Edited By D.U. Gubser

A Division of
The American
Physical Society

DCMP Newsletter

The Division of Condensed Matter Physics Summer 2002

Letter from the DCMP Chair

What does the DCMP executive committee do? ***First***, working in close cooperation with other APS unit leaders and the APS staff, the DCMP executive committee organizes the March APS meeting. We take the lead in revising the subject submission categories; we inform our members of important submission dates for invited and contributed talks; we select the DCMP invited talks and organize the invited sessions with the other participating units; and we lead the sorting meeting where all contributed talks, invited talks, special sessions, etc. are scheduled for the week long March meeting. It's a major undertaking (see DCMP Notes). ***Second***, the "Members-at-Large" of the DCMP executive committee select APS fellows from those nominated by DCMP. The DCMP chooses approximately 22 APS Fellows each year. Selection is a difficult process since there are many deserving candidates to choose from. (See tips on nominating fellows). ***Third***, we maintain communications with our Division members through a yearly newsletter, and a Web page (http://dcmp.bc.edu) which can be accessed directly or through the APS home page. This web page contains current information about DCMP meetings, functions, governance, and newsletters, as well as providing other valuable public outreach" information (see article on DCMP Web site**). *Fourth***, we promote public outreach in support of science, in general, and condensed matter physics in specific. At the current time, DCMP is supporting a "science fellow" in the APS public affairs office to help our members communicate with Congress. We also organized the "letter writing" campaign at the past two March meetings and will be doing it again in Austin next March. We help plan congressional meetings and receptions to show our representatives the excitement and the benefits of public science support. We will need your help in these endeavors (See DCMP Notes).

I have briefly outlined the duties of the DCMP executive committee for two reasons: *First*, to let you know what we do, and *second*, to encourage those of you who would like to become more involved in DCMP functions, to let us know. Getting good candidates to "run for office" is always a challenge, but it is a rewarding experience.

The DCMP appoints a nomination committee to search out good (and willing) candidates to run for election to the DCMP executive committee. I remind you, however, that nominations for office can be made by petition from the membership at large. The petition can be found on the DCMP Web site. (Please read the bio's and statements of all of this years "excellent" slate of candidates and vote for the person of your choice to represent your interests in DCMP.)

Let me end with a message many of you have heard before. Government funding for the physical sciences continues to erode as a percent of the country's overall Science and Technology funding. In 1993 Physical Sciences accounted for approximately 18% of the Federal basic and applied research funding. In 2000, Physical Sciences accounted for approximately 10.5%. This is a remarkable change in the way the Federal Government funds science. Federal support for the Life Sciences will amount to approximately 50% of the Federal basic and applied research funding this year (2002). While strong support for Life Sciences is easily defended, one can wonder if the balance of Federal funding has been tipped too far away from the physical sciences.

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Great technological advances in computers and diagnostic facilities, that are driving the surging interest in the Life Sciences, were all outcomes of earlier funding in the physical sciences. Are we short-changing future advances by slowing shinking the funding in the very sciences that made today technologies possible? Some think so.

It is imperative to speak out on these issues. Increased support for the physical sciences will only come if we, the community, articulate well the benefits of physical sciences. We should not belittle other science support, but the case for physical sciences needs to be heard. We must convince congress and the public of the successes and the opportunities of research in the physical sciences. Public outreach is a must.

As chairperson of the DCMP this year, I welcome suggestions for making DCMP a responsive organization supportive of its membership.

Don Gubser

DCMP Notes (March 17, 2002)

March Meeting (stats):

The March meeting in Indianapolis had 5411 attendees, slightly larger than the previous year in Seattle.
There were 706 invited talks and 3944 contributed talks.
Eight APS divisions, 6 forums, and 3 topical groups contributed to the program.
There were 109 exhibitors.
Student "Lunch with the experts" filled 33 tables with approximately 236 students.
There were 8 tutorials with 322 registrants.
Special Session: Science 2002: Washington Perspectives presented by John Marburger, (Director OSTP and Science Advisor to the President):
Upcoming March Meetings: 2003 Austin. 2004 Montreal.2005 Los Angles. 2006 Baltimore.

LCD projectors:

More and more scientists want computer projection for their talks. This past year, computer projectors were available in invited session rooms only. Projectors are very expensive (~$400/day/session) and would raise the registration fee at the conference significantly if placed in all rooms. Also, set-up time between talks makes staying on a 12 minute schedule for contributed talks very problematic. APS will continue to increase the availability of computer projection, but will not commit totally to them until price and technical interfacing problems become more tractable.

Prizes:

DCMP associated prizes are: i) the Buckley prize (for condensed matter science, $5K every year, endowed by Lucent), the Davisson Germer Prize (for surface physics, $5K every other year, supported by Lucent), and the Frank Issacson Prize (Optical effects in Solids, $5K every other year, supported by Elsevier). The prize money has not been increased since 1972, and a recommendation has been made to double the prize money to $10K. APS and DCMP are considering ways to implement this suggestion.

