

PHYSICS COMPUTING NEWS - FALL 1992

Newsletter of the Division of Computational Physics

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If you have any questions regarding the items in this newsletter, or suggestions for future issues of *Physics Computing News*, please contact C. Richard DeVore, Newsletter Editor. Questions about the ratification of the Bylaws should be addressed to Gary D. Doolen, Secretary-Treasurer. Their addresses are given in the Roster on page 7.

NEWS BYTES

Computational Physics Pioneer John Killeen Honored

John Killeen was the founding director of the National Energy Research Supercomputer Center and is a pioneer of computational plasma physics research. He was honored for these roles recently at the workshop on the Theory of Fusion Plasmas, held at the Villa Monastero in Varenna, Italy in August.

Dr. Killeen's paper, "Magnetic Fusion Computing, A Personal Retrospective View" was rappateured by David Anderson because John has a speech disability that resulted from the stroke he suffered in 1989. Dalton

Schnack, also a former student of his, gave a paper, "Computational Methods for Long Time-Scale, Dissipative Magnetohydrodynamics," which extended earlier work pioneered by Dr. Killeen.

PRIZES & AWARDS

Aneesur Rahman Prize

We are pleased to announce the creation of the first APS Prize specifically to recognize contributions to computational physics, the Aneesur Rahman Prize. The prize is sponsored by IBM, and will be presented annually at a meeting of the division. The first recipient of the Rahman Prize will be honored at our spring meeting, Physics Computing '93.

Aneesur Rahman was a pioneer in the application of computers to problems in molecular spectroscopy, and a leader in the use of techniques for molecular dynamics. His work showed breadth, depth, and a true understanding of how computations could be applied to solve physical problems.

Following is the description of this new prize:

Sponsored by the International Business Machines Corporation.

Purpose: To recognize and encourage outstanding achievement in computational physics research.

Nature: The prize consists of \$5,000, an allowance for travel to the meeting of the Society at which the prize is awarded and at which the the recipient will deliver the Rahman Lecture, and a certificate citing the contributions made by the recipient.

Establishment and Support: The prize was established in 1992 with support from IBM as a means of recognizing outstanding work and disseminating information in computational physics.

Rules and Eligibility: Nominations are open to scientists of all nationalities regardless of the geographical site at which the work was done. The prize shall ordinarily be awarded to one person, but a prize may be shared among recipients when all recipients have contributed to the same accomplishments.

Nominations: Send the name of the proposed candidate and supporting information, including a *curriculum vitae* of the nominee, a description of the important contributions for which the nominee is being recognized, and a proposed citation, before 1 March 1993 to: Jay P. Boris, APS/DCP Prize & Award Committee, Code 6400, Naval Research Laboratory, Washington, DC 20375-5320.

FELLOWSHIP PROGRAM

Based on our present membership census, our Division is eligible each year to have approximately 5 to 7 Fellows named who are associated with Computational Physics. Although the APS Council makes the final selection, our Divisional Fellowship Committee makes the recommendations to the Society Fellowship Committee and thence to the Council, which in a majority of cases are followed.

The process for selecting Fellows of the APS begins with a nomination form, available from the Secretary-Treasurer or from APS Headquarters. The completed forms are sent directly to APS Headquarters where the nominations are checked for eligibility. Next, the applications are forwarded to the APS Subunit (Topical Group or Division) most closely associated with the nominee's specialty. The Fellowship Committee of the Subunit then selects some or all of these to be recommended to the Council by the APS Fellowship Committee.

The deadline for nominations to fellowship in 1993 is February 15, 1993.

RATIFICATION OF DIVISIONAL BYLAWS

The proposed Bylaws for the Division of Computational Physics have been approved by the APS Committee on Constitution and Bylaws and by the APS Council. On page 10 of this newsletter you will find the text of the proposed Bylaws, and enclosed you will find a ballot and return envelope. All members of the division are encouraged to review the Bylaws and to vote for or against ratification. These Bylaws will be deemed ratified if approved by a simple majority of responding members. Mail your ballot in the enclosed envelope to the Secretary-Treasurer of the division. It must be received by December 31, 1992 for it to be counted.

