University of Heidelberg, Heidelberg, July 15, 2011.
118. R. Côté “Ultra-long range Rydberg molecules.” Seminar at the Laboratoire Aimé Cotton, Orsay (France), Monday, July 12 2011.
117. R. Côté “Meta-stable 1-D gases of polar molecules with attractive dipole forces.” Seminar at the Universidad Computense, Madrid, June 27 2011.
116. R. Côté “Meta-stable 1-D gases of polar molecules with attractive dipole forces.” INVITED TALK H6.00005: Ultracold molecules and Quantum Many Body Physics, APS March Meeting (Dallas TX), Tuesday March 22, 2011.
115. R. Côté “Ultracold molecules: their formation and manipulation.” AMO Seminar at the University of British Columbia (Canada), February 24 2011.
114. R. Côté “Controllable binding of polar molecules and meta-stable 1-D dipolar gases with attractive dipole forces.” Condensed Matter Seminar, Purdue University, Friday January 21, 2011.
113. R. Côté “Controllable binding of polar molecules and meta-stable 1D dipolar gases with attractive dipole forces.” INVITED Contributed TALK E1.00005, Joint APS-AAAPT New England Fall meeting (Brown University), Saturday October 30 2010.
112. R. Côté “Rydberg macrodimers: their properties and signature.” INVITED TALK, International Workshop *CRYP10: Cold Ryddberg Physics 2010*, Max-Planck-Institut für Physik Komplexer Systeme, Dresden (Germany), September 8 2010.
111. R. Côté “ Ultracold molecules: forming and using them.” Seminar at the Universidad Computense, Madrid, July 21 2010.
110. R. Côté “Information quantique avec des molécules: *Quantum computing with molecules.*” Invited talk at the *Mini-colloque MC6: Molécules dipolaires, états de Rydberg: applications actuelles et nouvelles perspectives*, Wednesday June 30 2010: Part of the PAMO-JMS 2010 (annual) meeting (June 29-July 2 2010, Orsay, France).
109. R. Côté “AMO Physics and its Applications: the case of polar molecules.” Seminar at the Harvard-Smithsonian Center for Astrophysics, May 11 2010.
108. R. Côté “Coherent manipulation of ultracold polar molecules.” Talk at the 40th Winter Colloquium on *The Physics of Quantum Electronics*, Monday January 4 2010, 21:10, Snowbird, Utah, January 3-7, 2010.
107. R. Côté “Ultracold Polar Molecules.” Invited talk at the *Ultracold Molecules MURI Kickoff* meeting (organized by AFOSR), University of Maryland, October 5 2009.
106. R. Côté “Rydberg macrodimers: exotic ultra-long range molecules.” Invited talk, ITAMP Workshop *Engineering Rydberg interactions in Atoms, Molecules, and Plasmas: A Collaborative Workshop*, Cambridge (MA), September 21, 2009.

105. R. Côté “Formation of Ultracold Molecules.” Invited talk, AMOS, DOE contractor meeting, Airlie Center, Tuesday, September 15 2009.
104. R. Côté “Ultracold molecules: formation and applications.” AMO seminar, Physics Department, Heidelberg University, July 27 2009.
103. R. Côté “Ultracold molecules: formation and applications.” Special seminar at TU-Munich, Garching, July 24 2009.
102. R. Côté “Cours invités IFRAF.” Invited Special Lectures as a *Chaire invitée of IFRAF (Institut Francilien de recherche sur les atomes froids)*, Paris, July 1 – 31 2009:
  - Lecture 1: Long-range interactions and many-body effects with Rydberg atoms (Institut d’Optique, Palaiseau, Thursday July 16 2009).
  - Lecture 2: Atoms and ions systems for quantum information (Ecole Normale Supérieure, Paris, Tuesday July 21 2009).
  - Lecture 3: Ultracold molecules: formation and applications (Laboratoire Aimé Cotton, Orsay, Thursday July 23 2009).
101. R. Côté “ Ultracold Rydberg atoms and their application to quantum information.” Seminar at the Universidad Computense, Madrid, June 30 2009.
100. R. Côté “Quantum Information using AMO systems.” Invited Tutorial at the Aspen Workshop *Quantum Simulation/Computation with Ultracold Atoms and Molecules*, May 24 to June 14, 2009 (Aspen, CO):
  - AMO Tutorial 1: trapped ions (Wednesday June 3 2009).
  - AMO Tutorial 2: cold atoms (Wednesday June 3 2009).
  - AMO Tutorial 3: cold molecules (Wednesday June 3 2009).
99. R. Côté “Probing Fundamental Physics using Photoassociation.” Invited talk, DAMOP 2009 Graduate Student Symposium, 3:00PM Tuesday, May 19 2009, DAMOP 2009, May 19-23 2009, Charlottesville (Virginia).
98. R. Côté “Feshbach-Optimized Photo-Association (FOPA) and its applications.” Atomic Physics Seminar, Yale, May 12 2009.
97. R. Côté “Ultracold Molecules: forming, and using them.” Colloquium, Colorado School of Mines, Tuesday, January 27 2009.
96. R. Côté “FOPA: Feshbach-Optimized Photo-Association.” AMO seminar, Colorado School of Mines, Monday, January 26 2009.
95. R. Côté “FOPA: Feshbach-Optimized Photo-Association.” AMO seminar, JILA, Wednesday, January 14 2009.
94. R. Côté “Forming Ultracold Molecules.” Invited talk, ITAMP Workshop *Dalgarno Celebratory Symposium*, Cambridge (MA), September 12, 2008

93. R. Côté “Giant formation rates of ultracold molecules via Feshbach Optimized Photoassociation.” Seminar, University Paris XIII, June 17 2008.
92. R. Côté “Giant formation rates of ultracold molecules via Feshbach Optimized Photoassociation.” Seminar, Laboratoire Charles Fabry de l’Institut d’Optique, Ecole Polytechnique (France), June 16 2008.
91. R. Côté “Effects of long-range interactions in ultracold Rydberg gases.” Invited talk at the Workshop on *Rydberg Excited Atoms*, May 15 2008, Sandbjerg Estate (Denmark), May 14-16, 2008.
90. R. Côté “Ultracold Physics.” Colloquium, Physics Department, U. Freiburg (Germany), April 28 2008.
89. R. Côté “Ultracold Molecules: forming, and using them.” Colloquium, Trinity College, Friday, April 4 2008.
88. R. Côté “Ultracold Molecules: forming, and using them.” Condensed Matter Physics Seminar, Brown University, Thursday, April 3 2008.
87. R. Côté “Ultralong-range Rydberg molecules.” INVITED TALK, International Workshop *Atom 2007*, Max-Planck-Institut für Physik Komplexer Systeme, Dresden (Germany), November 26 2007.
86. R. Côté “Evanescent-wave mirrors as controllable traps.” Invited talk, ITAMP Workshop on *Quantum Reflection*, Cambridge (MA), October 22-24, 2007
85. R. Côté “L’astronomie rayon-X.” Brunch Keynote speaker at the Annual Meeting of the *Fédération des Astronomes Amateurs du Québec (FAAQ)*, September 23, 2007 (Rimouski).
84. R. Côté “Ultracold polar molecules in a single quantum state.” Invited talk, ITAMP-UBC Workshop on *Coherent Control of Ultracold Molecular Processes*, Vancouver (Canada), Wednesday August 1, 2007.
83. R. Côté “Ultracold Molecules: forming, trapping, and cooling them.” Seminar at the Laboratoire Aimé Cotton, Orsay (France), Monday, July 2 2007.
82. R. Côté “Ultracold atom-ion scattering.” Special AMO seminar at the University of Granada (Spain), Wednesday, June 27 2007.
81. R. Côté “Ultracold Molecules: forming, trapping, and cooling them.” Seminar at the University of Granada (Spain), Monday, June 25 2007.
80. R. Côté “Ultracold atom-ion scattering.” Invited talk, ITAMP’s *Atom-Ion Topical Group*, Cambridge (MA), June 4-8, 2007
79. R. Côté “Quantum Computing with switchable dipoles.” Invited talk, ITAMP-CUA Workshop on *Hybrid Approaches to Scalable Quantum Information Systems*, Cambridge (MA), May 24-26, 2007



