

DIVISION OF BIOLOGICAL PHYSICS (DBP) Newsletter - May 96 Edition

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Announcement from the Chair

My name is Ivar Giaever and I am a professor at Rensselaer Polytechnic Institute in Troy NY, I can easiest be reached by e-mail at this address: giaevi@rpi.edu or through my home page address <http://www.rpi.edu/~giaevi> As your chair this year I welcome suggestions (and complaints!)

Status of DBP

We had 1289 members last year; to be a division we must have 3% of the total membership in APS (or 1227 members). Our membership declined a little last year, but the APS membership declined more (!), so presently we are at 3.15%.

Interestingly out of our 1289 members, 2869 are members of at least another division, forum or topical group, so on average we are members of 2.3 groups. Another statistic is that in the election I won, only 220 of you cast a vote for the candidates for the chair. Does that mean that most of our members have their real home in another division? I

hope you will be willing to play a more active role this year, so read on to see what you can do to improve your society.

Symposia for March Meeting 1997 (Deadline ASAP)

Next years March Meeting (March 17-23) will be in Kansas City, MO. This year as a Vice-Chair I arranged 7 invited sessions, and we also have 7 slots for 1997. I would have welcomed more suggestions last year, so you should recognize that this is your chance to promote your own work or suggest topics that you think would be interesting. We will also have leadoff speakers in the contributed sessions at least in major categories such as Protein, DNA, Membranes etc. Suggestions should be sent to: rousseau@ecom.yu.edu or:

Denis Rousseau
Dept. of Physiology and Biophysics
Ullman 303
Albert Einstein College of Medicine
1300 Morris Park Ave
Bronx, NY 10461

Please make your suggestions early (before July 1) so Denis can have time to put it all together. It is very convenient to use e-mail for this purpose, but any means will do. Forms are enclosed in this newsletter.

Also if you have a good suggestion for a tutorial session send your suggestions to this mysterious e-mail address: mossf@umslvma.umsl.edu or:

Frank Moss
Dept. of Physics
University of Missouri - St. Louis
St. Louis, MO 63121

By the way if you do NOT electronically submit your abstract to the APS, it will NOT be listed on their Electronic Meeting Board NOR printed in the Bulletin for the meeting. It will only be used for the sorters meeting to put it in the more or less correct category. With an electronic submitted abstract you will also get a chance to change that category if you think you are misplaced.

Home Page

Please take a look at our home page that you can find under the APS home page or directly at this address: <http://www.aps.org/DBP/>
(The address is case sensitive.)

The home page will be maintained this year by your chair-elect, Frank Moss, I am sure he will be grateful for suggestions for improvements at his address:

mossf@umslvma.umsl.edu

Fellows of DBP (Deadline 6/01/96)

Let me first thank Peter Debrunner for his long service as the head of the fellowship committee. Suggestions for fellows this year should go to Edgidijus Uzgiris at this address:

Uzgiris@crd.ge.com

or:

Edgidijus Uzgiris

Ge R&D Center

PO Box 8

Schenectady, NY 12301

Only about 10% of the membership in APS are fellows, remember it is an honor, and treat the suggestions seriously. We have slots open if you have good suggestions. Rules, regulations and forms can be found on: <http://www.aps.org/>

Biological Physics Prize (\$ 5000,-)

First let me take the opportunity to congratulate this years winner, Seiji Ogawa. The prize is given every other year so there is no prize in 1997, but we are open for suggestions at any time. Presently please send your suggestions to me.

100 Years Birthday

The American Physical Society is 100 years old in 1999, and a big bash otherwise known as the March Meeting will be held in Atlanta (New York and Washington were too expensive). Thomas Nordlund is our connection regarding the preparation for the celebration, any ideas on how we should promote our division at this special event?
nordlund@phys.uab.edu

or:

Thomas Nordlund

Dept of Phys.

University of Alabama

Birmingham, AL 35294

Read about the Centenary Celebration Online

Summary

We all agree that physics is a wonderful field, but to succeed in physics in this changing world where jobs are limited, it is necessary to be flexible and broaden the outlook. Recently Physics Today had an add for a job on Wall Street for \$300.000.- ++, and a

background in statistical physics maybe useful in playing the market. I can't promise you such a salary joining the DBP but if you are a student I think you will have fun learning about biology and today it is relatively easy to get a position in this area. Biology is now at the stage where it is possible to make quantitative calculations, model phenomena, and apply experimental techniques invented by physicists such as scanning microscopes and laser tweezers. Since traditional biologists are not very comfortable in these areas, there are lots of opportunities, in particular if you can collaborate with a biologist.

Unfortunately it is difficult to get funding in this interdisciplinary area, in spite of the fact that most granting agencies claim they look for such proposals. I have personally been turned down by both NIH and NSF several times, and the only suggestion I can give right now is to "keep buying lottery tickets". In the mean time we will keep trying to improve our lot.

MINUTES OF BUSINESS MEETING OF THE DIVISION OF BIOLOGICAL PHYSICS MARCH 20, 1996 ST. LOUIS MO.

The meeting was called to order by Chairperson Stuart Lindsay at 6:30 PM St. Louis Convention Center. The Minutes of the previous meeting were distributed and approved. The Treasurer's Report was distributed and Prohofsky commented on the changes in fiscal year that distorted information about the actual expenditures of the division. The report was approved. The results of the recent election were announced. Frank Moss was elected Vice-Chairperson, Angel Garcia and Tom Nordlund were elected to the Executive Committee, and Earl Prohofsky reelected Secretary-Treasurer.

