

# European GDR-Workshop on Nonlinearities in Acoustics

March 22-23, 2012

Labo. JAD, Université de Nice Sophia-Antipolis



It is a workshop of the European GDR :

## " **Wave Propagation in Complex Media for Quantitative and Non Destructive Evaluation** "

(ex French GDR US 2501). In the lines of previous one or two day scientific meetings, this coming workshop will focus on a specific topic of the network. In the present case, it is

**Nonlinearities in acoustics, specially contact nonlinearities,**

after those of Paris, Manchester, Bristol, on the same topic.

Scientific committee: Alain Léger, Bruno Lombard, L.M.A. Marseille

Organizing committee: Béatrice Desoudin, Angélique Guitard, Stéphane Junca, Bernard Rousselet

contact: [Stephane.Junca@unice.fr](mailto:Stephane.Junca@unice.fr)

	THURSDAY March 22	□□□□□□	FRIDAY March 23 2012	
10 h 30 →	<i>Accueil</i>	□□□□□□	<i>Anissa Meziane</i>	← 9 h
11h	<i>Hamad Hazim</i>	□□□□□□	<i>Cédric Payan</i>	9 h 45
11 h 45	<i>Yoshikazu Ohara</i>	□□□□□□	° Coffee break	← 10h30
12h30 →	° Lunch	□□□□□□	<i>Alain Léger</i>	11 h
14h	<i>Vincent Tournat</i>	□□□□□□	<i>Xavier Noblin</i>	11 h 45
14h45	<i>Bruno Lombard</i>	□□□□□□	° Lunch	← 12h30
15h30 →	° Break	□□□□□□	<i>Thomas Erneux</i>	14h
16h15	<i>Mourad Bentahar</i>	□□□□□□	Discussion	14 h 45
17h	<i>Vladislav Aleshin</i>	□□□□□□		
		□□□□□□		
Evening	° Dinner	□□□□□□		

- Vladislav ALESHIN: Contact mechanics based on Preisach analysis
- Mourad BENTAHAR: **Advances in dynamic behavior of nonlinear mesoscopic materials**
- Thomas Erneux: **Friction instabilities with delay**
- Hamad HAZIM : **Analytical solutions of nonlinear mechanical systems with a unilateral elastic contact - An asymptotic approach**
- Alain LEGER: **On the modelling and qualitative properties of the dynamics with unilateral contact.**
- Bruno LOMBARD: **Interaction of elastic waves with contact nonlinearities.**
- Anissa MEZIANE: **Numerical study of non linear bulk wave interaction at a frictional contact interface. Relation between generation of harmonics and contact interface dynamic.**
- Xavier Noblin : Photoelastic study of sound waves in grain packings
- Yoshikazu OHARA : **Accurate Measurement of Closed Crack Depths Using Subharmonic Phased Array**
- Cédrix Payan: Quantitative linear and nonlinear resonant inspection techniques for characterizing thermal damage in concrete
- Vincent TOURNAT: **Contact acoustic nonlinearities in unconsolidated granular media**

## Abstracts an Titles

1. Vladislav ALESHIN:  
<http://math.unice.fr/~junca/Research/Colloques/Abstract-VA.pdf>
2. Mourad BENTAHAR:  
<http://math.unice.fr/~junca/Research/Colloques/Abstract-MB.pdf>
3. **Thomas Erneux:**  
<http://math.unice.fr/~junca/Research/Colloques/Abstract-TE.pdf>
4. Hamad HAZIM : <http://math.unice.fr/~junca/Research/Colloques/Abstract-HH.pdf>
5. **Alain LEGER:**  
<http://math.unice.fr/~junca/Research/Colloques/Abstract-AL.pdf>
6. Bruno LOMBARD:  
<http://math.unice.fr/~junca/Research/Colloques/Abstract-BL.pdf>
7. Anissa MEZIANE:  
<http://math.unice.fr/~junca/Research/Colloques/Abstract-AM.pdf>
8. Xavier Noblin or Guillaume Huillard:  
<http://math.unice.fr/~junca/Research/Colloques/Abstract-XN.pdf>
9. Yoshikazu OHARA :  
<http://math.unice.fr/~junca/Research/Colloques/Abstract-YO.pdf>
10. Cédrix Payan:  
<http://math.unice.fr/~junca/Research/Colloques/Abstract-CP.pdf>
11. Vincent TOURNAT:  
<http://math.unice.fr/~junca/Research/Colloques/Abstract-VT.pdf>

Inscription: send your Name, institution, address, email to [Stephane.Junca@unice.fr](mailto:Stephane.Junca@unice.fr)

Pages under construction, update 12 March 2012

Accommodation :

Reservations for invited speakers and GDRE members are made directly by the organizing committee. Other participants are kindly asked to book accommodation on their own. A suggestion of hotels can be found below. In case of difficulties, please contact the organizers for help.

Hôtel Comté De Nice \*\*

29, rue de Dijon

Tél. : 04 93 88 94 56

Fax : 04 93 87 67 40

Web : [www.hotelcomtedenice.com](http://www.hotelcomtedenice.com)

Hôtel MIRABEAU \*\*\*

15 avenue Malausséna

Tél. : 04 93 88 33 67

Fax : 04 93 16 14 08

Hôtel Villa St. Hubert \*\*

(this is the hotel of all invited speakers and sponsored students)

26, rue Michel Ange

06100 Nice

Tél. : 04 93 84 66 51

Fax : 04 93 84 70 96

Mail : [contact@villasainthubert.com](mailto:contact@villasainthubert.com)

Directions:

For those who arrive at the airport, there are direct buses to the center. In particular there are lines 23 and 99 which start from Terminal 1 (if you arrive at Terminal 2, take a shuttle to Terminal 1). Line 23 is slow but cheap (1€) and takes you to the Campus Valrose area (University). Line 99 is a bit more costly and only takes you to the main train station but it is an express line. An easier way is of course to take a taxi (around 30 euros).

The hotels which have been booked by the organizing committee are all located in the area of railway station and University. We provide below a big map of Nice to indicate the locations of the Airport (at the west end of the Promenade des Anglais), the Railway Station and the Campus Valrose of the University of Nice. Then, you find a zoom of the black rectangle with the hotels (the addresses and phone numbers are available here). Finally, a map of the Campus.



An easy solution to go from your hotel to the campus is to take the TRAM (there is only one line, price 1 euro) and stop at "Valrose Université".