JOURNALS & PUBLICATIONS

Computational Physics Subsection of New Physical Review E

APS Editor-in-Chief Benjamin Bederson has announced the formation of a new Computational Physics subsection of Physical Review A15 (to become PRE on January 1, 1993). Irwin Oppenheim will continue as Editor of this section of the Physical Review, with Gerald Hedstrom serving as Associate Editor for the computational physics subsection. Following are excerpts from the announcement:

The Editor of Physical Review A15, Irwin Oppenheim and I are happy to welcome appropriate papers to this new computational physics section, not only because of your new status as a Division, but more importantly because computational physics is a vital part of all physics, and should certainly be represented in the American Physical Society journals. As with other sections of PRA15 which deal with specialized topics, the most suitable papers are those which seek to reach a wider audience of physicists than that reached by specialized journals. This policy has been in effect in PRA15 for a long time, and has been successfully implemented in such fields as plasma physics, biological physics, the physics of beams, and the physics of fluids. Authors, of course, must decide whether their paper is best suited to a specialized journal, or to a specific section of Physical Review such as condensed matter or particle physics, or to the new computational physics section.

Articles in this new section should not contain lengthy programs, algorithms, and the like, but these should be made available by the authors on request.

We will do everything in our power to help make this new section a success. We encourage you not only to send us your best computational papers, but also to offer suggestions as to how to best position the new section so that Physical Review E becomes the international journal of choice for general computational physics papers.

Manuscripts may be submitted at any time. The new section will appear with the first issue of PRE on January 1, 1993.

RETROSPECTIVES ON PHYSICS COMPUTING '92

Physics Computing '92, also known as the Fourth International Conference on Computational Physics, convened in Prague, Czechoslovakia during the week of August 24, 1992 at Charles University. The principal sponsor of this meeting was the Computational Physics Group of the European Physical Society (EPS), with some assistance from the Division of Computational Physics of the American Physical Society.

Division Councillor David V. Anderson was in attendance. He reports that the opening session of the conference was very formal, with organ processional and recessional works played and a prayer offered by the Chancellor of Charles University. He also provides the following summary of a meeting of the International Steering Committee in Prague:

The members of the International Steering Committee include three Europeans (Ralf Gruber, Switzerland; Jaroslav Nadrchal, Czechoslovakia; and Johnny Petersen, Norway) and three North Americans (David Anderson, USA; John Negele, USA; and Elaine Oran, USA). This common Steering Committee was established by the APS and the EPS for the purpose of coordinating the conference series known as Physics Computing '9x.

As the only American able to attend the Committee's meeting I met with our European counterparts to discuss present and future meetings. Among the several topics discussed, the issues of conference manuscripts and future venues were prominent.

The EPS members of the Committee are interested in exploring a more formal conference format in which authors will be expected to provide camera-ready manuscripts to be published in a special journal edition. It was estimated that such a requirement tends to increase the quality of the presentations and at the same time reduces the number of contributions and attendance. This quality versus quantity issue is one we should consider on the American side as well.

Our main decision taken at this meeting was the selection of Lugano, Switzerland as the venue for Physics Computing '94, to be held during the week of 22-26 August. Lugano is in the Italian part of Switzerland in the southern foothills of the Alps. Marco Tomassini and Ralf Gruber, both of the Swiss Scientific Computing Center, will act as Conference Organizer and Program Chairman, respectively. Ralf told us that the Lugano conference will require submission of manuscripts several weeks in advance of the conference so that a final proceedings book can be distributed at the meeting.

Division Fellow Daniel C. Barnes also attended the conference, as an invited speaker. He notes that Prague was an excellent choice for the meeting venue, allowing access to our East European and former Soviet counterparts. Interesting technical talks were offered on the subjects of optimization algorithms such as simulated annealing and genetic approaches and of hydrostochastics, a new approach to computational fluid dynamics related to lattice-Boltzmann methods. He also reports a much greater emphasis on distributed computing via workstation clusters and transputers in Europe, compared with the emphasis on mainframe parallel machines on our side of the Atlantic.

