

ITAMP News

Harvard-Smithsonian Center for Astrophysics
itamp.harvard.edu

FALL 2016

Workshops, Topical Groups, & Schools

Day Symposium on Cold Molecules

John Doyle Group (Harvard University) *Kang-Kuen Ni Group* (Harvard University), *Dave Patterson Group* (Harvard University), *ITAMP* (Harvard/Smithsonian CFA), *Roman Krems* (UBC), and *Timur Tscherebul* (University of Nevada, Reno)
May 31, 2016

Connecting Few-body and Many-body Pictures of Fractional Quantum Hall Physics

Nigel Cooper (Univ. of Cambridge) and *Chris Greene* (Purdue)
July 11-13, 2016

The Electronic-Structure Problem in Theoretical Strong-Field Physics

Robin Santra (CFEL - Hamburg)
October 10-14, 2016

ITAMP/B2 Institute Winter Graduate School on AMO Physics, “Quantum Information

Fundamentals and Applications”
University of Arizona- Biosphere 2
January 4-12, 2017

Many-Body Cavity QED

Dan Stamper-Kurn (UC Berkeley) and *Murray Holland* (JILLA)
May 15-17, 2017



Dear Friends:

We are in the first year of funding at ITAMP after the open competition. We are excited about the opportunities ahead and aware of the challenges which we will face. We welcome the AMO physics community participation in the activities at ITAMP. To list a number of ways the community can directly communicate with ITAMP and participate in its scientific and programmatic activities, I will mention the Call for Proposal for workshops and topical group meetings, themes for the ITAMP/B2 Graduate School, the newly announced Underrepresented School Faculty/Student Tandem Summer Fellowship and the Dalgarno Lectures.

The summer fellowship allows for a faculty and a student from an underrepresented school (HBCU, Latino, American-Indian, ...) to be in residence at ITAMP and become immersed in the research opportunities in AMO physics in the Cambridge area. The Dalgarno Lectures was inaugurated in the Spring 2016 and a committee has formed to select a prominent lecturer in AMO physics and applications to astrophysics. Nominations are welcome from the AMO physics community.

H. Sadeghpour



**SEND YOUR STUDENTS TO THE
ITAMP/B2 INSTITUTE
2017 WINTER SCHOOL!**

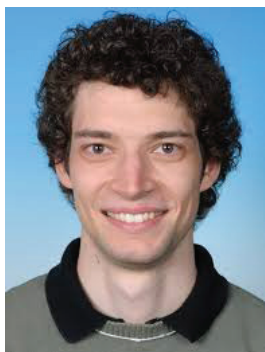
The ITAMP/B2 Institute Winter Graduate School in AMO Physics on “Quantum Information Fundamentals and Applications”, will be held on the Biosphere Campus near Tucson, Arizona from January 4-11, 2017. Visit:

www.cfa.harvard.edu/itamp/WinterSchool2017.html

ITAMP 2017 Postdoctoral Fellowship application will open on fall 2016.
www.cfa.harvard.edu/itamp/postdoctoral.html

2016 Postdoctoral Fellows

ITAMP Welcomes the 2016 edition of postdoctoral fellows.



Hannes Pichler comes to ITAMP from the group of Peter Zoller (Innsbruck) where he worked on preparation of highly entangled many-body quantum states in optical lattices at finite temperatures. Hannes began his tenure in April 2016.



Rivka Bekenstein will begin her tenure as an ITAMP fellow in September 2016. She performed her PhD research under the supervision of Moti Segev (Technion), where she investigated analog GR systems, such as optical wave packets in curved space emulating gravitational effects.

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ITAMP Outreach

Underrepresented School Faculty/Student Tandem Summer Fellowship

A new program at ITAMP addresses the lack of opportunities for research among minority students. The summer fellowship for a faculty and a student from a historically underrepresented school, such as HBCU or Latino colleges, allows the pair faculty/student to be resident at ITAMP and get involved in the research programs with fellows at ITAMP. This summer's fellows are Deborah Santamore, Delaware State University with her two students Dontray Dowdell and Arthur Newell.

High-School Student Outreach


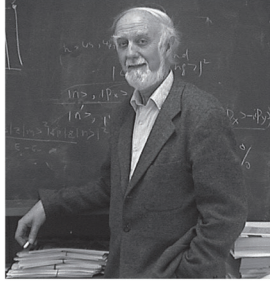
In collaboration with the Johns Hopkins University Center for Talented Youth (CTY), ITAMP will host a large class of high schools students in the CTY program in October 2016. The students will listen to lectures, witness several demos and participate in lab visits.

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ITAMP continues to offer videos from workshops and the Winter Schools on YouTube. Videos can be found by searching for "ITAMP/Physics" at youtube.com.

ITAMP is proud to announce the creation of a new lecture series, honoring **Alex Dalgarno**. The first lectures were given in May 2016 by Prof. Tilman Pfau at Harvard and MIT.

DALGARNO LECTURES





Inaugural **Alexander Dalgarno** Lecturer:
Prof. Tilman Pfau
Universität Stuttgart

May 4, 2016, 4:30 PM
ITAMP/HQOC, Harvard University, Jefferson 250
"Strongly Interacting Rydberg Gases in Thermal Vapor Cells"

May 5, 2016, 4:00 PM
Physics Colloquium, Massachusetts Institute of Technology, Building 10, Room 250
"Ultracold Dipolar Gases: From Chromium to Lanthanides"

May 10, 2016, 4:30 PM
CUA, Massachusetts Institute of Technology, Building 4, Room 270
"A Single Charge in a Bose-Einstein Condensate: from Two- to Few- to Many-Body Physics"



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Videos of the Dalgarno Lecture Series can be found at ITAMP Physics, playlist "ITAMP- Dalgarno Lectures".

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Contact the ITAMP Coordinator **Naomi Tariri** for information and questions at ntariri@cfa.harvard.edu

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