REPORT OF THE CHAIRPERSON

1. Stuart Lindsay congratulated Ivar Giaever, Program Chair for March 96, for the excellent program he put together.
2. He also congratulated Denis Rousseau, Tutorial Program Chair, for the excellent Tutorial program sponsored by our Division. The attendance was 30-35 persons and had four speakers. Stuart asked for suggestions for future tutorial programs and discussed the possibility of Focus Sessions at future meetings.
3. Lindsay said that we must plan the symposia for next year over the summer so that suggestions have to be made ASAP.
- 4 Future plans for our home page were discussed. Lindsay thanked Frank Moss for the initial compilation of our divisional directory and announced that Frank has agreed to maintain it. He can be contacted at mossf@umslvma.umsl.edu.
5. A directory of graduate positions in biological physics are kept on the home page and all students are urged to use it. Check for correct addresses on the home page.

6. Our division membership is 1,300 or 3.15% of APS membership. We have divisional standing for at least two more years.

7. The Biological Physics Prize was given this year to Seiji Ogawa. The prize will again be given in 1998. Suggestions for the award should be sent to Ivar Giaever (giaevi@rpi.edu).

8. Our Student Travel Award was given to Flavio Fenton of Boston University.

9. Stuart thanked all the officers and members of the executive committee for their help during the last year.

The Citations for the award of Fellowship in the APS for those sponsored by our division were read and the Certificate of Fellowship was presented to Rodney Elbert Harrington.

Irwin Oppenheim, Editor-Physical Review E, urged our members to submit manuscripts to PRE. He is making PRE the principal journal for biological physics among APS publications. Some discussion followed in which Irwin reported that time from acceptance to publication averaged 130 days at PRE. Time from submission to publication roughly twice that. The acceptance rate is about 60%.

Stuart Lindsay introduced Ivar Giaever as the incoming Chairperson. Ivar thanked Stuart for his leadership of the division during the past year.

An open informal discussion followed the formal part of the meeting. Lindsay noted that the majority of the abstracts in our area were from outside physics departments. He pleaded for more openness in physics departments and hiring of more biological physics staff. Eugenie Mielczarek suggested that we fund travel for speakers on biological physics topics especially for talks at small colleges. Positions for biological physics staff were advertised for by Wake Forest, UVA, Cornell, and Purdue this last year.

John Powell commented on the interest in molecular biology by students in undergraduate programs. He suggested listing a model biological physics curriculum on our web page. Harrington urged us to continue to reach out to people working in biological physics in other departments at universities as well as in industry.

There was a discussion about limiting our future meeting dates to three days even if it meant parallel sessions. Some expressed disagreement with this change in scheduling. It was suggested that we explore a joint DBP-Biophysical Society meeting. It was suggested that we not repeat symposia that occurred at the Biophys. Soc. meeting the month before. The meeting was adjourned at 7:15 PM.

Respectfully submitted
E.W. Prohofsky

EXECUTIVE COMMITTEE DBP

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3/96-3/97

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Financial Report March 19, 1996

Balance

11/30/94

23,735

Expenses

through 11/30/95

- 959

Income

through 11/30/95

7,150

Balance

11/30/95

29,926

Note: The APS has changed accounting procedures. The previous report ran from March 1994-March 1995. This from Nov. 30, 1994- Nov. 30, 1995.

Respectfully submitted

E.W. Prohofsky

1996 Division of Biological Physics New Fellows

Carlos J. Bustamante, University of Oregon

For pioneering the application of optical methods and scanning probes in measurements of the properties of single DNA molecules.

Rodney Elbert Harrington, University of Nevada

For elucidating DNA structure in chromatin, and the sequence basis of DNA bending.

Larry S. Liebovitch, Florida Atlantic University

For advancing the physics of fractals and chaos and using these methods to analyze and understand biological systems

Jose Nelson Onuchic, University of California, San Diego

For advancing our understanding of electron transfer in complex molecules.

George W. Rayfield, University of Oregon

For definitive experimental proof for quantized vortex rings in superfluid helium; for high precision studies on phase transitions in monolayers; for extensive studies on the optical and electrical properties of bacteriorhodopsin, and ensuing device applications.

NOTES FROM THE SECRETARY-TREASURER

The results of the 1995 election.

Vice-Chairperson is Frank Moss

Secretary-Treasurer is Earl Prohofsky

New Members Executive Committee are Angel Garcia and Tom Nordlund.

Congratulations on election.

The 1997 divisional meeting and symposia will be during the first half of the week of the APS March meeting in Kansas City March 17-21. Our sessions should run at least Monday through Wednesday, but as has been the case in the last few years, likely into a fourth day Thursday. Our division Business Meeting will then be late afternoon Tuesday or possibly Wednesday.

Our division has a long standing relationship with the Biophysical Society and has an Editor and members on the editorial board of the Biophysical Journal (BJ). Tom

Nordlund is currently an editor recommended by our division. The BJ is again this year expanding its list of referees and it was felt that representation of Biological Physicists in that list is desirable. A Referee Expertise Form is included in this newsletter. I encourage members to fill it out and mail it to the address on the form to insure a wider expertise in review for BJ. Tom Nordland also wants to encourage submission of appropriate papers to BJ.

Forms for suggesting symposia and lead-off speakers as discussed by the Chair are enclosed in this mailing. The division will again award travel grants to Student members who are first authors on a submitted abstract based on the content of the abstract and letters of recommendation from their advisors. The student travel award winner for the 1996 meeting is listed below. Nominations for this award should be sent to Ivar Giaever at giaeви@rpi.edu.

STUDENT MEMBER TRAVEL AWARD WINNER 1996

The travel award this year went to Flavio Fenton of Northeastern University, for a paper "A New Three-Variable Model of Action Potential Propagation in Cardiac Tissue" Co-authored with Alain Karma.

Sincerely yours

Earl Prohofsky

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