78. R. Côté “Ultracold atom-atom and atom-ion scattering: Feshbach resonances and charge transfer processes.” Invited talk, Workshop on *Quantum Dynamics of Ultracold Few-Body Systems*, Cuernavaca, Mexico, March 12-31 2007.
77. R. Côté “Quantum Computing with switchable dipoles.” Colloquium, Physics Department, Auburn University, Friday, February 9 2007.
76. R. Côté “Ultracold Molecules: forming, trapping, cooling, and using them.” Joint TUM-MPI seminar, Garching, Friday November 24 2006.
75. R. Côté “Ultracold Molecules: forming, trapping, cooling, and using them.” Center for Ultracold Atoms (CUA) Seminar, MIT, Tuesday October 17 2006.
74. R. Côté “Photoassociation of ultracold Sr.” Invited Talk at the ITAMP Workshop on *Ultracold Group II Atoms: Theory and Applications*, September 18-20, 2006 (Cambridge, MA).
73. R. Côté “Formation of Ultracold Molecules.” INVITED TALK, AMOS, DOE contractor meeting, Airlie Center, Tuesday, September 12 2006.
72. R. Côté “Quantum Computing with switchable dipoles.” Seminar at TU-Munchen, Garching, July 21 2006.
71. R. Côté “Quantum Computing with switchable dipoles.” Seminar at ICFO, Barcelona, July 12 2006.
70. R. Côté “Quantum Computing with switchable dipoles.” Seminar at the University of Granada (Spain), Wednesday, July 5 2006.
69. R. Côté “Quantum Computing with switchable dipoles.” Seminar at TU Eindhoven, Thursday, June 29 2006.
68. R. Côté “Quantum Computing with switchable dipoles.” INVITED TALK, Cross Border Workshop 2006, Storrs (CT), Saturday, June 3 2006.
67. R. Côté “Rydberg Physics.” Lecturer for the *EU Training School and Workshop (Achievements and Perspectives of Cold Molecules (Feb. 26 - March 10 2006))*. Ecole de Physique, Les Houches (Friday March 3 2006).
66. R. Côté “TUTORIAL: Quantum computing with Rydberg atoms.” INVITED TALK, SPIE Optics East Conference 6014 (Active and Passive Optical Components for WDM Communications V), Session 7, October 23-26 2005, Boston.
65. R. Côté “Quantum Computing, Excitation Blockade, and Many-body Physics in Ultracold Rydberg Gases.” Invited Talk at the ITAMP Workshop on *Cold and Ultracold Plasma and Rydberg Physics*, September 26-28, 2005 (Cambridge, MA).
64. R. Côté “Manipulating polar molecules with evanescent-wave mirrors.” Invited talk at the ARO Workshop on *Polar Molecules for Quantum Computing*, Arlington, September 1 2005.

63. R. Côté “Manipulating polar molecules with evanescent-wave mirrors.” Invited talk at the Workshop on *Theory of Ultracold Molecules*, Telluride, July 3-9 2005.
62. R. Côté “Quantum Information Processing using ultracold Rydberg atoms.” Seminar in the Computer Science Department, Université du Québec à Rimouski (UQAR), June 22 2005.
61. R. Côté “Long-range interactions and many-body effects in a cold Rydberg gas.” INVITED TALK, International Workshop *Ultracold PARYS 2005*, Gif-sur-Yvette, Paris, March 15 2005.
60. R. Côté “Local blockade of Rydberg excitation in an ultracold gas.” INVITED TALK, International Workshop on *Mesoscopic Phenomena in Ultracold Matter: From Single Atoms to Coherent Ensembles*, Max-Planck-Institut für Physik Komplexer Systeme, Dresden (Germany), October 11-15 2004.
59. R. Côté “Quantum Information Processing using ultracold Rydberg atoms.” AMO Seminar, Physics Department, University of Delaware (Delaware), October 4 2004.
58. R. Côté “Quantum Information Processing using ultracold Rydberg atoms.” Colloquium, Department of Physics, Wesleyan University (Connecticut), September 23 2004.
57. R. Côté “Local blockade of Rydberg excitation in an ultracold gas.” INVITED TALK, Session L1.003 - Rydberg Atoms and Ultracold Plasmas, Friday morning, May 28, DAMOP 2004 (Tucson, AZ).
56. R. Côté “Local blockade of Rydberg excitation in an ultracold gas.” Theory Seminar, Universität Innsbruck, May 14, 2004 (Innsbruck, Austria).
55. R. Côté “Local blockade of Rydberg excitation and Quantum Information Processing.” Condensed Matter Theory Seminar, Ludwig Maximilian Universität, May 13, 2004 (München, Germany).
54. R. Côté “Quantum information preprocessing using Rydberg atoms.” Theory Seminar, Technische Universität München, May 12, 2004 (München, Germany).
53. R. Côté “New Trends in Rydberg Physics - II.” Second Lecture in Fourth Week of the *International Workshop and Seminar on Rydberg Physics*, May 11 2004 (Dresden, Germany, April 19 - May 14, 2004).
52. R. Côté “New Trends in Rydberg Physics - I.” First Lecture in Fourth Week of the *International Workshop and Seminar on Rydberg Physics*, May 10 2004 (Dresden, Germany, April 19 - May 14, 2004).
51. R. Côté “Ultracold D + H<sub>2</sub> reactive scattering.” Seminar at the Theoretical Chemistry Group, Rome University (La Sapienza), April 29 2004 (Rome, Italy).
50. R. Côté “Ultracold D + H<sub>2</sub> reactive scattering.” Invited talk (sponsored by the Journal of Physics B) at the *International conference Bose-Einstein Condensation: from Atoms to Molecules*, Durham, United Kingdom, 30 March - 3 April 2004.

49. R. Côté “LiH and NaH Formation via Photoassociation.” Invited Talk at the joint ITAMP-CUA Workshop on *Ultracold Polar Molecules: Formation and Collisions*, January 8-10, 2004 (Cambridge, MA).
48. R. Côté “Quantum Information Processing with Ultracold Rydberg Atoms.” INVITED TALK, DARPA IPTO/NSF Bio-Computation/QIS PI Joint Meeting, Fort Lauderdale, May 13-16 2003.
47. R. Côté “Mesoscopic molecular ions in Bose-Einstein condensates.” INVITED TALK, New Laser Science Conference, Orlando, September 28-29 (2002).
46. R. Côté “Mesoscopic molecular ions in Bose-Einstein condensates.” Center for Ultracold Atoms (CUA) Seminar, Harvard, February 26, 2002.
45. R. Côté “Ultracold atom-ion interactions.” Physics Colloquium, University of Connecticut, February 22, 2002.
44. R. Côté “Mesoscopic molecular ions in Bose-Einstein condensates.” Talk at the 32nd Winter Colloquium on *The Physics of Quantum Electronics*, Tuesday January 8 2002, 21:30, Snowbird, Utah, January 7-10, 2002.
43. R. Côté “Ultracold atom-ion interactions.” AMO Seminar, Stony Brook, November 26, 2001.
42. R. Côté “Fast and robust entanglement using Rydberg atoms.” Quantum Information Seminar Series (QISS), University of Connecticut, Tuesday, November 13, 2001.
41. R. Côté “Ultra Cold Atoms and Ions.” Physics Seminar, Trinity College (Hartford), Friday November 9, 2001 (3:00PM).
40. R. Côté “Macrodimers: ultralong range Rydberg molecules.” INVITED TALK, Cold Molecules 2001: Coherent Control and Cold Molecules, Gif-sur-Yvette (France), October 21-25, 2001.
39. R. Côté “Ultracold Ion-Atom Collisions.” Session A6 Heavy Particles: New Directions. INVITED TALK (Progress report), XXII ICPEAC, Santa Fe, New Mexico, July 20, 2001.
38. R. Côté “Ultracold atom-ion interactions.” INVITED TALK, 10th International Laser Physics Workshop, Moscow, July 3-7, 2001.
37. R. Côté “Ultracold atom-ion interactions.” Special Frontiers in Physics Colloquium, University of Connecticut, June 29, 2001.
36. Côté, R. “Fast and robust entanglement using Rydberg atoms .” Session R1.003 - Quantum Information, INVITED session, Friday afternoon, May 18, DAMOP 2001 (London Ontario).
35. Côté, R. “Long Range Rydberg Dimers.” Talk at ITAMP Workshop *Complex Phenomena Involving Rydberg Atoms and Molecules*, April 26-28, 2001.
34. Côté, R. “Entanglement with Rydberg atoms.” Talk at the 31st Winter Colloquium on The Physics of Quantum Electronics, Tuesday January 9 2001, 19:50, Snowbird, Utah, January 7-11, 2001.

