

NEWSLETTER

girep

Groupe International de recherche sur l'enseignement de la physique
International research group on physics teaching
Internationaler Arbeitskreis zur Förderung des Physikunterrichts

No.11 - November 1983.

This 11th issue of the Newsletter is mainly devoted to improving GIREP functioning, and to circulating information on the next 1984 Seminar. Enclosed you find:

- a questionnaire to fill in, aimed at the formation of the "GIREP network" mentioned at No.8;
- two leaflets concerning the Seminar.

1. GIREP officers.

At the last GIREP Committee meeting held on 21st May 1983 at Balatongibrök, Hungary, it was noted that the term of office of the current GIREP officers would constitutionally come to an end in September 1983. They had been elected by the General Assembly held at the GIREP Seminar in Rehovot, Israel, in September 1979 for a four year period. This is the normal practice so that new elections can be held at the GIREP Seminar after next, the Seminars being held at two yearly intervals. However, the Seminar originally planned for summer 1983 we moved into 1984, to accommodate the ICPE Conference when it was moved from 1982 to 1983. So it has been proposed, and accepted, that the Committee should continue until new elections can be held at the next GIREP Seminar next year and your Committee will therefore continue to be, for one more year:

President: Arturo Loria, Istituto di Fisica dell'Università
Via Campi, 213/A - 41100 Modena (Italy)
Phone 059/372711.

Vicepresidents: Poul Black, Chelsea College-Bridges Place-
London SW6 4HR (U.K.)
Phone 01/7363401

George Marx, Dpt. of Atomic Physics-Roland Eötvös
University-Puskin Utca 5-Budapest 8
PB 327-II 1088 Hungary-Phone (361)131-843
Telex 22.54.67

Secretary: Brian E. Woolnough, Dpt. of Educational Studies,
The University- 15 Norham Gardens
Oxford OX2 6PY (U.K.)-Phone 0865/54121

Treasurer: Marisa Michelini, Istituto di Fisica dell'Università -
via Campi, 213/A-41100 Modena (Italy) Phone 059/361142.

The auditors will be:

Piet Lijnse, Rijksuniversiteit-3508 TA Utrecht -P.O.Box 80008
The Netherlands- Phone 09/3130531179 Telex 40048.

Uri Ganiel, Weizmann Institute-Rehovot (Israel) Telex 31900 WIX IL

2. GIREP '84, the IX Utrecht Seminar.

Our Dutch friends have used the word "Conference", instead of the traditional one "Seminar", and we keep to their choice.

Plans are now well under way, and fuller details are outlined in their leaflets. The Conference is to be held at Zeist, near Utrecht in the Netherlands, from 20-25 August 1984. Book the date now, it promises to be a very exciting and important Conference. The theme will be the Teaching and Learning of Mechanics, and various live issues relating to this fundamental aspect of physics teaching will be considered. In the last few years many have been rethinking: a) methods of teaching physics (what type of practical is most appropriate? how far can micro-computers enhance our teaching?, b) the type of physics we should teach (should it remain purely academic or should it be much more centred on its applications and its influence on the real world?), and c) the way that pupils learn, or fail to learn, their physics (how far is it possible, for clearly it is necessary, to take account of and build upon the prior knowledge that pupils bring with them into the physics lessons?).

The Utrecht Conference will enable us to focus on these issues through the topic of mechanics - a field in which there is a wealth of exemplar material. Those who are interested in attending and contributing to this Conference should contact Mrs. Jenny Andriese, Teacher Training and Educational Research Group, Physics Department, Rijksuniversiteit Utrecht, Postbus 80.008-3508 TA Utrecht, The Netherlands, Phone 09-3130531179, Telex 40048(FYLUT-NL), as soon as possible.

3. GIREP '86.

We have already started thinking towards the tenth GIREP Seminar in 1986, and have had a provisional offer from Professor Poul Thomsen to host this in Copenhagen. The suggested theme is Astronomy, Space and Cosmology. Members are invited to comment on this suggestion to any of the committee.