Congressional Interactions:

DCMP and DMP have been organizing the "letters to congress" campaign at the last two March meetings, and will continue this activity in the future**. There were 1734 letters written at the March meeting in Indianapolis.** We need volunteers help solicit letter writers at the computer site, and student/ post doc volunteers to help with the mechanics of the computers. We will be asking again next year in Austin.

There is also a clear need for ongoing congressional visits to articulate the need for stable and balanced science funding. All members are encouraged to visit their congress person and senator when they come to Washington DC. Also, when your representatives are home for a visit, try to arrange a time to visit with them. Every little bit helps.

Task Force on Topical Groups:

Many new topical groups have been formed recently, and we now need to stabilize or even reduce this number. It is rather easy to form a topical group, but once formed, they continue indefinitely under the present rules. A proliferation of topical groups has resulted; many of which remain in existence long after their need has past. Should there be a time limit (sunset clause) on topical groups? John Clark is leading a group studying this issue.

Elections:

Elections are open (see ballot) for 3 members at large, 1 vice chair, and 1secretary- treasurer. Barbara Cooper chaired the DCMP nomination committee. The DCMP ballot has been changed to permit a short "candidate statement" to aid our members with their voting decisions.

Electronic Balloting for DCMP Officers:

DCMP will use internet, web-based balloting for the election of officers. You can access this voting ballot from the DCMP web site (http://dcmp.bc.edu, or directly at http:// dcmp.bu.edu/vote.php). Follow on-line instructions to vote. Every current member of the Division will be sent, to the address that APS currently has for them,an email notice announcing this election process. If the email bounces, a paper copy will be automatically generated and sent to the individual. It is the belief of the DCMP Executive Committee that this will allow for a fair and complete polling of the membership. The voting process will be open until 3 September, 2002.

Tips for Nominating APS Fellows

The total number of APS Fellows who may be elected in a given year is limited to one-half of one percent of the total APS membership. Hence, the selection process is quite competitive, and sponsors should be aware of this when preparing nominations.

The DCMP has a Fellowship Committee comprised of the Members-at-Large of the DCMP Executive Committee. The Fellowship Committee reviews the nominations for APS Fellowship referred to the DCMP Executive Committee in March and then to the APS Council for approval in the Fall. Successful nominees generally have 10 or more years of professional experience beyond the Ph.D.

It is particularly important for nominators to ensure that the cases which they prepare for the Fellowship Committee are well documented. Inclusion of a complete publications list is highly recommended. Information such as lists of invited talks, awards, committee service, and organization of conferences is very helpful. Reprints of papers are generally not useful. On the other hand, a detailed statement by one or both the sponsors, discussing which of the candidate's achievements are "exceptional contributions" can aid the committee considerably. In general, supporting letters which evaluate the candidate's work are particularly helpful to the committee. The brief two-line endorsement on the form generally does not provide enough information, especially if the candidate is not known to members of the committee. Nominations may be made at any time during the year, but only those received by the deadline set by APS, currently 15 January, will be considered for action in the same year. Nomination forms are available from Ken Cole (cole@aps.org or (301) 209-3288). Completed forms should be returned to the APS Fellowship Program Office at the same address. Unsuccessful nominees are reconsidered in the second year after nomination; however, sponsors may resubmit the nomination with updated supporting material, prior to the deadline for the following year if they wish.

Sponsors should bear in mind that election to Fellowship is a very competitive process; they should ensure that the achievements of their candidates are genuinely reflected by the material submitted. In general, the guidelines for the Fellowship Committee are to look for sustained contributions to the field over a period of time rather than a single, albeit brilliant, piece.

Note: The number of APS Fellows that the DCMP selects from our community is directly related to our membership. Keep your DCMP membership active when renewing your APS membership each year, AND, encourage your colleagues to join. There are benefits and rewards for being a "card carrying member" of the DCMP community. Increased opportunities for APS Fellowships in Condensed Matter Physics is one of them.

New Web-based DCMP Invited Talk/Symposium Nomination Form

DCMP members will welcome an improved Web-based Invited Talk/Symposium Nomination Form for the March meeting in Austin assessable from the DCMP web page or the APS web site under March meeting. The new form can be used to nominate for single invited talks or for invited symposia and can be re-accessed and modified as many times as you like up to the deadline date, August 30, 2002.

Your suggestions are the only input the Committee has for organizing the DCMP invited talks and symposia at the meeting.

All information pertaining to a symposium should be completed; correct names, addresses and e-mail addresses are essential. To improve chances for acceptance, follow these suggestions:

• Only one subject category should be checked. For DCMP consideration, do not select "special focus sessions" in any category as they are reserved for other units.

• The vast majority of invited talks are in symposia, so that the chance of your suggestion being accepted is much greater if you do the extra work of incorporating it into a symposium.