33. Côté, R. “Ultracold collisions of mixtures.” Talk at the Workshop on Computational Methods for few-Body Dynamical Systems, NIST, November 15-17 2000.
32. Côté, R. “Ultracold atom-ion collisions and their transport properties.” Contributed talk, Ballroom D, Session MP ”Manipulating Cold Atoms 2” (Convention Center), 10:45AM, Oct. 23 2000, OSA and ILS-XVII Meeting, Providence, 22-26 October 2000.
31. Côté, R. “Theory of Photoassociation.” Invited talk (Session F-0185, 9:40AM, Tuesday August 22 2000) at the Symposium *Very Low Temperature Spectroscopy & Dynamics* of the 220<sup>th</sup> National Meeting of the American Chemical Society, Washington, D.C., August 20-24 2000.
30. Côté, R. “Ultrafast quantum gates using ultracold Rydberg atoms.” Invited talk at the *Townes Festival: TAMU-ONR Workshop on Quantum Optics*, Teton Village, Wyoming, July 31-August 4, 2000.
29. Côté, R. “Formation of Quasicondensate Droplets in hydrogen.” Seminar at the *Max-Planck Institute für Kernphysik*, Heidelberg (Germany), March 16, 2000.
28. Côté, R., “Quasicondensate droplet formation in ultracold hydrogen.” Seminar at the *Institut für Experimentalphysik*, Universität Innsbruck (Austria), March 14, 2000.
27. Côté, R. “Quasicondensate droplet formation in hydrogen.” Seminar at the *Theoretical Physics Division*, Technische Universität München, Garching (Germany), March 10, 2000.
26. Côté, R., Lectures at the *Max-Planck Institute für Kernphysik*, Heidelberg (Germany), February 28 - March 17, 2000:
  - Lecture I: *Ultracold Collisions I*.
  - Lecture II: *Ultracold Collisions II*.
  - Lecture III: *Photoassociation*.
  - Lecture IV: *Cold molecule formation*.
25. Côté, R. “Molecular Calculations of Ultracold Collisions.” Talk at the *CT Quantum Chem. meeting*, Chemistry Dept., University of Connecticut, Storrs, December 3, 1999.
24. Côté, R. “Formation of ultracold molecules via photoassociation: the case of lithium.” Talk at the *Workshop on Prospects of Cold Molecules*, Max-Planck Institut für Kernphysik, Heidelberg, Germany, November 8-10, 1999.
23. Côté, R. “Formation of Quasicondensate Droplets in a Hydrogen BEC.” Talk at the *TAMU-ONR Workshop on Quantum Optics*, Jackson, Wyoming, July 26-30, 1999.
22. Côté, R. “Photoassociation and Production of  $^6\text{Li}_2$  and  $^7\text{Li}_2$  Ultracold Molecules.” Talk at ITAMP Workshop *Trapping, Spectroscopy, and Collisions of Ultracold Molecules*, Harvard-Smithsonian Center for Astrophysics, Cambridge, July 1-3, 1999.
21. Côté, R. “Quasicondensate Droplet Formation in Hydrogen.” Seminar at C. Cohen-Tannoudji’s group meeting, Ecole Normale Supérieure, Paris (France), May 21, 1999.

20. Côté, R. “La formation de quasicondensats d’hydrogène.” Seminar at *Laboratoire Aimé Cotton*, Orsay (France), May 18, 1999.
19. Côté, R. “Quasicondensate droplet formation in hydrogen.” Talk at *Cold Atomic Collisions: Formation of Cold Molecules*, Workshop at the Centre de Physique des Houches, Les Houches (France), March 1-5, 1999.
18. Côté, R. “Quasicondensate droplet formation in hydrogen.” Seminar at the *Theoretical Physics Division*, Technische Universität München, Garching (Germany), February 24, 1999.
17. Côté, R., Lectures at the *Institut für Experimentalphysik*, Universität Innsbruck, Austria, February 15-26, 1999:
  - Lecture I: *Ultracold Collisions*.
  - Lecture II: *Photoassociation and Trapping I*.
  - Lecture III: *Photoassociation and Trapping II*.
  - Lecture IV: *Quasicondensate droplet formation in hydrogen*.
16. Côté, R. “Quasicondensate droplet formation in hydrogen.” Seminar at the *ITAMP Cold Atom Topical Group*, Harvard-Smithsonian Center for Astrophysics, Cambridge, February 10, 1999.
15. Côté, R. “Ultracold collisions - a probe for fundamental physics.” Review lecture at the *13<sup>th</sup> University College London Astronomy Colloquium, Atomic and Molecular Physics and Applications to Aeronomy and Astrophysics*, Cumberland Lodge (Windsor Park, UK), July 20-23, 1998.
14. Côté, R. “Recent results in BEC and effects of superfluidity.” Lecture at the *Workshop on New Directions in Atomic Physics*, Magdalene College, University of Cambridge, Cambridge (UK), July 8-11, 1998.
13. Côté, R., Lectures at the *Los Alamos Summer School in Atomic, Molecular and Optical Physics*, Los Alamos (New Mexico), June 1-5, 1998:
  - Lecture I : *Ultracold Collisions*.
  - Lecture II : *Photoassociative Spectroscopy*.
12. Côté, R., “Photoassociation: de la longueur de diffusion aux molécules froides.” Seminar at the *Université de Lyon*, Lyon (France), April 3, 1998.
11. Côté, R., “Photoassociation et photodissociation aux températures ultra-froides.” Seminar at the *Université Pierre et Marie Curie*, Paris (France), April 2, 1998.
10. Côté, R., “Scattering length: its experimental determination and its use to probe superfluidity.” Seminar at C. Cohen-Tannoudji’s group meeting, Ecole Normal Supérieure, Paris (France), March 27, 1998.

9. Côté, R., “Photoassociation: de la longueur de diffusion aux molécules froides.” Seminar at the *Laboratoire Aimé-Cotton*, Orsay (France), March 26, 1998.
8. Côté, R., “Ultracold collisions: a probe for Fundamental Physics.” Seminar at the *University of Connecticut*, Storrs, March 12, 1998.
7. Côté, R., “Potassium scattering lengths and BEC prospects.” Talk at the *Workshop on Collisions of Cold, Trapped Atoms* at JILA AMO Theory Center, November 12, 1997.
6. Côté, R., “Potassium scattering lengths and BEC.” Seminar at the *ITAMP Cold Atom Topical Group*, Harvard-Smithsonian Center for Astrophysics, Cambridge, October 29, 1997.
5. Côté, R., “Scattering Length: the ABC of BEC.” Seminar for the *Theoretical Physics Division*, Technische Universität München, Garching (Germany), July 30, 1997
4. Côté, R., “Wigner’s Threshold Laws and Cold Molecules.” Workshop on *High Resolution Multiple Resonance Spectroscopy (Emphasizing the Alkali Dimers)*, Dept. of Physics, Univ. of Connecticut, Storrs, CT, June 26, 1997.
3. Côté, R., “Photoassociation Spectra and the Scattering Length.” Seminar at the Harvard-Smithsonian Center for Astrophysics, Institute for Theoretical Atomic and Molecular Physics (ITAMP), January 23, 1995.
2. Côté, R., “Photoassociation Spectra of Lithium Atoms.” Seminar at the Massachusetts Institute of Technology, Atomic and Molecular Group, December 16, 1994.
1. Côté, R., “Spin Change Cross Sections for Alkali Atoms.” Seminar at the Harvard-Smithsonian Center for Astrophysics, Institute for Theoretical Atomic and Molecular Physics (ITAMP), October 25, 1993.