MEETING ANNOUNCEMENTS

Physics Computing '93

The Division of Computational Physics will host Physics Computing '93 in Albuquerque, New Mexico, May 30 – June 4, 1993. Co-sponsors of the meeting, which will also be known as The 5th International Conference on Computational Physics, are the AIP journal *Computers in Physics* and the European Physical Society. The venue will be the Albuquerque Convention Center.

The first day of the conference, as in previous years, will be devoted to tutorial presentations. A preliminary list of speakers and topics is given below. Each subsequent morning of the conference will open with a plenary session. The technical program will feature invited presentations as well as contributed talks and posters. An exhibit show featuring leading hardware and software companies, placement services, a press room, receptions, and a companions program also are being organized.

Abstracts of contributed papers must be received by March 5, 1993. They may be submitted by electronic mail to pc93@pinet.aip.org.

Questions, comments, or suggestions about Physics Computing '93 can be directed to Conference Organizer Robert Swendsen or Program Chair Michael Creutz. Their addresses are given in the Roster on page 7. Additional information will be forthcoming in the spring issue of this newsletter, and can be obtained electronically by anonymous ftp to [pinet.aip.org](ftp://pinet.aip.org) in directory `pc93`.

Tutorial Subjects

Particle Simulation Methods, James W. Eastwood, AEA Technology, Culham Laboratory, UK

Monte Carlo Methods for Radiative Transfer in Astrophysics, Barbara Whitney, Harvard University
Quantum Monte Carlo Methods for Continuum Systems, David M. Ceperley, University of Illinois, Urbana-Champaign
Advances in Flux-Corrected Transport Algorithms: A Lazy Person's Approach to High-Resolution CFD, Jay P. Boris, Naval Research Laboratory
Introduction to Mathematica, Nancy Blachman, Variable Symbols Inc.
Introduction to Maple, Nancy Blachman, Variable Symbols Inc.
Programming in High Performance FORTRAN, Chuck Koelbel, Rice University
Modular FORTRAN: A Language for Building Large Parallel Programs, Ian Foster, Argonne National Laboratory
Requirements for High Performance Scientific Distributed Computing, David W. Forslund, Los Alamos National Laboratory
High Performance Computing Trends, or Massively Parallel Computing Comes of Age, Mark Seager, Lawrence Livermore National Laboratory
Introduction to the Finite Element Method: A Physicist's Approach – With Applications to Quantum Mechanics, L. Ramdas Ram-Mohan, Worcester Polytechnic Institute
2D Moving Finite Elements: An Adaptive Grid Method for Computational Fluid Dynamics, Alan H. Glasser, Los Alamos National Laboratory
The Conjugate Gradient Method, Steven Ashby, Lawrence Livermore National Laboratory
A Survey of Available Third Party Software for Applications in Physics, Chemistry, Engineering, and Mathematics, Susarla Murty, Lawrence Livermore National Laboratory

Technical Sessions

- Numerical Algorithms & Methods
 - finite differences, adaptive meshes, multigrid and acceleration algorithms, particle methods, fast transforms, Lagrangian methods, eigenvalue solvers, finite element methods, sparse matrix solvers
- Networking & Databases
 - information retrieval, future directions in networking
- Education
 - computers in physics education
- Visualization
 - virtual reality, image processing, scientific visualization
- Computing in Experimental Physics
 - real-time computing, experimental techniques, data analysis
- Computer Languages & Architectures
 - parallel languages, parallel architectures, symbolic computation, neural networks, physical basis of computer hardware design
- Other Methods
 - quantum Monte Carlo; molecular dynamics; *ab initio* and fundamental structure calculations; fluids, plasmas, and turbulence; few body problems; chemical dynamics; *N*-body calculations; growth, aggregation, and fractals; cellular automata; chaos; macromolecules and protein folding; climate and pollution modeling; inverse problems; biophysics.

High Performance Computing: Grand Challenges in Computer Simulation

As part of the 1993 International Simulators Conference, the Society for Computer Simulation will host a special Symposium devoted to the impact of high performance computing on computer simulation. The symposium will be held at the Key Bridge Marriott Hotel in Arlington, Virginia, March 29 - April 1, 1993.

