

**1st International Conference on Complex Metallic Alloys and their Complexity (C-MAC 1)****Chairmen: Jean-Marie Dubois and Vincent Fournée**

Dates: Oct. 4-7, 2009

Place: City Hall of Nancy

*Information produced in red is to be confirmed***Sunday 4 Oct. 09**

13 : 00 Registration

**INTRODUCTORY SESSION, open to Grand Public**

15 : 00 Opening Address

15 : 05 Welcome address on behalf of the City Council

15 : 15 **Major developments of Nancy University: present and future**15 : 30 **The Chemistry Institute of CNRS**

15 : 45 Gender equality: an ethical issue or a business case?

16 : 30 Break

16 : 50 Complexity in everything

17 : 30 From mathematical games to complexity in Nature

18 : 15 CMAs: a new challenge in solid state science

19 : 00 Welcome cocktail, upon individual invitation.

Under the auspices of Académie de Stanislas and Académie  
Lorraine des Sciences

Jean-Marie DUBOIS	Co-ordinator, CMA NoE	
Claudine GUIDAT	Vice-Mayor of Nancy	
Jean-Pierre FINANCE	President, Henri Poincaré University	
Gilberte CHAMBAUD	Director, Chemistry Institute of CNRS	
Claudine HERMANN	Honorary President of 'Femmes et Sciences'	FR
Knut URBAN	Research Centre Jülich, Former President of German Physical Society (DFG)	DE
Marjorie SENECHAL	Northampton University	US
Vincent FOURNÉE	Nancy University & CNRS	FR

**Monday 5 Oct. 09****MATHEMATICS****Chair: M. Baake**

9 : 00 Presentation of the session

P 9 : 05 Mathematical diffraction theory, homometry and the inverse problem

I 10 : 00 Grain boundaries from a mathematical perspective

I 10 : 35 Subcritical percolation in non-periodic structures: rigorous results

11 : 10 Coffee Break

Michael BAAKE	Bielefeld University	DE
Uwe GRIMM	Open Uni, Milton Keynes	UK
Peter ZEINER	Bielefeld University	DE
Christoph RICHARD	Erlangen University	DE

**PHYSICAL PROPERTIES OF CMAs: THEORY AND EXPERIMENTS****Chair: A. Jagannathan**

11 : 30 Presentation of the session

P 11 : 35 Complexity: Origin and consequences for physical properties

12 : 30 Lunch break

I 14 : 30 Physical properties of Al<sub>13</sub>Tm<sub>4</sub> decagonal approximants

I 15 : 05 Structure of icosahedral AlMnPd: covering by dimpled Mackay clusters

15 : 40 Oral 1

15 : 55 Oral 2

16 : 10 Coffee Break

P 16 : 30 Ab-initio density-functional studies of complex intermetallic compounds: s

I 17 : 25 Electronic structure and magnetism of i-Al-Pd-Mn quasicrystal: bulk and s

I 18 : 00 Complex magnetic states and excitations in quasiperiodic thin films

18 : 35 Oral 3

18 : 50 Poster session

20 : 00 End of poster session and free evening - DIVERSITY Dinner

Anu JAGANNATHAN	Orsay University & CNRS	
Hans-Rainer TREBIN	Stuttgart University	DE
Jani DOLINSEK	Ljubljana University	SI
Marek MIHALKOVIC	Slovak Academy of Sciences	SL
Jürgen HAFNER	Wien University	AU
Marian KRAJCI	Slovak Academy of Sciences	SL
Anu JAGANNATHAN	Orsay University & CNRS	FR

**Tuesday 6 Oct. 09****METALLURGY****Chair: S. Gottlieb**

8 : 30 Presentation of the session

8 : 35 Hume-Rothery and the number of valence electrons per atom

P 9 : 05 The Hume-Rothery electron concentration rule for the complex metallic a

I 10 : 00 RECu(4.5-3.5): series of intermetallic compounds with giant crystal struct

10 : 35 Coffee Break

P 11 : 00 Placing all atoms in the right positions: single crystal growth of CMAs