• Do not recommend a speaker who gave an invited paper the past year or a subject on which there was a symposium last year.

• Do the work required to support a recommendation. Tell what the suggested speaker did, and describe how it fits into its field as well as its significance in advancing that field.

• Do not send reprints or preprints.

• Invited papers should be partly tutorial in order to afford those not working in that particular area the opportunity to learn about new developments. Recommend a good speaker.

• DCMP rules require that a single symposium have no more than one speaker from the same institution.

DCMP Web site:

An expanded DCMP web site has been developed to inform the general audience of the role and value of condensed matter physics in our lives, in addition to its primary purpose of serving the DCMP community. Your DCMP Executive Committee has enlisted Ms. Irina Bariakhtar (M.Sc. in semiconductor physics) to help with content and format issues.

We invite you to view the site at http://dcmp.bc.edu/ , and to send your comments and suggestions to Irina at dcmp@bc.edu. We are soliciting contributions for a variety of topic areas on the web site from the DCMP community (history, role of cmp, demos, videos, cool stuff, etc.). With community involvement, we can make a site we are happy with, one that we can go to quickly to find all the things we need as working professionals in condensed matter sciences (APS and other conferences, quick lists of journals, jobs, etc.).Thank you in advance for your co-operation and contributions.

Also use this website to vote for new members of the DCMP Executive committee.

Categories for the APS 2003 March Meeting

(Focus area topics not shown)

1. Metals
1.1 Materials: Synthesis, Growth & Processing (Bulk and Films)
1.2 Thermodynamic and Transport Properties
1.3 Atomic Structure and Lattice Properties
1.4 Electronic Structure and Optical Properties
1.5 Mechanical and Dynamical Properties
1.6 Spectroscopic Properties
1.7 Defects: Point, Line, Interface (Doping and Microstructure)

2. Semiconductors
2.1 Materials: Synthesis, Growth, & Processing (Bulk and Films)
2.2 Thermodynamic and Transport Properties (Incl. QHE, FQHE)
2.3 Atomic Structure, Lattice Properties, and Phase Transitions
2.4 Electronic Structure & Optical Properties
2.5 Mechanical & Dynamical Properties
2.6 Spectroscopic Properties
2.7 Defects: Point, Line, Interface (Doping and Microstructure)

3. Insulators and Dielectrics
3.1 Materials: Synthesis, Growth & Processing (Bulk and Films)
3.2 Thermodynamic and Transport Properties
3.3 Atomic Structure, Lattice Properties & Phase Transitions
3.4 Electronic Structure and Optical Properties
3.5 Mechanical & Dynamical Properties
3.6 Spectroscopic Properties
3.7 Defects: Point, Line, Interface (Doping and Microstructure)

4. Polymeric & Organic Materials
4.1 Semi-Crystalline Polymers
4.2 Liquid Crystalline Polymers
4.3 Solid Amorphous Polymers
4.4 Melts, Solutions and Gels
4.5 Rubbers and Networks
4.6 Charged and Ion-Containing Polymers
4.7 Block and Graft Copolymers
4.8 Blends and Composites
4.9 Electrically and Optically Active Materials
4.10 Surfaces
4.11 Thin Films
4.12 Experimental Techniques
4.13 Theory and Simulation

5. Superconductivity
5.1 Materials: Synthesis, Growth & Processing (Bulk and Films)
5.2 Thermodynamic and Transport Properties
5.3 Mechanical and Structural Properties
5.4 Electronic Structure and Spectroscopic Properties
5.5 Flux Pinning and Flux Dynamics
5.6 Spin Properties (NMR, NQR, ...)
5.7 Tunnel Junctions, Devices, and Josephson Arrays

6. Magnetism (Experiment, Theory, Applications)
6.1 Cooperative Phenomena (incl. spin structures, spin waves, phase transitions)
6.2 Magnetic Domains & Magnetic Field Phenomena: Dynamic & Static
6.3 Correlated Electrons (incl. heavy fermions, oxides)
6.4 Spin Dependent Transport: GMR, CMR, tunneling, spin injection, semiconductors
6.5 Magnetic Recording Materials and Phenomena
6.6 Magnetic Anisotropy: hard & soft materials
6.7 Artificially Structured or Self-Assembled Magnetic Materials (incl. multilayers & dots)
6.8 Low Dimensional Magnetism (incl, molecules, chains, surfaces)
6.9 Frustrated or Disordered Magnetic Materials
6.10 New Techniques and Applications

7. Complex Structured Materials
7.1 Materials: Synthesis, Growth, & Processing (Bulk and Films)
7.2 Noncrystalline Materials (Glasses/Amorphous)