Computational topics and areas of application to be addressed include:

- Numerical Algorithms & Methods
 - parallel algorithms and methods; methodologies to exploit HPCC architectures
- Applications
 - models of fluid dynamic behavior for 3-D flow fields; combustion system simulations; predictions of weather, climate, and global change; models of turbulence in fluid flows; computational solid mechanics; nuclear reactor safety analysis; computational ocean sciences and systems; nuclear fusion applications

For further information, contact:

Symposium on HPCC
c/o Society for Computer Simulation International
P. O. Box 17900
San Diego, CA 92177

2nd International Conference on Computational Physics

The Institute of Applied Physics and Computational Mathematics, Beijing, the Center for Computationally Intensive Physics, Oak Ridge National Laboratory, and Drexel University, Philadelphia, invite participation in the 2nd ICCP, to be held in Beijing, Republic of China, September 13-17, 1993. It is a sequel to the 1st ICCP, held in Beijing in June, 1988.

Topics to be covered at this conference include:

- Hardware
 - computer architectures; networking
- Algorithms & Methods
 - lattice gases and cellular automata; molecular dynamics; methods in computational fluid dynamics
- Visualization
 - graphics; animation; multimedia; virtual reality
- Applications
 - grand challenges; computer-aided education; fluid dynamics; lattice field theories - QCD, QED; cosmology and astrophysics; atomic physics; nuclear physics; nonlinear dynamics; condensed matter physics

For further information, contact:

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BYLAWS OF THE DIVISION OF COMPUTATIONAL PHYSICS

In the following text, “Society” shall signify the American Physical Society, “Council” and “Executive Board” shall signify the Council and the Executive Board of the Society, respectively; “Executive-Secretary” shall signify that Officer of the Society; and “Regular Meeting” shall signify the principal meeting held once a year by the Division.

ARTICLE I – NAME

This Division of the American Physical Society shall be called the Division of Computational Physics.

ARTICLE II – OBJECTIVE

The objective of the Division shall be the advancement and dissemination of knowledge regarding the use of computers in physics research and education. We shall include, among other areas, their application to experiments, theory, and education as well as the application of physics to the development of computer technology. The Division shall provide to its members, and to all members of the Society, an opportunity for coordination and a forum for discussion and communication.

In addition, the Division shall: promote research and development in computational physics; enhance prestige and professional standing of its members; encourage scholarly publication; and promote international cooperation in these activities.

ARTICLE III – ENABLING CONSTITUTIONAL PROVISION

Article VIII of the Constitution of the Society, as said Article may be subsequently revised or amended, is hereby incorporated in these Bylaws by reference.

ARTICLE IV – MEMBERSHIP

The members of the Division shall consist of members of the Society who have indicated in accordance with procedures established by Council their desire to join the Division and who retain membership from year to year by the payment of designated dues or by other method established by Council.

ARTICLE V – EXECUTIVE COMMITTEE

1. Governance. The Division shall be governed by an Executive Committee, which shall have general charge of the affairs of the Division.

2. Composition. The Executive Committee shall consist of the Officers of the Division, the most recent Past Chair, the Division Councillor(s), if any, and six Members-at-Large elected to staggered three-year terms.

3. Executive Committee Meetings. The Executive Committee shall meet at least twice each year. One meeting shall be held during the Regular Meeting of the Division, and the other shall be held approximately half way between Regular Meetings. Participation may be in person or, where possible, by teleconference, with the requirement that every participant can hear all the others at the same time, as required by Rule 708 of the New York State Corporation Code. Any member of the Executive Committee unable to attend a meeting may name a nonvoting alternate to represent him or her, subject to the approval of the Chair. The Chair of the Division shall preside over the Executive Committee meetings. A majority of the voting members, including at least two Officers, shall constitute a quorum.

4. Executive Committee Actions. Actions of the Executive Committee are taken by majority vote of a quorum. Voting shall be carried out, in person or by teleconference, only during Executive Committee meetings. Individual balloting by telephone, electronic mail, or other means is not permitted.

