

MRS - F13 Symposium UU

Phonon Interaction Based  
Materials Design --  
Theory, Experiments, and  
Applications

Boston, December 2-5, 2013

# WELCOME & INTRODUCTION

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# Our previous effort on phonon symposia

**MRS Fall 2007** Symposium EE: Phonon Engineering – Theory and Applications (1.5 days + poster)

**MRS Fall 2009** Symposium CC: Phonon Engineering for Advanced Materials Solutions – Theory and Applications (4 days + poster)

**MRS Fall 2011** Symposium W: Phonons in Nanomaterials – Theory, Experiments, and Applications (4.5 days + poster)

# This symposium

**MRS Fall 2013 Symposium UU**

3.5 days + poster session

16 Invited talks (4 in UU4, 2 in others)

49 Contributed talks

4 Posters

# Theme of this Symposium

To address fundamental and experimental issues related to phonon interactions and transport in structures representing multiple length scales (i.e. nano-materials, mesoscopic systems, bulk materials)

To address current concepts in phonon engineering to enable novel design and materials based solutions in technologically important areas

# Topics and Sessions

Phonon modes and dispersion relations - Monday AM  
(UU1)

Phonon thermal transport -- bulk materials - Tuesday AM  
(UU3)

Phonon thermal transport -- nano materials - Monday PM  
& Tuesday PM (UU2, UU4)

Phonon devices - Wednesday AM (UU5)

Phononics and coherent acoustics - Wednesday PM (UU6)

Poster - Wednesday PM (UU7)

Vibrational properties and phonon interactions -  
Thursday AM (UU8)

# MRS Policies

Recording (audio, video, still photography, etc.) of presentations during sessions without the written consent of MRS and the individual authors is strictly prohibited

Presenters please sign-in at the start of your session

# First Session

Phonon modes and dispersion relations