7.3 Fullerenes (not nanotubes)
7.4 Nanotubes and nanowires
7.5 Composites/Porous Media
7.6 Quasicrystals

8. Fluids
8.1 Classical Fluids
8.2 Complex Fluids (microemulsions, lyotropic fluids, surfactants)
8.3 Liquid Crystals
8.4 Colloids, Emulsions, and Foams
8.5 Turbulence
8.6 Fluid Dynamics

9. Phase Transitions and Strongly Correlated Systems
9.1 Metal-Insulator Phase Transitions
9.2 Ferroelectric Phase Transitions
9.3 Structural Phase Transitions
9.4 Phase Transitions at Surfaces and Interfaces
9.5 Magnetic Phase Transitions
9.6 Heavy Fermions
9.7 Non Fermi Liquids

10. Biological Physics
10.1 Proteins
10.2 Nucleic Acids
10.3 Function of Biomolecules
10.4 Lipids and Membranes
10.5 Imaging and Microscopy
10.6 Neurobiological Physics
10.7 Nonlinear Phenomena and Pattern Formation
10.8 Biomedical Physics

11. Chemical Physics
11.1 Theoretical Methods and Algorithms
11.2 Gas Phase Dynamics and Structure
11.3 Condensed Phase Dynamics, Structure and Thermodynamics
11.4 Surfaces and Interfaces
11.5 Materials
11.6 Spectroscopy and Dynamics of Single Molecules and Nanoparticles
11.7 Polymers, Biopolymers and Complex Systems

12. Statistical and Nonlinear Physics
12.1 Low-Dimensional and Quantum Chaos
12.2 Noise and Stochastic Resonance
12.3 Pattern Formation & Spatio-Temporal Chaos
12.4 Coherent Spatial Structures: solitons, intrinsic localized modes, discrete breathers
12.5 Granular Media
12.6 Equilibrium Statistical Mechanics: fundamentals, exactly solvable models
12.7 Systems Far from Equilibrium
12.8 Networks and Complex Systems
12.9 Disordered nonlinear systems and glassy dynamics

13. Artificially Structured Materials
13.1 Materials: Synthesis, Growth, & Processing (Bulk, Films & Coatings)
13.2 Superlattices & Nanostructures: structures
13.3 Superlattices & Nanostructures:electronic properties
13.4 Superlattices & Nanostructures: optical properties
13.5 Quantum computing: superconductors
13.6 Quantum computing: semiconductors
13.7 Photonic crystals

14. Surface, Interfaces & Thin Films
14.1 Materials: Synthesis, Growth, and Processing
14.2 Structure and Morphology
14.3 Reactions: Kinetics and Dynamics
14.4 Excitations, Energetics, Nonequilibrium Effects
14.5 Electronic and Lattice Properties
14.6 Magnetic and Superconducting Properties
14.7 Phase Transitions (Structural, Electronic, and Magnetic)
14.8 Novel Instrumentation & Techniques

15. Instrumentation and Measurements
15.1 Detectors, Sensors, Transducers
15.2 Spectroscopic Techniques
15.3 Scattering and Diffraction
15.4 Microscopic Techniques (Including Scanning)
15.5 Signal Processing and Analysis

16. Applications
16.1 Optoelectronic Devices & Applns
16.2 Superconducting Devices & Applns
16.3 Semiconducting Devices & Applns
16.4 Magnetic Devices & Applications
16.5 Polymeric & Biological Materials Devices & Applications
16.6 Optical/Laser & High Frequency Devices & Applications
16.7 Thermoelectrics
16.8 General Systems Applications

17. General Theory (Theoretical Methods)
17.1 Many Body
17.2 Electronic Structure
17.3 Density Functional Theory
17.4 Relativity
17.5 Computational Methods: Classical and Quantum Monte Carlo
17.6 Computational Methods: Classical and Quantum Molecular Dynamics
17.7 Computational Methods: Numerical Methods for Strongly Correlated Systems
17.8 Computational Methods: Multiscale Modeling
17.9 Computational Plasma Physics
17.10 Computational Fluid Dynamics
17.11 Numerical Methods for Partial Differential Equations
17.12 Computers in Physics Education

18. General
18.1 National Facilities
18.2 Public Policy
18.3 History
18.4 Education/Career Development
18.5 Society of Physics Students Abstracts

19. High Pressure Physics
19.1 Equations of state & phase transitions
19.2 Electronic & magnetic properties
19.3 Mechanical properties
19.4 Spectroscopy
19.5 Structure
19.6 Dynamical response
19.7 Theory & modeling
19.8 Instrumentation & techniques

20. Quantum Fluids and Solids
20.1 Bose Einstein Condensation
20.2 Normal Superfluid Liquid Helium
20.3 Vortices and Turbulence in Helium
20.4 Helium Films
20.5 Helium in Restricted Geometries
20.6 Helium Bubbles, Ions, Clusters & Droplets
20.7 Phase Transitions in Helium
20.8 Solid Helium
20.9 Spin-Polarized Systems
20.10 Techniques and Applications

