

## Report of Nanoscience Working Group to Oct., 2007 IUPAP Council



IUPAP Nanoscience Working Group Meeting, Szeged, Hungary, 7 Sept. 2006

Back: A. Beye, W. van Wijngaarden, M. Tegze

Front: A. Hansen, M. Maaza, P. Ormos, D. Dahlberg, M. Paalanen, P. Hawrylak

Regrets: R. Slusher, R. Nieminen

Dear IUPAP Council,

The Nanoscience Working Group (WG8) sponsored a meeting on Nanobiophysics in Szeged, Hungary, Sept. 3 – 7, 2006 which was a great success. For convenience, a brief electronic version of this report is being sent that omits the detailed reports of items 4-8 listed in the index on the following page. A bound copy of the entire report has been sent to J. Franz to be taken to the Council meeting.

The Working Group unanimously recommends the following.

1. Approve M. Maaza (iThemba Labs, South Africa) as an Associate Member of WG8 representing NanoAfnet.
2. Approve M. Paalanen as the liaison between WG8 and SUNAMCO.
3. Approve the Ultracold Quantum Degenerate Matter meeting tentatively scheduled for Banff, Canada, Feb. 23-27, 2008 and allocate \$10,000 for its support.
4. Approve the membership of WG8 with terms as shown below (Please suggest member representing C10 Condensed Matter).

Thank you very much for your consideration of these requests.

On behalf of the Nanoscience Working Group,

W. A. van Wijngaarden  
Chair, IUPAP WG8

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## **Item 1: Proposal for Ultracold Degenerate Matter Conference**

IUPAP funds are required immediately to make a deposit of about \$5,000 to secure the Banff Conference site. Funds are also needed to launch a website and other promotional material. Attendees will pay a registration fee (\$250 for researchers, \$150 for students/postdocs). Special efforts will be made to recruit women as invited speakers (see below) and provide travel funds as appropriate in conformity with IUPAP guidelines.

Tentative Site: Banff, Alberta, Canada

Tentative Date: Feb. 20 – 23, 2008

Attendance Estimate: 75 - 100

Support Request from IUPAP: \$10,000

### **Organizing Committee**

A. Hansen (C3 Statistical Physics)

M. Paalanen (C5 Low Temperature Physics)

P. Hawrylak (C9 Semiconductors)

To be selected (C10 Condensed Matter)

W. A. van Wijngaarden (C15 Atomic, Molecular & Optical Physics) – Chair

R. Slusher (C17 Quantum Electronics)

R. Nieminen (C20 Computational Physics)

### **Possible List of Invited Speakers**

Immanuel Bloch (Mainz)

Jean Dalibard (ENS)

Seamus Davis (Cornell)

David Feder (Calgary)

Matthew Fisher (Santa Barbara)

Allen Goldman (Minnesota)

Rudy Grimm (Innsbruck)

Randall Hulet (Rice)

Debbie Jin (Boulder)

Raymond Laflamme (Waterloo)

Tony Leggett (Illinois)

Catherine Levin (Chicago)

Yuri Mukharsky (Saclay)

Richard Packard (Berkeley)

Mark Raizen (Rice)

Cristophe Salomon (ENS)

John Saunders (Royal Holloway)

Gora Shlyapnikov (Orsay)

Dan Stamper-Kurn (Berkeley)

Joseph Thywissen (Toronto)

Juras Tuoriniemi (Helsinki)

### **Tentative List of Session Titles in addition to Poster Session**

1. Refrigeration and new phenomena at submillikelvin temperatures
2. Bose Einstein Condensates
3. Fermi Gases
4. Superfluids
5. Superconductors
6. Quantum information processing atoms & ions
7. Chip traps for atoms, ions and molecules
8. Atoms in optical lattices

## Item 2: Proposed Terms of Nanoscience Working Group Members

Commission	Member	Institution	Suggested Term
C3: Statistical Physics	A. Hansen	Trondheim, Norway	2006 – 2009
C5: Low Temperature Physics	M. Paalanen	Helsinki University of Technology, Finland	2005 – 2008
C6: Biological Physics			2006 - 2009
C8: Semiconductors	P. Hawrylak	National Research Council, Canada	2006 – 2009
C9: Magnetism	D. Dahlberg	U. of Minnesota, USA	2006 – 2009
C10: Condensed Matter	<i>IUPAP Council Suggestion</i>		2006 - 2009
C15: Atom, Mol. & Opt. Physics	W. van Wijngaarden (Chair)	York University, Canada	2005-2008
C17: Quantum Electronics	R. Slusher	Lucent, USA	2005-2008
C20 Computational Physics	R. Nieminen	Helsinki, Finland	2005-2008
NANOAFNET	M. Maaza (Associate)	iThemba Labs, South Africa	2006-2009