



Understanding Surface and Interface Interactions: From Scattering Dynamics to Heterogeneous Catalysis

July 29 - 30, 2017

Chairs

Rachael G. Farber and Katharina Doblhoff-Dier

Salve Regina University

100 Ochre Point Avenue
Newport, RI, US

Conference Description

The Gordon Research Seminar on Dynamics at Surfaces is a unique forum for graduate students, post-docs, and other scientists with comparable levels of experience and education to present and exchange new data and cutting edge ideas.

Focusing on the same topics as the related Gordon Research Conference, this meeting offers young theoreticians and experimentalists investigating surface and interface dynamics an opportunity to present and actively discuss their work with their peers. Two established scientists in the field will provide introductory lectures to open each session; the presented talks will be selected from abstracts submitted by young investigators. A career panel featuring representatives in the field will close the GRS. GRS participants are encouraged to attend the following GRC on Dynamics at Surfaces.

Related Meeting



This GRS will be held in conjunction with the "Dynamics at Surfaces" Gordon Research Conference (GRC). Those interested in attending both meetings must submit an application for the GRC in addition to an application for the GRS. Refer to the [associated GRC program page](#) for more information.

Conference Program

Saturday

2:00 pm - 5:00 pm Arrival and Check-in

3:30 pm - 3:45 pm Introductory Comments by GRC Site Staff / Welcome from the GRS Chair

3:45 pm - 4:30 pm	Keynote Session: Tools, Challenges, and Opportunities in Research Discussion Leader: Helen Chadwick (Leiden University, The Netherlands)
3:45 pm - 4:15 pm	Arthur Utz (Tufts University, USA) "There's Gold in Them Thar Hills - Tools, Challenges, and Opportunities in Research"
4:15 pm - 4:30 pm	Discussion
4:30 pm - 6:00 pm	Poster Session
6:00 pm - 7:00 pm	Dinner
7:30 pm - 9:30 pm	Messy Surfaces <i>Not all interfaces are perfect crystals and not all processes that take place at surfaces are simple and clear-cut. The provocative title "Messy Surfaces" embraces liquid interfaces and self-assembly as well as the "messy" task of disentangling a multitude of processes influencing dynamics at surfaces.</i> Discussion Leader: Nusnin Akter (Stony Brook University, USA)
7:30 pm - 7:50 pm	Joseph Gord (University of Wisconsin-Madison, USA) "Gas-Liquid Scattering Studies of Atmospheric Reactions at the Surfaces of Sea-Spray Mimics"
7:50 pm - 8:00 pm	Discussion
8:00 pm - 8:20 pm	Anton Tamtögl (Institute of Experimental Physics, Graz University of Technology, Austria) "Atomic-Scale Diffusion and Friction on a Topological Insulator Surface: H ₂ O on Bi ₂ Te ₃ (111)"
8:20 pm - 8:30 pm	Discussion
8:30 pm - 8:50 pm	Rebecca Thompson (University of Chicago, USA) "Oxidative Destruction of Nerve Agent Simulants by O(³ P) Atomic Oxygen"
8:50 pm - 9:00 pm	Discussion
9:00 pm - 9:10 pm	David Nesbitt (JILA, University of Colorado Boulder, USA) "Quantum State-Resolved Collision Dynamics at the Gas-Liquid Interface"
9:10 pm - 9:15 pm	Discussion
9:15 pm - 9:30 pm	General Discussion
Sunday	
7:30 am - 8:30 am	Breakfast

9:00 am - 11:00 am	<p>Difficult Surfaces</p> <p><i>Are surfaces difficult? The physical and chemical processes happening at solid-gas interfaces certainly are! Steps, impurities, phonons, vibrations, and a myriad of interacting electrons can crucially influence reaction rates and reaction mechanisms.</i></p> <p>Discussion Leaders: Thomas Eldridge (University of Virginia, USA) and Amy Brunsvold (SINTEF Energy Research, Norway)</p>
9:00 am - 9:20 am	<p>Alex Schilling (Tufts University, USA)</p> <p>"Templated Growth of a Chiral Thin Film Oxide"</p>
9:20 am - 9:30 am	Discussion
9:30 am - 9:50 am	<p>Jörn Werdecker (Ecole Polytechnique Federale de Lausanne, Switzerland)</p> <p>"Observation of Vibrational Energy Redistribution in a Gas-Surface Encounter: State-to-State Scattering of CH₄ from Ni(111)"</p>
9:50 am - 10:00 am	Discussion
10:00 am - 10:20 am	<p>Richard van Lent (Leiden University, The Netherlands)</p> <p>"Resolving the Simplest of Reactions: Low Energy D₂ Dissociation on Pt"</p>
10:20 am - 10:30 am	Discussion
10:30 am - 10:50 am	<p>Barratt Park (University of Goettingen, Germany)</p> <p>"Rotationally-Resolved Scattering of Formaldehyde from the Au(111) Surface"</p>
10:50 am - 11:00 am	Discussion
11:00 am - 12:30 pm	<p>Poster Session</p> <p><i>Coffee will be served in the poster area from 11:00 am - 11:30 am</i></p>
12:30 pm - 1:30 pm	Lunch
1:30 pm - 2:30 pm	<p>Mentorship Component: Career Panel</p> <p><i>Three established career scientists will be available for an informal forum discussing the potential career paths in academia and industry: Dr. David Nesbitt, JILA Fellow and Adjoint Professor at University of Colorado Boulder; Dr. Arthur Utz, Associate Professor at Tufts University; and Dr. Amy Brunsvold, Research Scientist at SINTEF, Energy Research.</i></p> <p>Discussion Leaders: Rachael Farber (Loyola University Chicago, USA) and Katharina Doblhoff-Dier (Leiden University, The Netherlands)</p>

1:30 pm - 2:30 pm	<p>Panel Discussion</p> <p><i>So You Have a PhD... What's Next?</i></p> <ul style="list-style-type: none"> • Amy Brunsvold (SINTEF Energy Research, Norway) • David Nesbitt (JILA, University of Colorado Boulder, USA) • Arthur Utz (Tufts University, USA) • Reinhard Maurer (Yale University, USA)
2:30 pm - 3:00 pm	<p>Evaluation Period</p> <p><i>Fill in GRS Evaluation Forms</i></p>
3:00 pm	Seminar Concludes

Contributors

 <p>Carl Storm International Diversity Fellowship</p>	 <p>AFOSR AIR FORCE OFFICE OF SCIENTIFIC RESEARCH</p>	<p>Surface Science</p> <p>A JOURNAL DEVOTED TO THE PHYSICS AND CHEMISTRY OF INTERFACES</p>
 <p>Universiteit Leiden</p>	 <p>LOYOLA UNIVERSITY CHICAGO</p>	 <p>SCM Software for Chemistry & Materials</p>
 <p>uim university universität uulm</p>		