21. Atomic, Molecular & Optical (AMO) Physics
21.1 Quantum Gases: Bose-Einstein Condensation & Fermi-Dirac Degeneracy
21.2 Quantum Computing and Communications
21.3 AMO processes on Surfaces and in Condensed Matter
21.4 Strong-Field Physics
21.5 Atomic/Molecular Structure & Properties
21.6 Photon Interactions with Atoms & Molecules
21.7 Atomic/Molecular Collisions & Interactions
21.8 Charged Particle Collisions
21.9 Highly Excited Species, Clusters
21.10 Quantum Optics/Ultrafast Phenomena

DCMP 2002 ELECTIONS

Candidates Biographies and Statements

Candidates for Vice-Chair

Aharon Kapitulnik

Present Position: Professor of Applied Physics and of Physics, Deputy Director of the Laboratory for Advanced Materials, Stanford University.

Education: B.S. Physics, 1978; Ph.D. Physics, 1983; Tel-Aviv University.

Employment History: Professor of Applied Physics and of Physics, Stanford University, 1994 – present, Deputy Director, Laboratory for Advance Materials, 2000-present. Visiting Professor, The Hebrew University of Jerusalem, 2000; Visiting Scientist, "Central Research Institute for the Electric Power Industry", Komae, Tokyo, Japan, 1997, Chair, Department of Applied Physics, Stanford University, 1996-2000; Director, center for Materials Research (MRSEC), Stanford university, 1999-2000; Visiting professor, Visiting Professor, Ecole Normale Superieure,and Visiting Professor, University of Paris XI, Orsay, France, 1992; Associate Professor of Applied Physics and Physics, Stanford University, 1990-1994; Assistant Professor, Department of Applied Physics, 1985-1990; Assistant Professor in Residence, Department of Physics, U.C. Santa Barbara, 1985; Chaim Weizmann Fellow and Institute Postdoctoral Research Fellow at the Institute for Polymers and Organic Solids, U.C. Santa Barbara, and Associate member at Institute for Theoretical Physics, U.C. Santa Barbara, 1983-1985.

Principal Research Interests: Condensed Matter Physics: Superconductivity in strongly correlated systems and high-temperature superconductors. Physics of disordered systems; Material science and physics of thin metallic films, Magnetism. Phase transitions in solid state physics. Use of condensed matter methods for the study of general physics problems such as gravitational force at short distance.

Other Physics Activities: Chairman of Local Committee, Materials and Mechanisms of Superconductivity (M^2S), Stanford, CA, June 1990; Co-Chairman, Gordon Research Conference on Condensed Matter Physics, Brewster Academy, NH, August 1991; Chairman, Gordon Research Conference on Condensed Matter Physics, Brewster Academy, NH, July 1992; Co-Chairman, NATO/ASI on Vortices in Superfluids Cargese, Corsica, France, 1993; Co-Director, Program on "Vortices," Institute for Theoretical Physics, U.C. Santa Barbara, CA, August-December, 1993; Organizer, International Workshop

on Vortex Dynamics, Stanford U., July, 1999; Organizer, Aspen Winter Conference on Condensed Matter Physics: Quantum Coherence and Dissipation, February, 2002.

Honors: Chaim Weizmann Postdoctoral Fellowsip, 1983-1984. IBM Faculty Development Award, 1985-1986. Alfred P. Sloan Fellow, 1985-1989. Presidential Young Investigator Award, 1986-1991. TRW Faculty Assistanship Award, 1990-1991. Elected Fellow, American Physical Society, 1994.

Statement: It has been suggested that physics in the 21st century will be dominated by biotechnology, nanotechnology and interdisciplinary research. Unfortunately, the suffixes of the former two terms were chosen to be "technology" instead of science or physics, and "interdisciplinary" sometimes obscures the source discipline, i.e. physics. It is evident that physics, and in particular condensed matter physics, will play a leading role in these emerging fields, not only leading to new technologies, but also to new discoveries of fundamental interest. A particular effort will be made to broaden the reach of the DCMP to encompass, for example, condensed matter related activities in other fields such as atomic physics.

Susan N. Coppersmith

Present Position: Professor of Physics, University of Wisconsin-Madison, 2001—.

Education: B.S. Physics 1978, MIT; M.S. Physics 1981, Ph.D. Physics 1983, Cornell University.

Employment History: Research Associate, Brookhaven National Laboratories, 1983-1985; Postdoctoral Member of Technical Staff, AT&T Bell Laboratories, 1986-1986; Visiting Lecturer, Princeton University, 1986-1987; Member of Technical Staff, AT&T Bell Laboratories, 1987-1995; Professor of Physics, University of Chicago, 1995-2001. Principal Research Interests: Disordered materials; nonlinear dynamics.

Other Physics Activities: Associate Editor, Reviews of Modern —; ITP (UCSB) Advisory Board, 1997-2001 (Chair, 1999-2000); General Member, Aspen Center for Physics 1991 —; Chair, Gordon Conference on Condensed Matter Physics, 1995.