## Conferences/Posters

- Marko Gacesa and **R. Côté**, “Controlled charge exchange between alkaline earth metals and their ions.” Session P5: Ion-Atom and Ion-Ion Collisions (2:00 PM-4:00 PM, Thursday, June 11, 2015). Contributed talk (Marko Gacesa ) P5.00001, 2:00 PM-2:12 PM, DAMOP 2015, June 8-12, 2015, Columbus, Ohio.
- Di Shu, Ionel Simbotin, and **Robin. Côté**, “A survey of near threshold resonances for  $1/R^n$  long-range potentials.” Session M6: Long-range Interactions in Cold Gases (8:00 AM - 10:00 AM, Thursday, June 11, 2015). Contributed talk (Di Shu) M6.00005, 8:48 AM-9:00 AM, DAMOP 2015, June 8-12, 2015, Columbus, Ohio.
- Jovica Stanojevic and **Robin Côté**, “Study of Rydberg lifetimes in BEC.” Session G8: Quantum Gases with Rydberg Atoms (8:00 AM - 10:00 AM, Wednesday, June 10, 2015). Contributed talk (Jovica Stanojevic) G8.00007, 9:12 AM-9:24 AM, DAMOP 2015, June 8-12, 2015, Columbus, Ohio.
- Jia Wang, Marko Gacesa, and **Robin Côté**, “Rydberg Electrons in a Bose-Einstein Condensate.” Session G8: Quantum Gases with Rydberg Atoms (8:00 AM - 10:00 AM, Wednesday, June 10, 2015). Contributed talk (Jia Wang) G8.00006, 9:00 AM-9:12 AM, DAMOP 2015, June 8-12, 2015, Columbus, Ohio.
- Marko Gacesa, John A. Montgomery, Harvey H. Michels, and **Robin Côté**, “Towards producing ultracold CaNa<sup>+</sup> molecular ions in the ground electronic state.” Session D1: Poster Session I (4:00 - 6:00PM), Poster D1.00031, Tuesday, June 9, 2015, DAMOP 2015, June 8-12, 2015, Columbus, Ohio.
- I. Simbotin, D. Shu, and **R. Côté**, “Jost function description of near threshold resonances.” Session D1: Poster Session I (4:00 - 6:00PM), Poster D1.00133, Tuesday, June 9, 2015, DAMOP 2015, June 8-12, 2015, Columbus, Ohio.
- Marko Gacesa, Subhas Ghosal, Jason Byrd, and **R. Côté**, “Photoassociation of ultracold LiRb molecules with short pulses near a Feshbach resonance.” Session Q1: Poster Session III (4:00 - 6:00PM), Poster Q1.00022, Thursday, June 5, 2014, DAMOP 2014, June 2-6 2014, Madison, Wisconsin.
- Di Shu, I. Simbotin, and **R. Côté**, “Threshold resonance effects for  $1/R^3$  long-range potentials.” Session P8: Atomic and Molecular Collisions (4:00 PM - 6:00 PM, Thursday, June 5, 2014). Contributed talk (Di Shu) P8.00008, 5:00 PM - 5:12 PM, DAMOP 2014, June 2-6 2014, Madison, Wisconsin.
- I. Simbotin and **R. Côté**, “Resonances in ultracold reactive collisions of vibrationally excited ortho and para H<sub>2</sub> with D.” Session P8: Atomic and Molecular Collisions (4:00 PM - 6:00 PM, Thursday, June 5, 2014). Contributed talk (I. Simbotin) P8.00001, 4:00 PM - 4:12 PM, DAMOP 2014, June 2-6 2014, Madison, Wisconsin.

- Jia Wang and **R. Côté**, “Applications of Rydberg-dressing in few-body physics.” Session K1: Poster Session II (4:00 - 6:00PM), Poster K1.00006, Wednesday, June 4, 2014, DAMOP 2014, June 2-6 2014, Madison, Wisconsin.
- Marko Gacesa and **R. Côté**, “Charge transfer in cold collisions of  $\text{Be}^+ + \text{Be}$ .” Session J8: Heavy Particle Collisions: Atoms, Surfaces, and Antimatter (2:00 PM - 3:48 PM, Wednesday, June 4, 2014). Contributed talk (Marko Gacesa) J8.00002, 2:12 PM - 2:24 PM, DAMOP 2014, June 2-6 2014, Madison, Wisconsin.
- Di Shu, Sandipan Banerjee, John A. Montgomery Jr., and **R. Côté**, “New *ab initio* potential curves for the ground and low-lying excited states in  $\text{NaCa}^+$  and  $\text{LiBe}^+$  molecular ions.” Session D1: Poster Session I (4:00 - 6:00PM), Poster D1.00045, Tuesday, June 3 2014, DAMOP 2014, June 2-6 2014, Madison, Wisconsin.
- J. Wang, Marko Gacesa, and **R. Côté**, “Interactions of Rydberg atoms in a Bose-Einstein condensate.” Session B5: Rydberg Atoms and Molecules in Cold Gases and Ultracold Plasmas (10:30 PM - 12:30 PM, Tuesday, June 3, 2014). Contributed talk (Jia Wang) B5.00002, 10:42 AM - 10:54 AM, DAMOP 2014, June 2-6 2014, Madison, Wisconsin.
- J. Wang, Jason Byrd, I. Simbotin, and **R. Côté**, “Controlling ultracold chemical reactions via Rydberg-dressed interactions.” Session Q1: Poster Session III (4:00 - 6:00PM), Poster Q1.00116, Thursday, June 6 2013, DAMOP 2013, June 3-7 2013, Quebec City (Canada).
- **R. Côté**, I. Simbotin, J. Wang, and S. Ghosal, “Effect of p-wave resonances on the threshold behavior of ultracold chemical reactions.” Session P5: Atom-Atom and Atom-Molecule Collisions (2:00 PM - 3:36 PM, Thursday, June 6, 2013). Contributed talk (Robin Côté) P5.00004, 2:36 PM - 2:48 PM, DAMOP 2013, June 3-7 2013, Quebec City (Canada).
- Diego Valente, Sandipan Banerjee, and **Robin Côté**, “Charge transfer in ultracold atom-ion alkaline-earth systems.” Session N4: Ion-atom Collisions (10:30 AM - 11:42 AM, Thursday, June 6, 2013). Contributed talk (Diego Valente) N4.00002, 10:42 AM - 10:54 AM, DAMOP 2013, June 3-7 2013, Quebec City (Canada).
- Sandipan Banerjee, John Montgomery, and **Robin Côté**, “Comparative study of the *ab initio* potential curves for  $\text{Be}_2^+$ ,  $\text{Mg}_2^+$ ,  $\text{Ca}_2^+$  and  $\text{Sr}_2^+$  molecular ions.” Session N4: Ion-atom Collisions (10:30 AM - 11:42 AM, Thursday, June 6, 2013). Contributed talk (Robin Côté) N4.00001, 10:30 AM - 10:42 AM, DAMOP 2013, June 3-7 2013, Quebec City (Canada).
- Jason Byrd, John Montgomery, and **Robin Côté**, “External electric field alignment and long range forces between molecules.” Session J3: Ultracold Molecules I (2:00 PM - 4:00 PM, Wednesday, June 5, 2013). Contributed talk (Robin Côté) J3.00004, 2:36 PM - 2:48 PM, DAMOP 2013, June 3-7 2013, Quebec City (Canada).
- Di Shu, Sandipan Banerjee, John Montgomery, and **Robin Côté**, “*Ab initio* potential curves for the ground and low-lying excited states in  $\text{LiBe}^+$  and  $\text{NaCa}^+$  molecular ions.” Session D1: Poster Session I (4:00 - 6:00PM), Poster D1.00132, Tuesday, June 4 2013, DAMOP 2013, June 3-7 2013, Quebec City (Canada).