ARTICLE VI – OFFICERS AND DIVISION COUNCILLOR(S)

- 1. Officers.** The Officers of the Division shall be a Chair, a Chair-Elect, a Vice-Chair, and a Secretary-Treasurer.
- 2. Duties of the Chair.** The Chair shall preside at all meetings of the Executive Committee and Business Sessions of the Division at which his or her attendance is possible.
- 3. Duties of the Chair-Elect.** The Chair-Elect shall act in place of the Chair if the latter is unable to perform his or her duties. The Chair-Elect shall perform such other functions as may be explicitly provided in the Bylaws.
- 4. Duties of the Vice-Chair.** The Vice-Chair shall act in place of the Chair-Elect if the latter is unable to perform his or her duties. The Vice-Chair shall perform such other functions as may be explicitly provided in the Bylaws.
- 5. Duties of the Secretary-Treasurer.** The Secretary-Treasurer shall maintain the records of the Division including minutes of Executive Committee meetings and Business Sessions, Division activities, and membership lists. The Secretary-Treasurer shall notify the Executive Committee of matters requiring the decision of said Committee and shall prepare the agenda of Executive Committee meetings and Business Sessions. The Secretary-Treasurer shall prepare minutes of Executive Committee meetings and Business Sessions and shall submit these minutes to each member of the Executive Committee and to the Executive Secretary within four weeks after each meeting. Following elections, such minutes are to include the results of the election and a roster of the current Executive Committee membership. The Secretary-Treasurer shall ensure that the newsletter, *Physics Computing News*, is produced and distributed in a timely fashion.

The Secretary-Treasurer shall keep the Council and Executive Secretary of the Society informed of the activities and needs of the Division.

The Secretary-Treasurer shall have responsibility for all funds in the custody of or placed at the disposal of the Division and shall authorize disbursements from such funds for expenses in a manner that is consistent with the general policies of the Society and the Division. Financial records shall be kept on an annual basis consistent with the fiscal policies of the Society. The Secretary-Treasurer shall present a financial report at each meeting of the Executive Committee and at the annual Business Session of the Division.

- 6. Duties of the Division Councillor(s).** The Division Councillor(s) shall serve as liaison between the Council of the Society and the Executive Committee of the Division. Following each Council meeting, the Division Councillor(s) shall report to the Chair and the Secretary-Treasurer regarding Council actions that affect the status and operations of the Division. Reports shall be made to the entire Executive Committee during their regularly scheduled meetings.

ARTICLE VII – ELECTION AND TENURE OF THE OFFICERS, EXECUTIVE COMMITTEE MEMBERS, AND DIVISION COUNCILLOR(S)

- 1. Qualifications.** Officers, Division Councillor(s), and Members-at-Large of the Executive Committee must be members of the Division at nomination.
- 2. Ballot.** The Vice-Chair, Secretary-Treasurer, Division Councillor(s), and Members-at-Large of the Executive Committee shall be elected by mail ballot as hereinafter provided.
- 3. Nomination and Election of the Vice-Chair, Secretary-Treasurer, and Executive Committee Members.** Each year the Nominating Committee shall nominate at least two candidates for the office of Vice-Chair, for Secretary-Treasurer during the final year of the term of the current Secretary-Treasurer, and for open positions of Members-at-Large of the Executive Committee. The Nominating Committee shall notify the Secretary-Treasurer of the results not later than sixteen weeks before the Regular Meeting, except under extraordinary circumstances. Members of the Division shall be encouraged to suggest candidates for the various offices and Executive Committee positions and communicate those suggestions to the Secretary-Treasurer not

later than sixteen weeks before the Regular Meeting, except under extraordinary circumstances. If as many as five percent of the total Division membership determined on 31 December of the year preceding the election suggests the same person for the same office, that person shall be deemed to have been nominated.

The Secretary-Treasurer shall poll the Division membership by mail ballot, stating a closing date at least three weeks prior to the Regular Meeting. Ballots shall be returned to and counted by the Secretary-Treasurer or his or her designate. Election shall be decided by a plurality of those voting. If there is a tie, the Executive Committee shall decide the election, with the Chair voting only in the case of a tie among the other Executive Committee members. The Secretary-Treasurer shall communicate the results of the election to the Chair at least two weeks prior to the Regular Meeting and shall publish the results in a manner designated for official announcements.