Honors: Fellow, American Physical Society, 1992 and American Association for the Advancement of Science, 1999; Distinguished Member of Technical Staff, AT&T Bell Laboratories, 1990.

Statement: Condensed matter physics matters because of its intellectual content as well as its impact on technology. It is important for us to appreciate the strength that comes from our diversity as well as to convince the public of our importance to society. If elected as Vice-Chair of the DCMP, I will strive to make the organization as fair and efficient as possible, and I will also work hard to convince the general public of the value of our work.

Candidates of Secretary Treasurer

Joseph W. Serene

Present Position: Professor of Physics, Georgetown University, 1993 —.

Education: Ph.D., Physics, 1974, Cornell University; M.A., Physics, 1972, Cornell University; A.B., Physics, 1969, Dartmouth College.

Employment History: Georgetown University, Professor of Physics, 1993-present, Dean, Graduate School of Arts and Sciences, 1998-2001, Department Chair, Physics, 1993-1998; Naval Research Laboratory, Research Physicist, 1987-1993, Section Head, 1992-1993; National Science Foundation, Division of Material Research, Acting Section Head, Condensed Matter Sciences, 1986-1987, Program Director, Condensed Matter Theory, 1984-1986; Yale University, Applied Physics, Associate Professor, 1983-1984, Assistant Professor, 1979-1983; SUNY at Stony Brook, Assistant Professor of Physics, 1976-1979; Helsinki University of Technology, NORDITA Guest Professor, 1975-1976; Stanford University, Postdoctoral Fellow, 1974-1975.

Principal Research Interests: Theory of strongly-correlated Fermi systems; unconventional superconductors and superfluids; applications of parallel computers in condensed matter physics.

Honors: Fellow, American Physical Society; President's Medal, Georgetown University.

Statement: Among the particular challenges facing DCMP, many grow out of the healthy tension between diversity and coherence that fuels the intellectual excitement of our division. In the context of these challenges, the secretary-treasurer has important responsibilities and opportunities to maintain and strengthen communication within our division, with the rest of APS, and with the general public; and to facilitate the growth of community and shared purpose, while respecting the essential individuality of our many sub-disciplines and affiliated neighbors. Over the past ten years I have served as a depart-

ment chair and graduate school dean (in a graduate school where the majority of science Ph.D. programs are in biomedicine), and I have played a large and central role in the extensive restructuring of a major academic medical center. I believe that the organizational and interpersonal insights and skills that I gained would enhance my effectiveness as secretary-treasurer, and I would welcome the opportunity to serve the condensed matter physics community.

Jack E. Crow

Present Position: Florida State University, Professor, 1990—, Director, National High Magnetic Field Laboratory, 1992—

Education: B. Engr Science-Physics, 1962, Cleveland State University; Ph.D. Physics, 1967, University of Rochester.

Employment History: Brookhaven National Laboratory, Assistant Physicist, Associate Physicist, 1967-1973; Temple University, Associate Professor, 1973-1977, Professor, 1973-1989, Chair, Department of Physics, 1979-1982; National Science Foundation, Division of Materials Research, Program Director, Solid State Physics, 1984-1986; Temple University, Director, Center for Materials Research, 1987-1989; Ben Franklin Superconductivity Center (consortium: Drexel University, University of Pennsylvania, Temple University), Director,1988–1989; Florida State University, Professor, 1990—, Director, Center for Materials Research and Technology, 1990-1992.

Principal Research Interests: Magnetism, superconductivity, Material Science, Solid State Physics.

Other Professional Activities: Member: American Physical Society and American Association for the Advancement of Science; Member: Division of Condensed Matter Physics-APS, Forum on Industrial and Applied Physics-APS, Cryogenics Society of America, Materials Research Society, Sigma Xi-The Scientific Research Society; Member, U.S. Department of Energy Basic Energy Sciences, Advisory Committee, 1997-

Candidates of Members at Large

Andrea J. Liu

Present Position: Professor, Dept. of Chemistry & Biochemistry, University of California, Los Angeles, 1993—.

Education: A. B. Physics, University of California, Berkeley, 1984; Ph.D. Physics, Cornell University, 1989.

Employment History: UCLA Dept. of Chemistry & Biochemistry, Assistant Professor, Associate Professor, Professor, 1993-present; Université Louis Pasteur, Inst. de Physique, CNRS Poste Rouge 2001; Visiting Scientist, Elf-Aquitaine/CNRS laboratory, Visiting Scientist, 1997; UCSB Dept. of Chemical & Nuclear Engineering, Postdoctoral Associate, 1991-1994; Exxon Research & Engineering Company, Postdoctoral Associate, 1989-1991.

Principal Research Interests: Soft Condensed Matter Physics, Biophysics.