11 : 55 Oral 1

12 : 10 Oral 2

12 : 25 Lunch break

Saskia GOTTLIEB	Frankfurt University	DE
Jacques FRIEDEL	Académie des Sciences, Paris	FR
Uichiro MIZUTANI	Nagoya Industrial Science Rese	JA
Radovan CERNY	Geneva University	CH
Mike FEUERBACHER	Res. Center Juelich	DE

**ELECTRON MICROSCOPY****Chair: A. Czyrska-Filemonowicz**

14 : 30 Presentation of the session

P 14 : 35 Transmission electron microscopy: from 2-D to 4D space

I 15 : 30 Recent results and new approaches in Electron Energy-Loss Spectroscop

16 : 05 Coffee Break

I 16 : 30 Transmission electron microscopy of complex metallic alloys

17 : 05 Oral 1

17 : 20 Oral 2

17 : 35 Poster session

19 : 00 End of poster session

20 : 00 Banquet buffet

Aleksandra CZYRSKA-FILEM.	AGH, Krakow	PL
Philippe A. BUFFAT	EPFLausanne	CH
Odiel STEPHAN	Orsay University & CNRS	FR
Valérie DEMANGE	Rennes University & CNRS	FR

**Wednesday 7 Oct. 09****SURFACES**

	9 : 00	Presentation of the session	<b>Chair: J. Ledieu</b>		
P	9 : 05	CMA surfaces: state-of-the-art and future prospects	Julian LEDIEU	Nancy University & CNRS	FR
I	10 : 00	Uniaxially commensurate film growth on quasicrystalline surfaces	Ronan McGRATH	Liverpool University	UK
	10 : 35	Coffee Break	<u>Renee</u> DIEHL	Penn State University	US
I	11 : 00	Intermetallic compounds in catalysis	Marc AMBRÜSTER	Max Planck Institut - Dresden	DE
	11 : 35	Oral 1			
	11 : 50	Oral 2			
	12 : 05	Oral 3			
	12 : 20	Lunch break			

**NEW MATERIALS - NEW FUNCTIONS**

	14 : 30	Presentation of the session	<b>Chair: S. Kobe</b>		
P	14 : 35	Complex intermetallic compounds as thermoelectrics	<u>Spomenka</u> KOBE	Ljubljana University	SI
I	15 : 30	Novel materials for room temperature magnetic cooling	<u>Silke</u> PASCHEN	TU Wien	AU
	16 : 05	Coffee Break	Oliver GUTFLEISCH	IFW Dresden	DE
I	16 : 30	Growth mechanisms and properties of oxide films formed on Al-based ...	<u>Marie-Genev.</u> BARTHÉS-L.	Orsay University & CNRS	FR
	17 : 05	Oral 1			
	17 : 20	Oral 2			
	17 : 35	Oral 3			
	17 : 50	From CMA to C-MAC	Marc de BOISSIEU	C-MAC & CNRS	FR
	18 : 10	Concluding remarks	Louis SCHLAPBACH	EMPA & ETHZ	CH
	18 : 25	Farewell address	Jean-Marie DUBOIS	Nancy University & CNRS	FR
	18 : 35	End of the meeting			
	19 : 30	International Working Dinner for CMA & C-MAC officers			

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Aleksandra CZYRSKA-FILEMONOWICZ  
 Julian LEDIEU  
Saskia GOTTLIEB-SCHÖNMEYER

**REGISTRATION DETAILS**

Register by email at: [diana.szyf@cma.mines.inpl-nancy.fr](mailto:diana.szyf@cma.mines.inpl-nancy.fr) not later than July 30, 2009.  
 If you wish to present an oral or a poster contribution, send an abstract by email to the same address, but not later than June 15, 2009.  
 Oral presentations will be selected by the International and Program Committees on the basis of the abstracts received.

**Registration fee:**

Thanks to the EC support, there will be no registration fee. Participants are requested to arrange their own travel and accommodation.  
 All meals, except on Oct. 6 evening, will be supported and arranged on their own by the participants in the many restaurants available nearby the City Hall. Travel and subsistence costs of CMA members will be covered according to the usual TRF scheme of the network.  
 There will be no proceedings, only a booklet of abstracts.

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