4. Nomination and Election of a Division Councillor. During the final year of the term of a Division Councillor and when the Division has more than one Councillor, the Secretary-Treasurer shall determine from the Executive Secretary if the terminating Division Councillor position is to continue. Such determination shall be made by the Executive Secretary based on Division membership according to rules specified in the Constitution and Bylaws. If the position is to continue or whenever the Executive Secretary informs the Division that a new Division Councillor is to be elected, the Executive Committee shall nominate at least two candidates for the open position. The Secretary-Treasurer shall inform the Division members of the nominations made and shall invite these members to suggest additional candidates. If as many as five percent of the total Division membership determined on 31 December of the year preceding the election suggests the same person, that person shall be deemed to have been nominated. The Secretary-Treasurer shall poll the Division by mail ballot, stating a closing date at least three weeks before 1 September. Ballots shall be returned to and counted by the Secretary-Treasurer or his or her designate. Election shall be by plurality of those voting. If there is a tie, the Executive Committee shall decide the election, with the Chair voting only in the case of a tie among the other Executive Committee members. The Secretary-Treasurer shall communicate the results of the election to the Chair and to the Executive Secretary before 1 September of the year prior to that in which the new Councillor assumes office and shall publish the results in a manner designated for official announcements.

5. Official Year. The official year shall extend from the close of one Regular Meeting to the close of the next Regular Meeting.

6. Vice-Chair, Chair-Elect, and Chair. The member elected as Vice-Chair shall serve in that office for one year, then for one year as Chair-Elect, and then for one year as Chair. The Chair shall not be eligible for the office of Vice-Chair in the year following his or her term of office.

7. Terms of Office. The terms of office of the Officers and Members-at-Large of the Executive Committee shall begin at the close of the Regular Meeting of the Division following their election. The Secretary-Treasurer shall serve for a term of three years and may not serve more than two consecutive terms. The tenure of a Member-at-Large of the Executive Committee shall terminate in the event of his or her assumption of a post as an elected Officer of the Division, and the unexpired portion of his or her term shall be filled as hereinafter provided for a vacancy. The term of office of a Division Councillor shall begin at the beginning of the calendar year following his or her election. Divisional Councillors shall serve for a term of four years and may not serve more than two consecutive terms unless otherwise specified by Council.

To insure corporate memory and to provide for smooth transitions in the replacement of officers, the Chair, Division Councillor, and the Secretary-Treasurer shall each serve an additional year as *ex officio* members of the Executive Committee. Their titles shall be Past Chair, Past Councillor, and Past Secretary-Treasurer. Their participation on the Executive Committee shall be as non-voting members.

8. Vacancies in Offices. If a vacancy occurs in the office of Chair, the Chair-Elect shall succeed and complete the term and shall serve as Chair also in the following year. The Vice-Chair shall serve simultaneously as Chair-Elect during the remainder of the term and shall continue to serve as Chair-Elect in the following term.

If a vacancy occurs in the office of Chair-Elect otherwise than through advancement to Chair, the Vice-Chair

shall become Chair-Elect. In this case, and also if the office of Vice-Chair becomes vacant for other reasons, the office of Vice-Chair shall remain vacant for the remainder of the term. In the next scheduled election, candidates for both Chair-Elect and Vice-Chair shall be nominated.

If vacancies occur in the offices of both the Chair and the Chair-Elect, the Vice-Chair shall become Chair and shall complete the term. In this case a special election shall be held to fill the offices of Chair-Elect and Vice-Chair. The members so elected shall continue to serve as officers in the normal succession order.

Vacancies in any other elected office shall be filled (or left unfilled) by the Executive Committee until such time as the vacancy can be filled by regular election procedures.

ARTICLE VIII – APPOINTED COMMITTEES

1. Nominating Committee. The Nominating Committee shall consist of four members appointed by the Chair to staggered two-year terms and one member appointed by the Council for a one-year term. The Chair shall ascertain through the Executive Secretary the identity of this member. The Chair shall appoint the Chair of the Nominating Committee from among the members, with the restriction that the member appointed by Council is not eligible for Chair. The Nominating Committee shall prepare a slate of candidates for the positions of Vice-Chair, Secretary-Treasurer, and Members-at-Large of the Executive Committee according to Article VII.3 of these Bylaws. The Nominating Committee shall advise the Chair on suitable candidates for Society committees, including relevant Society Prize and Award committees, and on candidates for Society offices. The Nominating Committee shall perform such other duties as described in the Bylaws.