Other Physics Activities: Member, Science Steering Committee, Institute for Complex and Adaptive Matter 2002-; Member-at-Large, APS GSNP 2000-2003; Member, Editorial Board, Physical Review E 1998-2003; Co-Organizer, ITP Workshop on Jamming and Rheology 1997.

Statement: I feel strongly that for DCMP to retain its eminence and vigor, it must represent all of condensed matter physics. This includes core research areas represented in physics departments, but also includes interdisciplinary research areas, such as those encompassed by the Topical Group on Statistical and Nonlinear Physics, the Divisions of Polymer Physics and Biophysics, and other divisions. If elected, I will work to make all of these fields an integral part of DCMP.

Arthur P. Ramirez

Present Position: Leader, Materials Integration Science Laboratory, Los Alamos National Laboratory; Co-Director, Institute for Complex Adaptive Matter, a University of California Multicampus Research Program.

Education: B.S. Physics, 1978; Ph.D. Physics, 1984; Yale University.

Employment History: Los Alamos National Lab, 2001–present; Bell Labs, 1984-2000;

Principal Research Interests: Magnetism, Superconductivity, Dielectrics, Thermoelectric Cooling Materials, Two-Dimensional Electron Systems, Organic Semiconductors.

Other Physics Activities: Member Bell Labs High School Science Grant Program 1997-2000; Co-chair Colossal Magnetoresistance APS Focused Session 1998; Member Advisory Committee to Dutch FOM Strongly Correlated Electron Program 1999; Member NSF MRSEC Advisory Panels 1999-2000; Member GMAG Nominating Committee 2001; Member National High Magnetic Field External Review Committee 1999-2002; Member National High Magnetic Field Research Program Committee 2002; Co-organizer Physics of Frustration from Proteins to Pyrochlores 2002 Workshop;

Honors: Fellow American Physical Society; Bell Labs Cooperative Research Fellowship, Bell Labs Distinguished Member of Technical Staff, ISI Highly Cited Researcher.

Statement: The Division of Condensed Matter Physics is a leading body for organizing the dissemination of research in our field. Exercising the highest standards for our meetings, our communications, and the honors we bestow on peers is a critical endeavor for maintaining our high status among the many branches of science. The Member at Large post is a key component of the overall process, and it is an honor to be considered for the post. If elected, I will work hard to justify this honor.

Michael R. Norman

Present Position: Senior Physicist and Head, Condensed Matter Theory Group, Materials Science Division, Argonne National Laboratory.

Education: B.S. Physics, 1979, LSU-S; Ph.D. Physics, 1983, Tulane University.

Employment History: Senior Physicist, Argonne National Lab, 1998-present; Physicist, 1990-1998; Asst. Physicist, 1986-1990; Postdoc, 1983-1986; Visiting Scientist, Cambridge University, UK, 1992; Visiting Scientist, SPhT, Saclay, France, 2001.

Principal Research Interests: Theoretical Condensed Matter Physics; Strongly Correlated Electron Systems; Uncoventional Superconductivity; Spectroscopies in Condensed Matter Systems.

Other Physics Activities: Editorial Board, Physical Review B, 2000-present; Head, Advisory Committee, CIAR Program on Superconductivity, 1998-present; Principal Investigator, NSF Science and Technology Center for Superconductivity, 1989-2000; Visitor, Aspen Center for Physics, 1994, 1998, 2001; Visitor, Institute for >Theoretical Physics, Santa Barbara, 2001; Organizing Committee, Spectroscopies in Novel Superconductors, 2001.

Honors: Fellow, American Physical Society, 1995; University of Chicago Distinguished Performance Award, 1999.

Statement: Funding for condensed matter physics has not kept pace with the growth of the field. As DCMP is a major voice for condensed matter physics within the US, I would like to see it play a bigger role in informing the public and the government about the value of funding condensed matter physics in this country

David G. Grier

Present Position: Professor of Physics, The James Franck Institite and Institute of Bio physical Dynamics, The University of Chi cago, 1992 —. Education: S.B. mcl Physics, Harvard College, 1984, Ph.D. Physics, The University of Michigan, 1989

Employment History: Postdoctoral Member of Technical Staff, AT&T Bell Laboratories. Murray Hill, NJ, Dept. of Condensed Matter Physics, 1989-1992. Assistant Professor of Physics, The University of Chicago, 1992-1997. Associate Professor of Physics, The University of Chicago, 1997-2002. Professor of Physics, The University of Chicago, 2002 -

Principal Research Interests: Soft condensed matter physics, biophysics, macromolecular interactions and dynamics, phase transitions in reduced dimensionality, self-organization, optical physics, materials science, superconductivity.

Other Relevant Activities: Founder and Chair of Scientific Advisory Board, Arryx, Inc.