- Diego Valente and **Robin Côté**, “Charge transfer processes in ultracold atom-ion collisions.” Session T4: Cold Collisions (8:00 AM - 10:00 AM, Friday, June 8, 2012). Contributed talk (Diego Valente) T4.00009, 9:36 AM - 9:48 AM, DAMOP 2012, June 4-8 2012, Orange County (California).
- I. Simbotin, S. Ghosal, and **R. Côté**, “Threshold resonances in ultracold chemical reaction.” ICAP 2012 poster Th-163 , Poster Session III (Thursday, July 26), Book of Abstract p.362, Ecole Polytechnique, Palaiseau (France), (July 23–27, 2012).
- Diego Valente and **Robin Côté**, “Charge transfer processes in ultracold atom-ion collisions.” Session T4: Cold Collisions (8:00 AM - 10:00 AM, Friday, June 8, 2012). Contributed talk (Diego Valente) T4.00009, 9:36 AM - 9:48 AM, DAMOP 2012, June 4-8 2012, Orange County (California).
- Diego Valente and **Robin Côté**, “Ultracold Atom-Ion Schemes for Quantum Information.” Session Q1: Poster Session III (4:00 pm - 6:00 pm), Poster Q1.00081, Thursday, June 7 2012, DAMOP 2012, June 4-8 2012, Orange County (California).
- Sandipan Banerjee, John Montgomery, and **Robin Côté**, “Calculation of *ab initio* potential curves for ground and low lying excited states of heteronuclear alkaline earth dimers  $\text{BeCa}^+$ ,  $\text{BeMg}^+$  and  $\text{MgCa}^+$ .” Session N7: Atomic and Molecular Structure and Spectroscopy I (10:30 AM - 12:30 PM, Thursday, June 7, 2012). Contributed talk (Sandipan Banerjee) N7.00002, 10:42 AM - 10:54 AM, DAMOP 2012, June 4-8 2012, Orange County (California).
- Jason Byrd, Subhas Ghosal, John Montgomery Jr., and **Robin Côté**, “Photoassociation of alkali tetramers into high vibrational states.” Session M1: Cold Chemistry (8:00 AM - 10:00 AM, Thursday, June 7, 2012). Contributed talk (Jason Byrd) M1.00008, 9:24 AM - 9:36 AM, DAMOP 2012, June 4-8 2012, Orange County (California).
- **Robin Côté**, Ionel Simbotin, and Subhas Ghosal, “Threshold resonances in ultracold chemical reactions.” Session M1: Cold Chemistry (8:00 AM - 10:00 AM, Thursday, June 7, 2012). Contributed talk (Robin Côté) M1.00007, 9:12 AM - 9:24 AM, DAMOP 2012, June 4-8 2012, Orange County (California).
- Jason N. Byrd, John A. Montgomery Jr., and **Robin Côté**, “Anisotropic van der Waals dispersion interactions using TD-DFT.” Poster at the *52th Sanibel Symposium*, February 19 - 24, 2012, St. Simons Island, GA. (1st Prize for the best Poster).
- Sandipan Banerjee, Jason Byrd, **Robin Côté**, H. Michels, John Montgomery, “*Ab initio* potential curves for the ground states of  $\text{Ca}_2^+$ : Existence of a double minimum in the  $\text{A}^2\Sigma_g^+$  state.” Session B5: Molecular Structure and Spectroscopy (10:30 AM - 12:30 PM, Tuesday, June 14 2011). Contributed talk (Sandipan Banerjee) B5.00004, 11:06 AM - 11:18 AM, DAMOP 2011, June 13-17 2011, Atlanta (Georgia).
- Elena Kuznetsova, Tank Bragdon, **Robin Côté**, and Susanne Yelin, “Cluster state generation using long-range interactions.” Session M5: Quantum Information Methods (8:00 AM - 10:00 AM, Thursday, June 16 2011). Contributed talk (Elena Kuznetsova) M5.00007, 9:12 AM - 9:24 AM, DAMOP 2011, June 13-17 2011, Atlanta (Georgia).

- Diego Valente and **Robin Côté**, “Ultracold atom-ion collisions with Beryllium.” Session J3: Heavy Particle Collisions (10:30 AM-12:30 PM, Wednesday, June 15 2011). Contributed talk (Diego Valente) J3.00002, 10:42 AM-10:54 AM, DAMOP 2011, June 13-17 2011, Atlanta (Georgia).
- Jason Byrd, John Montgomery, Jr., **Robin Côté**, “Interactions of polar alkali dimers.” Session E1: Poster Session I (4:00 pm - 6:00 pm), Poster E1.00085, Tuesday, June 14 2011, DAMOP 2011, June 13-17 2011, Atlanta (Georgia).
- Jason Byrd, John Montgomery, Jr., **Robin Côté**, “Long range interactions between like homonuclear alkali metal diatoms.” Session B5: Molecular Structure and Spectroscopy (10:30 AM-12:30 PM, Tuesday, June 14 2011) Contributed talk (Jason Byrd) B5.00002, 10:42 AM-10:54 AM, DAMOP 2011, June 13-17 2011, Atlanta (Georgia).
- Diego Valente and **Robin Côté**, “Hyperfine interactions and charge transfer processes in ultracold atom-ion collisions.” Session Q1: Poster Session III (4:00 pm - 6:00 pm), Poster Q1.00106, Thursday, June 16 2011, DAMOP 2011, June 13-17 2011, Atlanta (Georgia).
- Sandipan Banerjee, Jason Byrd, **Robin Côté**, H. Michels, John Montgomery, “Formation of  $\text{Be}_2^+$  molecules in the metastable  $\text{B}^2\Sigma_g^+$  state by ultracold photoassociation.” Session E1: Poster Session I (4:00 pm - 6:00 pm), Poster E1.00029, Tuesday, June 14, 2011, DAMOP 2011, June 13-17 2011, Atlanta (Georgia).
- Subhas Ghosal, Ionel Simbotin, and **Robin Côté**, “Potential resonances in ultracold chemical reactions.” Poster at ICEAC 2011: *International Conference on Emerging Areas of Chemistry 2011*, Tripura University, January 12-15 2011, India (awarded best poster).
- S. Banerjee, J.N. Byrd, **Robin Côté**, H. H. Michels, and J.A. Montgomery Jr., “Calculation of *ab initio* potential curves for the X  $^2\Sigma_u^+$  and B  $^2\Sigma_g^+$  states of  $\text{Be}_2^+$ : Existence of a double minimum.” Poster at the CUA Open House, Harvard University, Cambridge, MA (June 2010).
- Jason N. Byrd, John A. Montgomery Jr., and **Robin Côté**, “Alkali metal core-correlation effects: comparison between all electron correlation and pseudopotential with core polarization potential calculations.” Poster at the *2010 Molecular Quantum Mechanics* conference, May 23-29, 2010, Berkeley, CA.
- S. Banerjee, Jason N. Byrd, **Robin Côté**, H. H. Michels, and John A. Montgomery Jr., “*Ab initio* potential curves for the X $^2\Sigma_u^+$  and A $^2\Sigma_u^+$  states of  $\text{Be}_2^+$ : Existence of a double minimum.” Poster at the *2010 Molecular Quantum Mechanics* conference, May 23-29, 2010, Berkeley, CA.
- Marko Gacesa, Hans-Reinhard Müller, **Robin Côté**, and Vasili Kharchenko, “Polarization of the X-ray emission induced by charge-exchange collisions of solar wind ions and neutral heliospheric gas.” Session X5: Exotic Particle and Molecular Ion Collisions (10:30 AM-12:30 PM, Saturday, May 29, 2010). Contributed talk (M. Gacesa) X5.00002, 10:42 AM-10:54 AM, DAMOP 2010, May 25-29 2010, Houston (Texas).
- Nolan Samboy, Jovica Stanojevic, and **Robin Côté**, “Effects of Electric Fields on Rydberg-Rydberg Long-Range Interaction and Formation of Stable Macrodimers Bound States.” Session

T1: Poster Session III (4:00 pm - 6:00 pm), Poster T1.00155, Friday, May 28, 2010, DAMOP 2010, May 25-29 2010, Houston (Texas).

- I. Simbotin, S. Ghosal, and **R. Côté**, “Zero energy resonances in reactive scattering: anomalous temperature dependence of atom–molecule reaction rates.” Session T1: Poster Session III (4:00 pm - 6:00 pm), Poster T1.00126, Friday, May 28, 2010, DAMOP 2010, May 25-29 2010, Houston (Texas).
- Marko Gacesa, Subhas Ghosal, and **Robin Côté**, “Role of Feshbach resonances in enhancing the production of deeply bound ultracold LiRb molecules with laser pulses.” Session T1: Poster Session III (4:00 pm - 6:00 pm), Poster T1.00112, Friday, May 28, 2010, DAMOP 2010, May 25-29 2010, Houston (Texas).
- Elena Kuznetsova, Marko Gacesa, Susanne Yelin, and **Robin Côté**, “Phase gate and readout with an atom/molecule hybrid platform.” Session R3: Focus Session: Hybrid and Condensed Matter Quantum Systems (10:30 AM-12:30 PM, Friday, May 28, 2010). Contributed talk (E. Kuznetsova) R3.00006, 12:06 PM-12:18 PM, DAMOP 2010, May 25-29 2010, Houston (Texas).
- **Robin Côté**, John Montgomery, and Jason Byrd, “Controllable stability of dipolar gases in 1-D geometry.” Session S6: Ultracold Dipoles (2:00 PM-4:00 PM, Friday, May 28, 2010). Contributed talk (R. Côté) S6.00002, 2:12 PM-2:24 PM, DAMOP 2010, May 25-29 2010, Houston (Texas).
- Subhas Ghosal, Ionel Simbotin, and **Robin Côté**, “Interference of Feshbach and zero-energy resonances in ultracold chemical reactions.” Session J3: Ultracold Chemistry (8:00 AM-10:00 AM, Thursday, May 27, 2010). Contributed talk (S. Ghosal) J3.00008, 9:24 AM-9:36 AM, DAMOP 2010, May 25-29 2010, Houston (Texas).
- T.V. Tscherbul, Z. Pavlovic, H.R. Sadeghpour, **R. Côté**, and A. Dalgarno, “Trap losses in slow atom-molecule (He-OH) collisions.” Session J3: Ultracold Chemistry (8:00 AM-10:00 AM, Thursday, May 27, 2010). Contributed talk (T.V. Tscherbul) J3.00009, 9:36 AM-9:48 AM, DAMOP 2010, May 25-29 2010, Houston (Texas).
- Sandipan Banerjee, John Montgomery, Jason Byrd, Harvey Michels, and **Robin Côté**, “Calculation of potential curves for the  $X^2\Sigma_u^+$  and  $A^2\Sigma_g^+$  states of  $\text{Be}_2^+$ : Existence of a double minimum.” Session C2: Focus Session: Molecular Spectroscopy (2:00 PM-4:00 PM, Wednesday, May 26, 2010). Contributed talk (Sandipan Banerjee) C2.00006, 3:36 PM-3:48 PM, DAMOP 2010, May 25-29 2010, Houston (Texas).
- Elena Kuznetsova, Susanne F. Yelin, and **Robin Côté**, “Robust quantum computing using molecules with switchable dipoles.” Poster Session (Tuesday August 18), ARO Contractor’s meeting, Minneapolis August 17-21 2009.
- P. Pellegrini, **R. Côté**, O. Dulieu, J. Deiglmayr, A. Grochola, M. Repp, R. Wester, and M. Weidemüller, “Enhanced scattering amplitude at short internuclear distances in the photoassociation of ultracold LiCs molecules.” Session Y1: Poster Session IV (1:30 - 3:30 pm), Poster Y1.00112, Saturday, May 23 2009, DAMOP 2009, May 19-23 2009, Charlottesville (Virginia).