2. Program Committee. The Program Committee shall consist of the Chair, the Chair-Elect, the Vice-Chair, the Secretary-Treasurer, conference organizers, and at least nine other members appointed by the Chair, upon recommendation of the Chair-Elect, to staggered three-year terms. The Vice-Chair shall serve as Chair of the Program Committee. The Program Committee shall have the responsibility of assisting the Executive Secretary, or his or her designate, in arranging the technical programs of the meetings of the Society. Its activities shall include the scheduling of contributed papers within the areas of interest of this Division, as well as the arranging, in cooperation with the Executive Secretary or his or her designate, of symposia and sessions of invited papers sponsored by the Division for a meeting. For meetings of the Division, including the Regular Meeting, the Program Committee shall be responsible for the solicitation and selection of invited and review papers, and shall be responsible for making the meeting arrangements. In the case of sponsored conferences or other specialty meetings, the Program Committee may delegate its tasks to a Paper Selection Committee chosen by the Chair of the Executive Committee.

To facilitate the meeting arrangements, the Chair of the Executive Committee shall appoint a Conference Organizer for each meeting or sponsored conference organized under the purview of the Division. The Conference Organizer will work with the Meetings Department of the Society and, where appropriate, use their services in making the meeting arrangements. The Conference Organizer will report to the Chair of the Program Committee, or others as designated by the Chair of the Executive Committee. Conference Organizers shall serve until one year after their conference is held and, if not members of the Executive Committee, shall serve as *ex officio* non-voting members of the Executive Committee.

3. Fellowship Committee. The Fellowship Committee shall consist of the Vice-Chair and four other members appointed by the Executive Committee, upon recommendation of the Chair, to a one-year term. The Vice-Chair shall serve as Chair of the Fellowship Committee. The Fellowship Committee shall promote the nomination of candidates for Fellowship, shall review the qualifications of such candidates, and shall report its recommendations to the Executive Committee for approval before submission is made to the Executive Secretary of the Society.

4. Publications Committee. The Publications Committee shall consist of four members appointed by the Chair to staggered two-year terms. The Chair shall appoint the Chair of the Publications Committee from among the members. The Publications Committee shall solicit articles for *Physics News*, shall interact with the editors of the *Physical Review* and *Physical Review Letters* on matters of interest to the Division, and shall serve as the Divisional interface with editors and publications for the popular press. If the Chair is not a

member of the Executive Committee, he or she shall serve as an *ex officio* non-voting member of the Executive Committee.

5. International Liaison Committee. The International Liaison Committee shall consist of three members appointed by the Executive Committee to staggered three-year terms. The Chair shall appoint a Chair of this committee from among its members. Among the duties of this committee shall be the development and maintenance of relationships with other national and international physics societies. The Chair shall also serve as the Official Society Correspondent to the European Physical Society Group on Computational Physics. If this Chair is not a member of the Executive Committee, he or she will serve as an *ex officio* non-voting member of the Executive Committee.

6. Terms of Office of Appointed Committee Members. The terms of committee members appointed or recommended by an incoming Chair shall commence at the beginning of the year in which he or she assumes office.

7. Ad Hoc Committees. The Chair shall appoint other *ad hoc* committees as necessary, which shall serve only during his or her term as Chair.

ARTICLE IX – MEETINGS

1. Regular Meeting. One meeting of the Division, to be known as the Regular Meeting, shall be held annually at such time and place as shall be ordered by the Executive Committee, subject to approval by the Executive Board. Whenever it shall be feasible and not to the disadvantage of the members of the Division, the Executive Committee may order this or any other meeting to be held conjointly with a Meeting of the Society or of another society, conference, or group, so long as such joint meeting does not conflict importantly with the schedule of Meetings of the Society as determined by the Executive Board. The registration fee for the Regular Meeting, when not held jointly with a Meeting of the Society, shall be fixed after consultation with the Executive Secretary. Non-members of the Society shall pay a surcharge to be set each year by the Executive Board.