Conference Chair: Fall Meeting of the Materials Research Society (1999). Chair: ACS Colloid and Surface Science Symposium (2001). Chair: Gordon Conference on Condensed Matter Physics (1999). Chair: NASA Science Concept Review Panels, PHASE, PHASE-II and PCS experiments on the Space Shuttle and International Space Station. Instructor: Les Houches Summer School on Electrostatic Effects in Soft Matter and Biophysics (2000).

Lecturer: Frontiers of Science Symposium on Superconductivity, National Academy of Sciences (2001). Lobbyist: The Science Coalition — Representative to Illinois Congressional Delegation (2000). Guest Editor: MRS Bulletin (October 1998).

Director: MRSEC Industrial Outreach program (2001-2002). Director: MRSEC Educational Outreach program (1997-2001).

Recent Honors: The Llewellyn John and Harriet Manchester Quantrell Award (2000), Top 20 Scientists Under 40, Discover Magazine (October 2000), David and Lucile Packard Fellowship for Science and Engineering (1998-2002). Project Kaleidoscope Fellowship for Excellence in Science Education (1998-2002).

Statement: Soft condensed matter physics is developing rapidly into a coherent and vibrant scientific endeavor. Combining powerful new tools of equilibrium and nonequilibrium statistical mechanics with new computational methods and a host of extraordinary new experimental methodologies, soft condensed matter is making important new inroads into explaining how seemingly complex hierarchically structured systems come into existence and how their unique and interesting properties arise. My goal as a member of the DCMP executive committee will be to provide more of a forum within the mainstream APS community for the best research and researchers in this fast-evolving interdisciplinary branch of physics. In particular, my hope is to bring forward active young researchers at the cutting edge of soft condensed matter physics to give invited talks, and to develop new short courses for the APS March Meeting, to provide more of a voice for soft matter in setting the topical focus for Physics Today and other APS journals, and also to work toward developing new fellowships and awards for interdisciplinary researchers at all levels.

Leonid Glazman

Present Position: Professor of Physics, McKnight Presidential Chair,Theoretical Physics Institute, School of Physics and Astronomy, University of Minnesota, since 2000

Education: M.S. Physics, 1979, Kharkov State University, Ukraine; Ph.D. Physics, 1982, Inst. Low Temperature Physics and Engineering Ukr. Acad. Sci.

Employment History: University of Minnesota,Theoretical Physics Institute, associate professor, professor, McKnight Presidential Chair in Theoretical Condensed Matter, 1990 present; Institute of Microelectronics Technology USSR Acad. Sci., Solid State Theory Department, scientific researcher, senior scientific researcher, 1986-1990; Delft Technical University, the Netherlands, Visiting Professor, 1997, 1998

Principal Research Interests: Physics of low-dimensional and mesoscopic interacting electrons systems.

Other Physics Activities: 2002 Gordon Research Conference on Correlated Electron Systems, vice-chair; Spintronics 2001 Conference (Maryland) and International Conference on Electronic correlations: from meso- to nanophysics (Les Arcs, France, 2001) – member of the Advisory Committees; International Conference on Recent Progress in Many-Body Theories (Manchester, UK, 2001) and International Conference on Transport in Mesoscopic Systems (Gothenburg, August 1999) - member of the Program Committees.

Honors: Fellow of American Physical Society; McKnight Presidential Chair; Humboldt Research Award for Senior US Scientists.

Statement: Further strengthen the exchange of information and ideas between researchers of different fields of Condensed Matter Physics.

Paul McEuen

Present Position: Professor of Physics, Cornell University

Education: B.S. 1985, Engineering Physics, Univ. of Okla., 1985; Ph.D., Applied Physics, Yale Univ., 1990.

Employment History: Post-Doctoral Researcher, MIT, 1990-1991. Assistant Professor, Physics, UC-Berkeley, 1992-1996. Associate Professor, Physics, UC-Berkeley, 1996-2000, Professor, Physics, Cornell University, 2001-present.

Principal Research Interests: Physical, chemical, and biological nanostructures, novel fabrication techniques, scanned probe microscopy.

Other Physics Activities: Co-Organizer, ITP Program on Nanoscience, 2001; Member, Scientific Advisory Board, Molecular Foundry, LBNL, 2001-present; Member, JASON Division, The MITRE Corp, 2000-present.

Honors: Office of Naval Research Young Investigator, 1992-1995; Alfred P. Sloan Foundation Fellow, 1992-1994; Packard Foundation Fellows, 1992-1997; National Young Investigator, 1993-1998; LBNL Outstanding Performance Award, 1997; Packard Foundation Interdisciplinary Fellow, 1999; Agilent Europhysics Prize, 2002.

Statement: My goal as a member of the DCMP Executive committee would be to promote emerging areas of condensed matter physics where exciting new results are happening. I would also work to build bridges between condensed matter physics and other disciplines, including the chemical, biological, and information sciences.

To vote, go to htttp://dcmp.bc.edu and follow instructions.

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Date following name indicates end of service on DCMP Committee, though title may change.

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