- I. Simbotin, Z. Pavlovic, and **R. Côté**, “Exact computation of the scattering length.” Session Y1: Poster Session IV (1:30 - 3:30 pm), Poster Y1.00104, Saturday, May 23 2009, DAMOP 2009, May 19-23 2009, Charlottesville (Virginia).
- Marko Gacesa and **Robin Côté**, “Limit on variation of fundamental constants from photoassociation in ultracold gases.” Session X4: Precision Measurements (10:30 AM-12:42 PM, Saturday, May 23 2009). Contributed talk (M. Gacesa) X4.00004, 11:06 AM-11:18 AM, DAMOP 2009, May 19-23 2009, Charlottesville (Virginia).
- Jason N. Byrd, John A. Montgomery, H. Harvey Michels, and **Robin Côté**, “Atom-diatom intermolecular forces and three body dispersion coefficients for doublet  $\text{Li}_3$ .” Session T1: Poster Session III (4:00 - 6:00 pm) Poster T1.00004, Friday, May 22 2009, DAMOP 2009, May 19-23 2009, Charlottesville (Virginia).
- Z. Pavlović, **R. Côté**, and H.R. Sadeghpour, “Feshbach resonances in  $^{52}\text{Cr}$ - $^{53}\text{Cr}$  and  $^{53}\text{Cr}$ - $^{53}\text{Cr}$  gas.” Session M1: Poster Session II (4:00 - 6:00 pm), Poster M1.00100, Thursday, May 21 2009, DAMOP 2009, May 19-23 2009, Charlottesville (Virginia).
- Sandipan Banerjee, Marko Gacesa, and **Robin Côté**, “Forming ultracold LiK molecules from Li-K mixtures.” Session M1: Poster Session II (4:00 - 6:00 pm), Poster M1.00095, Thursday, May 21 2009, DAMOP 2009, May 19-23 2009, Charlottesville (Virginia).
- Peng Zhang, Alexander Dalgarno, and **Robin Côté**, “Ytterbium atom-ion Collisions.” Session M1: Poster Session II (4:00 - 6:00 pm), Poster M1.0063, Thursday, May 21 2009, DAMOP 2009, May 19-23 2009, Charlottesville (Virginia).
- Elena Kuznetsova, Marco Gacesa, Philippe Pellegrini, **Robin Côté**, Mikhail D. Lukin, and Susanne F. Yelin, “Coherent formation of ultracold molecules in the ground rovibrational state.” Session E1: Poster Session I (4:00 - 6:00 pm), Poster E1.00050, Wednesday, May 20 2009, DAMOP 2009, May 19-23 2009, Charlottesville (Virginia).
- M. Gacesa, V. Kharchenko, and **R. Côté**, “Polarization of X-rays produced in charge-exchange collisions in astrophysical plasmas.” poster at the *Dalgarno celebratory symposium*, Harvard University & ITAMP, Cambridge (MA), September 10-12 (2008).
- P. Pellegrini, M. Gacesa, and **R. Côté**, “Giant formation rates of ultracold molecules via Feshbach Optimized Photoassociation.” ICAP 2008 poster TH89, Poster Session III (Tuesday, July 31), Book of Abstract p.414, Storrs (July 27-August 1 2008).
- Elena Kuznetsova, P. Pellegrini, **R. Côté**, M D. Lukin, and S.F. Yelin, “Formation of deeply bound molecules via chainwise adiabatic passage.” ICAP 2008 poster TH82, Poster Session III (Tuesday, July 31), Book of Abstract p.407, Storrs (July 27-August 1 2008).
- Jason N. Byrd, H. Harvey Michels, and **R. Côté**, “Singly excited doublet  $^7\text{Li}_2 + ^7\text{Li}$  potential energy surface for the formation of ultracold trimers.” ICAP 2008 poster TH66, Poster Session III (Tuesday, July 31), Book of Abstract p.391, Storrs (July 27-August 1 2008).

- S. Banerjee, M. Gacesa, P. Pellegrini, and **R. Côté**, “Feshbach Resonances in ultracold  $^{40}\text{K}$  +  $^{87}\text{Rb}$  mixture.” ICAP 2008 poster TH65, Poster Session III (Tuesday, July 31), Book of Abstract p.390, Storrs (July 27-August 1 2008).
- Z. Pavlovic, H.R. Sadeghpour, and **R. Côté**, “Feshbach Resonances in Bose-Fermi Cr Gas Mixtures.” ICAP 2008 poster TH43, Poster Session III (Tuesday, July 31), Book of Abstract p.368, Storrs (July 27-August 1 2008).
- N. Samboy, J. Stanojevic, and **R. Côté**, “Long-range Wells in Rydberg-Rydberg Potential Curves.” ICAP 2008 poster TU56, Poster Session II (Tuesday, July 29), Book of Abstract p.245, Storrs (July 27-August 1 2008).
- J. Stanojevic, **R. Côté**, and J.M. Rost, “Theoretical study of an excitation blockade in ultracold Rydberg gases.” ICAP 2008 poster TU45, Poster Session II (Tuesday, July 29), Book of Abstract p.234, Storrs (July 27-August 1 2008).
- M. Gacesa and **R. Côté**, “Using Feshbach resonance to observe variation of fundamental constants in ultracold atomic and molecular.” ICAP 2008 poster TU15, Poster Session II (Tuesday, July 29), Book of Abstract p.204, Storrs (July 27-August 1 2008).
- Elena Kuznetsova, **R. Côté**, Kate Kirby, and S.F. Yelin, “Quantum phase gates with polar molecules in an optical lattice.” ICAP 2008 poster MO92, Poster Session I (Monday, July 28), Book of Abstract p.145, Storrs (July 27-August 1 2008).
- Y.N. Martinez de Escobar, P.G. Mickelson, S.B. Nagel, A.J. Traverso, M. Yan, T.C. Killian, P. Pellegrini, and **R. Côté**, “Two-photon spectroscopy of  $^{88}\text{Sr}$ .” ICAP 2008 poster MO20, Poster Session I (Monday, July 28), Book of Abstract p.73, Storrs (July 27-August 1 2008).
- P. Pellegrini, M. Gacesa, and **R. Côté** “Giant formation rates of ultracold molecules via Feshbach optimized photoassociation.” Session B4: Photoassociation and Cold Collisions, Contributed talk (P. Pellegrini) B4.00002, 11:00 AM – 1:12 PM, Wednesday, May 28, 2008, DAMOP 2008 (Penn. State).
- M. Gacesa, P. Pellegrini, and **R. Côté** “Feshbach-optimized photoassociation in LiRb.” Session B4: Photoassociation and Cold Collisions, Contributed talk (M. Gacesa) B4.00004, 11:00 AM – 1:12 PM, Wednesday, May 28, 2008, DAMOP 2008 (Penn. State).
- E. Kuznetsova, **R. Côté**, K. Kirby, and S. Yelin “Quantum computation schemes based on polar molecules.” Session C6: Quantum Computation, Contributed talk (E. Kuznetsova) C6.00006, 2:00 PM – 4:24 PM, Wednesday, May 28, 2008, DAMOP 2008 (Penn. State).
- I. Simbotin, **R. Côté**, and A. Dalgarno “The mutual influence of reactive and non-reactive scattering channels in atom–molecule collisions.” Session E1: Poster Session I: 4:00 pm – 6:00 pm, Poster E1.00062, Wednesday, May 28, 2008, DAMOP 2008 (Penn. State).
- N. Samboy, J. Stanojevic, and **R. Côté** “Long-Range Wells in Rydberg-Rydberg Potential Curves.” Session P6: Ultracold Rydberg Atoms and Plasmas, Contributed talk (N. Samboy) P6.00004, 11:00 AM – 1:24 PM, Friday, May 30, 2008, DAMOP 2008 (Penn. State).