2. Annual Business Session. Each year the Division shall hold a Business Session which shall be a session of the Regular Meeting. This Business Session shall be devoted exclusively to the reports of officers and committees, election results, and the transaction of business affairs. No scientific program of the Division shall be presented simultaneously with the Business Session. The Secretary-Treasurer shall notify the Division members of the agenda for the Business Session no later than three weeks prior to the Regular Meeting.

3. Other Meetings. Meetings of the Division, other than the Regular Meeting, may be initiated by the Executive Committee or by petition of twenty percent of the members of the Division, subject to approval by the Executive Board. Special conferences may be sponsored in whole or in part by the Division, subject to the rules and regulations specified in the Society Constitution and Bylaws.

4. Papers at Meetings. Programs of meetings of the Division may provide for the inclusion of both invited and contributed papers. When a meeting of the Division is held in conjunction with a meeting of the Society, the rules of the Society shall apply to submitted papers. When a meeting of the Division is not held in conjunction with a meeting of the Society, the Executive Committee shall prescribe the subject and character of the meeting, which may include limitations on the subject matter of submitted papers. The Secretary-Treasurer shall fix the deadline date for receipt of titles and abstracts in consultation with the Executive Secretary and shall designate the place to which they should be sent. The amount of time to be allowed for the presentation of a paper at the Regular Meeting shall be determined by the Program Committee, except as otherwise directed by the Executive Committee. These allotments of time shall be consistent with the Constitution and Bylaws of the Society and with regulations of Council.

ARTICLE X – DUES

Dues for maintenance of membership in the Division shall be established by Council.

ARTICLE XI – NEWSLETTER

The newsletter of the Division, *Physics Computing News*, shall be managed and edited by an Editor, who shall be elected by the Executive Committee for a term of three years. The Editor shall oversee the preparation and distribution of *Physics Computing News*. There shall be at least two issues per year; the frequency and timing of these issues shall be determined by the Editor in consultation with the Secretary-Treasurer, subject to approval of the Executive Committee or its delegate. The Executive Committee may direct the Secretary-Treasurer to distribute complimentary copies of the newsletter to specified non-members of the Division. If not a member of the Executive Committee, the Editor shall serve as an *ex officio* member.

ARTICLE XII – OFFICIAL ANNOUNCEMENTS

Official announcements shall be made in the *APS News*, in *Physics Computing News*, and in such other publications as the Executive Committee may direct.

ARTICLE XIII – PROCEDURE OF AMENDMENT OF BYLAWS

Proposal of an Amendment to these Bylaws may be made by the Council, by the Executive Committee, or by a petition to the Chair signed by not fewer than ten percent of the members of the Division. If the proposed amendment or new Bylaws originates within the Division, it must be approved by Council before further action can be taken. Following Council approval, the Secretary-Treasurer shall distribute copies of the proposed Amendment or new Bylaws to all members of the Division not less than three weeks before the Regular Meeting and opportunity shall be given for discussion during the Business Session. Voting on the proposed Amendment or Bylaws shall proceed as follows: copies of the proposed Amendment(s) or Bylaws shall be distributed with the election materials for the next scheduled election of the Executive Committee members. Ballot forms shall have the Amendment(s) or Bylaws question included. Adoption of the Amendment(s) or Bylaws shall require a two-thirds vote among those voting. The Amendment(s) or Bylaws, if approved, shall become effective at the close of the Regular Meeting next following the election. In the case where the existing Bylaws are deemed unacceptable by the Society because they are inconsistent with the Society's Constitution and Bylaws, the new Amendment(s) or new Bylaws shall become, provisionally, effective immediately following Council approval until such time when the Division members can ratify them.

BALLOT

The Bylaws of the Division of Computational Physics establish its structure and operations, including the nomination, election, tenure, and duties of its officers, executive committee members, and councilors, the duties and composition of its appointed committees, and the schedule of its scientific and business meetings.

Bylaws: Vote for approval or disapproval of the proposed Bylaws.

- I accept the proposed Bylaws.
- I reject the proposed Bylaws.

Please return your ballot in the envelope provided. It must be received on or before December 31, 1992 for it to be counted.