4. GIREP publications.

The position concerning the distribution of the proceedings of the various GIREP Seminars is that they are sent, free, to all who attend the Seminar and also to all members of GIREP who had paid their membership fee for the years both in which

the Conference took place and the proceedings were published. It sometimes happens that a member does not receive the publications to which he is entitled, and for this we apologize. He or she should write, at the addresses given above, for GIREP 81 'The Teaching of Nuclear Energy' to George Marx, for GIREP 79 'Physics Teaching, Oscillations and Waves' to Uri Ganiel, and for GIREP 77 'The role of the Laboratory in Physics Education' to Brian Woolnough, copy to A.Loria.

The announced book (260 pages) "The Education and Training of Physics Teachers Worldwide -A Survey- General Editor Brian Davies" has been published by John Murray Ltd, 50 Albemarle Street, London W1X 4BD. The cost is £ 4.95 but a copy is available for GIREP members directly from the publisher at the price of £ 2.72 (40% reduction!).

5. Special bonuses.

As a special bonus to those who have paid their 1982 fees, and to 1983 new members we enclose a copy of the proceedings of the ICPE Conference in Trieste, 1980; a copy will be sent also to people joining GIREP henceforth up to the end of 1984.

We are aware that some members already own a copy of the Trieste proceedings: in this case we would invite them to present ours to somebody who might be interested in that Conference and/or in GIREP.

6. Fees.

The fee is still \$10.

The official Bank of GIREP remains:
Credit Suisse, 1002 Lausanne-Switzerland-Account N.376089-91, where fees should be paid in SFr at the rate of exchange of the day: obviously bank and mail charges must be paid by the sender.

Fees from the U.K. can be paid directly in pounds to Brian Woolnough, and fees from Italy directly in Lire to Marisa Michellini: again at the rate of exchange of the day, with bank and mail charges paid by the sender.

Fees from countries where the above procedures are difficult or altogether impossible can be paid directly to George Marx after having agreed the procedure with him.

7. GIREP membership, and financial statement.

a) Membership.

Number of Nations represented in GIREP and membership paid of the various years at the dates shown.

DATE	NUMBER OF NATIONS	FEES PAID								
		1979	1980	1981	1982	1983	1984	1985	1986	1987
7.5.80	45	118	109	6	2	1	1			
25.7.81	51	183	186	110	33	5	2			
13.5.83	53	194	212	241	183	108	30	9	6	3

New members from 1979 to 1983: 35
 Members lost from 1979 to 1983: 5.

b) Financial Statement.

As you know, the GIREP funds are kept in three places:
 A) Credit Suisse; B) Banca Popolare di Modena (Italy); C) Barclays Bank PLC-Oxford (U.K.).

A) Credit Suisse (SFr).

	CREDIT	DEBIT
1.Assets brought forward from previous balance(31.7.81)	17,080.95	
2.Fees received	2,847.39	
3.UNESCO Contribution to the Balatonfüred Seminar: VIII GIREP Seminar 1981	976.25	
4.Balatonfüred Seminar expenses		13,625.85
5.Credited to Secretary for Newsletter Expenses		1,747.60
6.GIREP contribution to the Survey edited by B.Davies		1,259.80
7.Bank charges		78.24
		<hr/>
TOTAL	20,904.59	16,711.49

Carried forward at 13.5.83 SFr. 4,193.10

B) Banca Popolare di Modena (Lire).

	CREDIT	DEBIT
1.Assets brought forward (31.7.81)	1,065,625	
2.Fees received	2,951,754	
3.Balatonfüred Seminar expenses		294,884
4.Postage, Stationery, photocopies, segretarial expenses		760,800
5.Bank and exchange charges		7,000
6.Interest	548,393	
		<hr/>
TOTAL	4,565,772	1,062,684

Carried forward at 13.5.83 Lire 3,503,088.

C) Barclays Bank PLC (Sterling).