- M. Gacesa, V. Kharchenko, and **R. Côté** “Polarization of X-rays produced in charge-exchange collisions in astrophysical plasmas.” Session R1: Poster Session III: 4:00 pm - 6:00 pm Friday, May 30, 2008, DAMOP 2008 (Penn. State).
- M. Gacesa, P. Pellegrini, and **R. Côté** “Feshbach resonances in LiNa and LiRb.” Poster, UConn/ITAMP/CUA Open House 2008, Cambridge (MA).
- N. Samboy and **R. Côté** “Long-Range Rydberg-Rydberg Potential Curves.” Poster, UConn/ITAMP/CUA Open House 2008, Cambridge (MA).
- I. Simbotin, **R. Côté**, and A. Dalgarno “Reactive and non-reactive scattering in atom-molecule collisions.” Poster, UConn/ITAMP/CUA Open House 2008, Cambridge (MA).
- M. Gacesa, P. Pellegrini, and **R. Côté** “Feshbach resonances in LiNa and LiRb.” Poster, Fall 2007 Joint Meeting of the APS and AAPT New England Sections, UConn, Oct. 19-20 2007.
- N. Samboy and **R. Côté** “Long-Range Rydberg-Rydberg Potential Curves.” Poster, Fall 2007 Joint Meeting of the APS and AAPT New England Sections, UConn, Oct. 19-20 2007.
- I. Simbotin, **R. Côté**, and A. Dalgarno “Reactive and non-reactive scattering in atom-molecule collisions.” Poster, Fall 2007 Joint Meeting of the APS and AAPT New England Sections, UConn, Oct. 19-20 2007.
- M. Gacesa, P. Pellegrini, and **R. Côté** “Feshbach resonances and photoassociation in heteronuclear systems.” Session P4: Cold Collisions of Atoms and Heteronuclear Molecules, Contributed talk (R. Côté) P4.00004, 10:30 AM – 1:06 PM, Friday, June 8, DAMOP 2007 (Calgary, Canada).
- **R. Côté** and J. Stanojevic “Long-range interactions and many-body effects in a cold Rydberg gas.” Session J5: Cavity QED and Quantum Control, Contributed talk (R. Côté) J5.00011, 1:30 PM – 3:54 PM, Thursday, June 7, DAMOP 2007 (Calgary, Canada).
- R. Côté and S. Kallush “Trapping and cooling molecules with evanescent-wave mirrors.” ICAP 2006 poster A.96 (Abstract book p. 183), Innsbruck (July 16-21 2006).
- S. Yelin, R. Côté, K. Kirby, and T. Calarco “Robust quantum computing using polar molecules.” ICAP 2006 poster B.161 (Abstract book p. 425), Innsbruck (July 16-21 2006).
- R. Côté and J. Stanojevic “Many-body effects in local blockade of Rydberg excitations.” ICAP 2006 poster C.54 (Abstract book p. 489), Innsbruck (July 16-21 2006).
- E. Juarros, K. Kirby, and R. Côté “Formation of Alkali Hydrides via Two-photon Excitation.” Session G1.00091 - Poster Session I, Wednesday afternoon, May 17, DAMOP 2006 (Knoxville, Tennessee).
- P. Pellegrini, H. Michels, W. Smith, and R. Côté “Stimulated formation of ultracold ground (NaCa)<sup>+</sup> molecular ions.” Session G1.00092 - Poster Session I, Wednesday afternoon, May 17, DAMOP 2006 (Knoxville, Tennessee).

- I. Simbotin and R. Côté “Reactive scattering calculations for  $D + H_2$  in vibrationally excited states at ultralow temperature.” Session G1.00093 - Poster Session I, Wednesday afternoon, May 17, DAMOP 2006 (Knoxville, Tennessee).
- Zoran Pavlović, R. Côté, and H.R. Sadeghpour “Cold collisions in Cr-Cr and Cr-Rb mixtures.” Session G1.00094 - Poster Session I, Wednesday afternoon, May 17, DAMOP 2006 (Knoxville, Tennessee).
- M. Gacesa, Z. Pavlovic, P. Pellegrini, and R. Côté “Li + Na collisions at ultracold temperatures.” Session G1.00103 - Poster Session I, Wednesday afternoon, May 17, DAMOP 2006 (Knoxville, Tennessee).
- S. Yelin, R. Côté, and T. Calarco “Quantum computing with polar molecules.” Session G1.00143 - Poster Session I, Wednesday afternoon, May 17, DAMOP 2006 (Knoxville, Tennessee).
- N. Samboy, G. Rawitscher, R. Côté, and W. Gloeckle “Three-Body Scattering via the Faddeev Scheme in Configuration Space.” Session O1.00016 - Poster Session II, Thursday afternoon, May 18, DAMOP 2006 (Knoxville, Tennessee).
- J. Stanojevic and R. Côté “Long-range Rydberg-Rydberg interactions and molecular resonances.” Session O1.00103 - Poster Session II, Thursday afternoon, May 18, DAMOP 2006 (Knoxville, Tennessee).
- S. Yelin, K. Kirby, and R. Côté “Dipolar switching for robust quantum computation with polar molecules.” Session C5: Quantum Computation, Contributed talk (S. Yelin) C5.00003, 10:54 AM – 11:06 AM, Wednesday, May 17, DAMOP 2006 (Knoxville, Tennessee).
- T. Wang, R. Côté, E. Eyler, S. Farooqi, P. Gould, M. Kostrun, D. Tong, D. Vrinceanu, and S. Yelin “Superradiance in ultracold Rydberg atoms.” Session T5: Rydberg Atoms and Wave Packets, Contributed talk (T. Wang) T5.00002, 10:42 AM – 10:54 AM, Friday, May 19, DAMOP 2006 (Knoxville, Tennessee).
- E. Juarros, K. Kirby, and R. Côté “One-photon Assisted Formation of Ultracold LiH and NaH.” Session E5: Ultracold Plasmas and Molecules, Contributed talk (E. Juarros) E5.00009, 3:06 PM – 3:18 PM, Wednesday, May 17, DAMOP 2006 (Knoxville, Tennessee).
- P. Pellegrini, R. Côté, and T. Killian “High intensity photoassociation spectroscopy of ultracold strontium atoms: nonperturbative theoretical analysis.” Session L5: Photoassociation Spectroscopy, Contributed talk (P. Pellegrini) L5.00003, 10:54 AM – 11:06 AM, Thursday, May 18, DAMOP 2006 (Knoxville, Tennessee).
- J. Stanojevic and R. Côté “Many-body effects in strongly interacting systems of Rydberg atoms.” Session Z4: Rydberg Atoms and Coherent Control, Contributed talk (J. Stanojevic) Z4.00003, 9:24 AM – 9:36 AM, Saturday, May 20, DAMOP 2006 (Knoxville, Tennessee).
- J. Stanojevic and R. Côté “Long-range interactions and many-body effects in a cold Rydberg gas.” Session D6.00093 - Poster Session I, Wednesday afternoon, May 18, DAMOP 2005 (Lincoln, Nebraska).

