



# 1<sup>st</sup> International Conference on Phononic Crystals, Metamaterials and Optomechanics

**Santa Fe, New Mexico, USA,  
May 29-June 2, 2011**

**Phononics**  
2011

INTERNATIONAL CONFERENCE ON PHONONIC CRYSTALS,  
METAMATERIALS & OPTOMECHANICS

May 29<sup>th</sup> - June 2<sup>nd</sup>, 2011 - Santa Fe, USA

Themes	Timeline
1. Phononic crystals	15 Jan, 2010: Extended abstract deadline
2. Phononic metamaterials	15 Jan, 2010: Student Fellowship deadline
3. Wave propagation in periodic structures	15 Mar, 2011: Notification of acceptance
4. Nano-scale phonon transport	1 Apr, 2011: Early registration deadline
5. Phononic MEMS and RF applications	29 May, 2011: Reception and on-site registration
6. Optomechanics	30 May, 2011: Technical program begins
7. Fabrication and characterization for phononics	3-4 Jun, 2011: Post-event social program

**Mission**  
Whether examined at the nanoscale, microscale or larger scales, the creation and manipulation of phonons (aka phononics) is opening up a new technological frontier with a potential impact that could match that of electronics almost half a century ago. Phononics encompasses a range of interconnected disciplines, usually labeled in terms of the type of host "materials" that provide the medium for phononic wave propagation, e.g. phononic crystals, metamaterials, superlattices, periodic structures etc. The coming-of-age of these cross-related disciplines provides a converging point of historical significance for the science of phononics. It is now timely for a large-scale international forum to be established and inaugurated to unify all the emerging areas mentioned in the Themes list under one scope.

**Conference Chair:** Prof. Bab F. El-Kady, Santa National Laboratories (USA)

**International Organizing Committee (IOC)**  
Prof. Abdellah Khelif, Georgia Tech-CNRS (USA/France)  
Prof. Olivier D'Acun, Caltech (USA)  
Prof. Jose Sanchez-Galvez, Univ. Pablo de Olavide (Spain)  
Prof. Massimo Ruzzene, Georgia Tech (USA)  
Dr. Peter Shukla, Santa National Laboratory (USA)  
Dr. Ray H. Chiao, Santa National Laboratory (USA)  
Prof. Tsung-Tsung Wu, National Taiwan University (Taiwan)

**Conference Co-Chair:** Prof. Mahmoud I. Hussein, University of Colorado at Boulder (USA)

**Technical Organizing Committee (TOC)**  
Dr. Mehmet F. Su, University of New Mexico (USA)  
Dr. Zeyi C. Leseman, University of New Mexico (USA)  
Dr. Charles M. Soukoreff, Santa National Laboratories (USA)  
Shuai L. Du, University of Colorado at Boulder (USA)  
Danna R. Blak, University of Colorado at Boulder (USA)  
Linda L. Wood, Santa National Laboratories (USA)  
Bernardo G. Parfeni, University of New Mexico (USA)

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## The Conference Begins ...



**Preparation**



**Registration**



## Welcome from the Chairs



Opening Remarks



Mahmoud and Ihab



## Technical Sessions



**Main Lecture Hall**



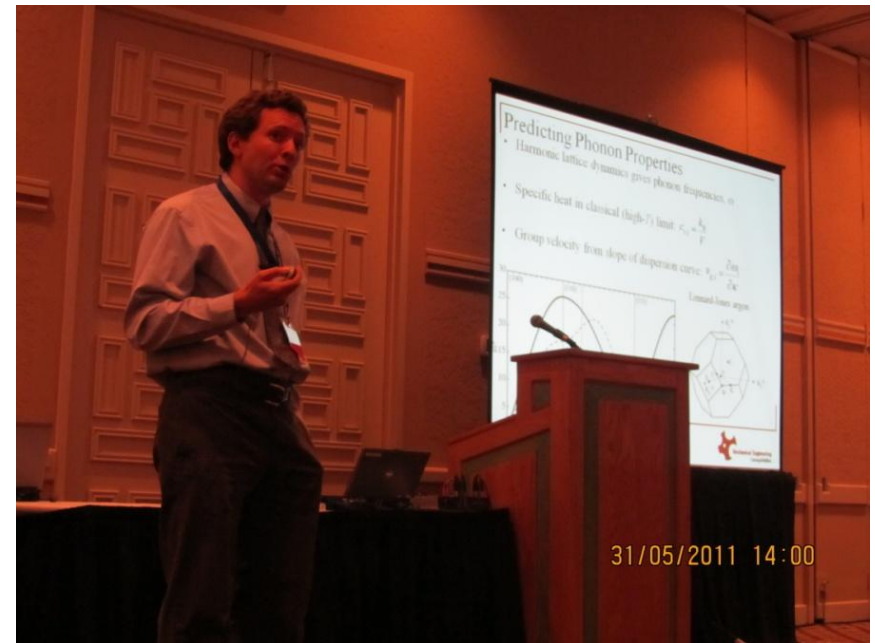
**Poster Session**



***2011 Felix Bloch Lecturer:***  
**Professor Sia Nemat-Nasser, University of California, San Diego**



**Andrew Norris:**  
Plenary Speaker in Phononic Metamaterials



**Alan McGaughey:**  
Keynote Speaker in Phonon Transport

## Meetings and Discussions



**Committee Meeting**



**Coffee Break**



## Student Competitions



**Matteo Senesi, 1<sup>st</sup> Place**  
**Phononics 2011 NSF Best Student Poster  
Presentation Award**



**Andrew Tomchek, 2<sup>nd</sup> Place**  
**Phononics 2011 NSF Best Student Poster  
Presentation Award**





## Social Events



**Conference Reception**



**Conference Banquet**



Conference Group Photo





T. Carmon

Kumar

A. Young

G. M. Hulbert

S. Bringuier

G. Orris

D. Torrent

T. Isotalo

E. Chavez

B. Djafari-Rouhani

D. Schneider

C. Reinke

P. Otsuka

J. S. Jensen

S. Benchabane

A. Spadoni

G. Bastian M. Zubtsov

J. Vasseur

D. Lanzillotti-Kimura

G. Theocharis

V. Romero-Garcia

R. Magyar

J. Maasilta

M. Kang

M. Neves

I. El-Kady

O. Umnova

A. Leonard

P. Chapuis

B. Assouar

A. Krokhin

N. Kuo

Africk

M. Spector

G. Bogart

J. Page

R. Pourabolghasem

S. Cummer

J. Sánchez-Dehesa

A. N. Norris

M. Maldovan

H. Estrada

M. Senesi

B. Kim

G. Herrera

B. Bonello

M. J. Leamy

R. Olsson

A. S. Phani

G. Manktelow

P. Rakich

A. Srivastava

A. Tomchek

Amirkhizi

E. Flores

Y. Pennec

O. R. Bilal

L. Wang

I. Psarobas

G. Zhu

L.-W. Cai

B. L. Davis

M. M. Sigalas

Q. Guo

M. Su

G. Cole

A. C. Boye

M.I. Hussein

V. Tournat

A. Khelif