	CREDIT	DEBIT
1.Brought forward (4.7.81)	247.25	
2.Printing of Newsletter No.9		28.36
3.Postage and secretarial to OUDES		65.22
4.From GIREP 81 account for speaker's	140.00	
5.Expenses(BEW vice JLL) Air London/Bud.		129.00
6.Credit from Credit Suisse to Oxford	500.00	
7.Postage for Newsletter No.9 etc.		76.82
8.Printing of Newsletter No.10		75.76
9.Secretarial, postage and phone to OUDES re Newsletter No.10 etc.		70.17
10.Secretary(BEW)expenses for committee meeting Hungary. Air London/Budapest		142.50
11.Additional expenses re above, hotel,train.		25.70
12.To Brian Davies for copies of the Survey send out for GIKEP		49.00
13.To J.Murray for additional copies of the Survey, and postage, to contributors.		115.10
14.Sale of 5 Oxford conference book	20.00	
15.Membership fees from 71 member-years	380.10	
16.Membership in dollars(\$225):22.5m-yrs	150.00	
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	TOTALS	1,437.35 777.63

Carried forward at 30.7.83 £ 659.72

8. GIREP Network.

It has been suggested that members might like to know of other members who have interests and researches in similar fields to their own. It would be useful to share experiences and ideas, perhaps before they have reached the publication stage. It would be helpful too for members who are considering entering a new field to be able to correspond with others already working in the field. To this end, members are asked to complete the enclosed 'Interests' sheet and return it to Brian Woolnough. If there is sufficient response to make it viable, he will then put together a composite address list, with members interests noted, and circulate it to all members with the next Newsletter.

9. A plea for help.

Newsletters normally consist of the dissemination of news, but they could also be used for a sharing of ideas and a debating of issues. If any member would like to write a provocative note or letter for this Newsletter we would be happy to consider publishing it for wider discussion. E.g. we are aware that there is currently a demand in the U.K. for 'graded tests in science', but very little seems to have been

done in this field. What is wanted is a method of assessing achievement in science at various levels for 11-16 year old pupils. The assessments should be criteria referenced, non-discriminating, motivational for the pupils, informative for the employers, and relatively easy to be administered in the schools by the teachers. If anyone has experience of such graded tests in science, please communicate with Brian Woolnough.

10. Snippets.

Did you know that:

- a) an Austrian ski-making firm has one layer of bimetallic element running the whole length of the ski so that as snow conditions change with temperature the curve of the ski changes appropriately;
- b) agricultural scientists are using electrostatic fields to spray the crops efficiently, by raising the spray to a high potential when the insecticide is directed into the, earthed, crops;
- c) tortoises need to run at approximately 80 miles per hour before the Bernoulli effect causes them to 'lift off'?

These are just a few of the fascinating items of physics fun, information and interest included in copies of Snippets which have recently been produced for school pupils by the Institute of Physics, 47 Belgrave Square, London. If anyone would like to obtain a free copy of Snippets, possibly with a view to publishing something similar in their own country, they should write to Brian Davies, at the Institute of Physics, who is the Editor of Snippets.

11. European Journal of Science Education.

We have been informed by the publishers that members of GIREP may receive copies of the European Journal of Science Education at a personal reduced rate (reduced by 50%) of £17 per year, or \$46 or DM80. Anyone interested in taking advantage of this offer, or in receiving a sample copy, should contact Richard Steele, Taylor and Francis Ltd., Rankine Rd., Basingstoke, RG24 0PR, U.K.

12. Quantum Mechanics, and Disorder, in Schools.

Some members will be familiar with the splendid collections of essays that George Marx has put together on the themes of Quantum Mechanics in the School (in 1981 for the 80th Anniversary of Heisenberg's Birth) and of Disorder in Schools (in 1983 for a seminar on the teaching of Entropy). The articles, written

by experts in the field, many of them GIREP members, provide two authoritative collections representing the 'state of the art' emphasizing recent developments in these fields. They put together articles that you've heard about, talks you missed, and teaching schemes proposed but which you cannot quite lay your hands on! George Marx has most generously made some surplus copies of these available to GIREP members. Any GIREP member who has not got a copy and would like one, please write direct to Brian Woolnough, who will send copies as requested, without charge.

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We announce with deep regret the death of Prof. Søren Sikiær- Past President and honorary member- and of Prof. Mark Zemansky- honorary member.

R E M I N D E R S

- May we remind you that the elections for the new Committee will take place next August and that, according to the Statutes, only members up-to-date with their 1984 fee can vote.

As we must circulate in time the list of members would you please see to the payments for 1983 and 1984 at your earliest convenience.

- If there are any errors with the addresses or with the membership dates please notify the Treasurer.