- D. Tong, S.M. Farooqi, J. Stanojevic, R. Côté, E. Eyler, and P.L. Gould “Molecular Resonances due to Long-Range Interactions between Ultracold Rydberg Atoms.” Session D6.00094 - Poster Session I, Wednesday afternoon, May 18, DAMOP 2005 (Lincoln, Nebraska).
- P.G. Mickelson, S.B. Nagel, A.D. Saenz, Y.N. Martinez, Y.C. Chen, T.C. Killian, P. Pellegrini, and R. Côté “Photoassociative spectroscopy at long range in ultracold strontium.” Session L5: Ultracold Collisions and Photoassociation Processes, Contributed talk L5.00005, Friday afternoon, May 20, DAMOP 2005 (Lincoln, Nebraska).
- Z. Pavlović, R. Krems, R. Côté, and H.R. Sadeghpour “Zeeman relaxation and magnetic Feshbach resonances in bosonic  $^{52}\text{Cr}$  gas.” Session L5: Ultracold Collisions and Photoassociation Processes, Contributed talk L5.00006, Friday afternoon, May 20, DAMOP 2005 (Lincoln, Nebraska).
- P. Pellegrini, R. Côté, and T. Killian “Theoretical analysis of the photoassociative spectroscopy of ultracold strontium atoms.” Session L5: Ultracold Collisions and Photoassociation Processes, Contributed talk L5.00007, Friday afternoon, May 20, DAMOP 2005 (Lincoln, Nebraska).
- M. Koštrun and R. Côté “Spectroscopic Evaluation of Degeneracy in Dilute Weakly Interacting Degenerate Fermi Gases.” Session M6.00021 - Poster Session III, Friday afternoon, May 20, DAMOP 2005 (Lincoln, Nebraska).
- P. Pellegrini and R. Côté “Photoassociative spectroscopy of ultracold strontium atoms.” Contributed talk (P. Pellegrini), UConn/ITAMP Open House, February 5 (2005).
- J. Stanojevic and R. Côté “Many-body effects in a cold Rydberg gas.” Poster, UConn/ITAMP Open House, February 5 (2005).
- D. Tong, S.M. Farooqi, J. Stanojevic, R. Côté, E. Eyler, and P.L. Gould “Molecular Resonances in Ultracold Rydberg Atoms.” Poster, UConn/ITAMP Open House, February 5 (2005).
- M. Koštrun and R. Côté “Two-photon probe of Degeneracy in Dilute Weakly Interacting Degenerate Fermi Gases.” Poster, UConn/ITAMP Open House, February 5 (2005).
- E. Taylor-Juarros, R. Côté, and K. Kirby “Formation of Ultracold Polar Molecules.” Poster (presented by E. Taylor-Juarros), Quantum Optics Winter meeting in Obergurgl (Austria), Feb 27 - Mar 5, 2005.
- E. Taylor-Juarros, R. Côté, K. Kirby “Photoassociation to Produce Ultracold LiH and NaH.” Session J1.056 - Poster Session II, Thursday afternoon, May 27, DAMOP 2004 (Tucson, AZ).
- D. Tong, S.M. Farooqi, J. Stanojevic, S. Krishnan, Y.P. Zhang, R. Côté, E.E. Eyler, and P.L. Gould “Suppression of Rydberg excitation in an ultracold atomic sample.” Session P1.091 - Poster Session III, Friday afternoon, May 28, DAMOP 2004 (Tucson, AZ).
- Zoran Pavlovic, R. Côté, P. Pellegrini, and R. Côté “Li+H and Li+Rb collisions at ultralow temperatures.” Session J1.060 - Poster Session II, Thursday afternoon, May 27, DAMOP 2004 (Tucson, AZ).



- E.E. Eyler, S.M. Farooqi, D. Tong, J. Stanojevic, S. Krishnan, Y.P. Zhang, R. Côté, and P.L. Gould, “Excitation suppression in an ultracold Rydberg gas due to a local van der Waals blockade.” Abstract IMI6, p.67. Presentation given by E.E. Eyler at the CLEO/IQEC meeting, May 16-21 2004 (San Francisco, CA).
- J. Stanojevic and R. Côté, “Local blockade in a cold Rydberg gas.” Poster 37, International Workshop and Seminar on Rydberg Physics (Dresden, Germany, April 19 - May 14, 2004).
- R. Côté, C. Boisseau, S.M. Farooqi, S. Krishnan, J. Stanojevic, D. Tong, Y.P. Zhang, A.S. Estrin, E.E. Eyler, and P.L. Gould “Long-range molecular resonances in a cold Rydberg gas.” Session We173, Poster session, Wednesday afternoon, July 23, XXIII-ICPEAC 2003 (Stockholm, Sweden).
- I. Simbotin, Z. Pavlovic, and R. Côté “Reactive scattering in the ultracold regime.” Session We174, Poster session, Wednesday afternoon, July 23, XXIII-ICPEAC 2003 (Stockholm, Sweden).
- E. Taylor-Juarros, R. Côté, and K.P. Kirby “Formation of ultracold alkali hydrides.” Session We181, Poster session, Wednesday afternoon, July 23, XXIII-ICPEAC 2003 (Stockholm, Sweden).
- R. Côté and B. Segev “Quantum reflection engineering: the bichromatic evanescent-wave mirror.” Session Tu118, Poster session, Tuesday afternoon, July 29, XXIII-ICPEAC 2003 (Stockholm, Sweden).
- E. Taylor-Juarros, R. Côté, K. Kirby “Formation of Ultracold LiH and NaH.” Session J1.033 - Poster Session II, Thursday afternoon, May 22, DAMOP 2003 (Boulder, CO).
- S.M. Farooqi, S. Krishnan, J. Stanojevic, D. Tong, Y.P. Zhang, A.S. Estrin, R. Côté, E.E. Eyler, and P.L. Gould “Long-Range Molecular Resonances in a Cold Rydberg Gas.” Session L3.004, ORAL session, Friday morning, May 23, DAMOP 2003 (Boulder, CO).
- J. Stanojevic, S. M. Farooqi, D. Tong, S. Krishnan, Y. P. Zhang, A. S. Estrin, R. Côté, John Calsamiglia, E.E. Eyler, and P.L. Gould “Excitation Efficiency of a Cold Rydberg Gas.” Session L3.005, ORAL session, Friday morning, May 23, DAMOP 2003 (Boulder, CO).
- John Calsamiglia, Jacob Taylor, Robin Côté, and Mikhail Lukin “ Dipole blockade in optical lattices: mesoscopic collapses and revivals.” Session J1.015, Poster Session II, Thursday afternoon, May 22, DAMOP 2003 (Boulder, CO).
- Zoran Pavlovic, Ionel Simbotin, and Robin Côté “H + H<sub>2</sub> collisions at ultralow temperatures.” Session J1.031, Poster Session II, Thursday afternoon, May 22, DAMOP 2003 (Boulder, CO).
- Ionel Simbotin, Zoran Pavlovic, and Robin Côté “Cl + H<sub>2</sub> collisions at ultralow temperatures.” Session J1.032, Poster Session II, Thursday afternoon, May 22, DAMOP 2003 (Boulder, CO).
- Marijan Kostrun and Robin Côté “Spectroscopic Temperature Determination of Degenerate Fermi Gases.” Session D1.038, Poster Session I, Wednesday afternoon, May 21, DAMOP 2003 (Boulder, CO).

- E. Taylor-Juarros, R. Côté, and K. Kirby “Formation of ultracold polar molecules.” ICAP 2002 poster E6 (Abstract book p. 159).
- Robin Côté “Hopping conductivity in ultracold gases.” ICAP 2002 poster G15 (Abstract book p. 177).
- Robin Côté and Christophe Boisseau “Ultralong-range Rydberg molecules.” ICAP 2002 poster E14 (Abstract book p. 266).
- E. Taylor-Juarros, R. Côté, K. Kirby “Formation of Ultracold Polar Molecules.” Session P6.029 - Poster Session III, Friday afternoon, May 31, DAMOP 2002 (Williamsburg).
- R. Côté, V. Kharchenko, M.D. Lukin “Mesoscopic molecular ions in Bose-Einstein condensates.” Session D6.027 - Poster Session I, Wednesday afternoon, May 29, DAMOP 2002 (Williamsburg).
- O.P. Makarov, R. Côté, H. Michels, and W.W. Smith “Radiative lifetime of the metastable excited singlet  $A^1\Sigma^+$  state of  $(\text{CaNa})^+$ .” Session D6.042 - Poster Session I. Wednesday afternoon, May 29, DAMOP 2002 (Williamsburg).
- Z. Pavlovic, R. Côté, H.R. Sadeghpour “Cold collisions between chromium atoms.” Session D6.048 - Poster Session I, Wednesday afternoon, May 29, DAMOP 2002 (Williamsburg).
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- John Calsamiglia, R. Côté, and M.D. Lukin “Mean-field theory of dipole blockade.” Session P6.048 - Poster Session III, Friday afternoon, May 31, DAMOP 2002 (Williamsburg).
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- W.W. Smith, E. Babenko, R. Côté, and H.H. Michaels “On the collisional cooling of co-trapped atomic and molecular ions by ultracold atoms:  $\text{Ca}^+ + \text{Na}$  and  $\text{Na}_2^+(v^*, J^*) + \text{Na}$ .”
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