NEWSLETTER

Mars / March 1984

Please send items to / Envoyer toute information à : Louis Charbonneau,
Département de mathématiques et d'informatique, U.Q.A.M., C.P. 8888,
succ. A, Montréal, Qué., H3C 3P8.

84.1 ANNUAL MEETING / CONGRES ANNUEL

UNIVERSITY OF GUELPH

June 7 - 8 juin
1984

CALL FOR PAPERS / APPEL DE COMMUNICATIONS

The programme committee is anxious to have a full and varied programme for
papers presented at our Annual Meeting. Papers which present the results of
research into the history of mathematics will be welcome. But this year,
papers in the philosophy of mathematics, papers which link history and
philosophy, and, in particular, papers which relate history or philosophy
to the teaching of mathematics would be particularly welcome.

To commemorate the 300th anniversary of Leibnitz' first paper on calculus
in 1683, there will be a special session on Leibnitz and the History of the
Calculus, organized by Prof. H.N. Gupta of the University of Regina. Papers
on Leibnitz, on the history of calculus, and particularly on the use of
history to enrich the teaching of calculus, are solicited. If you feel that
your paper would be appropriate for this session, mark your abstract
"Special Session - Leibnitz" and it will be forworded by the organizing
committee to Prof. Gupta.

The committee has already received more than half a dozen titles. Have you
send yours ?

Send all title with the abstract before April 7th. Abstracts received after
April 7th will be considered if they can fitted into the programme.

Send your title and your abstract to:

                    Prof. John W. Berry
                    Department of Mathematics
                    University fo Manitoba
                    Winnipeg, Man.
                    R3T 2N2

NOTA: As usual, we expect to receive a travel grant from SSHRC which will
allow us to help you covering your expenses.

84.2 OTHER MEETINGS / AUTRES RENCONTRES

Canadian Mathematics Education Study Group
  Groupe canadien d'étude en didactique des mathématiques

The Group will held its Eighth Annual Meeting at the University of
Waterloo, Waterloo, Ont., from the 2nd to the 6th of June 1984. Invited
speakers will be Dr. Allan Bishop, form Cambridge University, and Dr.Leon
Henkin, from the University of California at Berkeley. Working groups will

be on Logo and the mathematics curriculum, the impact of research and technology on school algebra curricula, and epistemology and mathematics education.

For more informations write to Bernard Hodgson, Sec.-Treas., CMESG, Département de mathématiques, Université Laval, Québec, Qué., G1K 7P4.

§ International Study Group On the Relations Between History and Pedagogy of Mathematics

ISGHPM will meet April 25-27 immediately prior to the National Coucnil of Teachers of Mathematics (NCTM) annual meeting in San Francisco, just as in Toronto in 1982 and Detroit in 1983. The meeting will be at the San Francisco University High School, Monday afternoon through Wednesday morning; the NCTM sessions begin Wednesday morning.

For more informations, contact Prof. V.F. Rickey, Dept of Mathematics and Statistics, Bowling Green State University, Bowling Green, Ohio 43403.

§ National Council of Teachers of Mathematics

In San Francisco, April 26-28 1984. Contact: N.C.T.M., 1906 Association Dr. Reston, VA 22091.

§ Fifth International Congress on Mathematical Education (ICME 5)

In Adelaide, Australia, August 24-30, contact: ICME 5 Travel Planners, P.O. Box 32366, San Antonio, Texas 78216 (512/341-8131).

§ Conference on Renaissance Mathematics

The British Society for the History of Mathematics in conjunction with The Open University is organizing a conference on Renaissance mathematics to be held September 26 to 30, 1984. Conference themes include Pedagogic Aspects of Renaissance Mathematics; National Traditions in Mathematics; The Vernacular Tradition; The Work of Nicholas Chuquet; Mathematics and Other Sciences; Mathematics and Society. Workshop sessions are planned. English and French are the languages of the conference.

Enquiries should be directed to Dr. Cynthia Hay, Conference Secretary, Faculty of Mathematics, The Open University, Walton Hall, Milton Keynes MK7 6AA, England.

§ Symposium international sur les polynomes orthogonaux et leurs applications.

Pour célébrer le 150ième anniversaire de la naissance de E.N. Laguerre, né et mort à Bar-le-Duc (1834-1886), un symposium international sur les polynomes orthogonaux et leurs applications se tiendra à Bar-le-Duc (250 km à l'est de Paris) du 15 au 18 octobre 1984. Quoiqu'étant un symposium mathématique, les organisateurs espèrent que de nombreuses communications porteront sur l'histoire de polynomes orthogonaux. J. Dieudonné donnera une conférence sur "L'oeuvre mathématique de Laguerre". Les communications seront de 20 minutes suivies de 5 minutes de discussions.
Vous pouvez envoyer le titre ainsi que le résumé de votre communication, avant le 15 avril, à :

André Draux
U.E.R. I.E.E.A. - M3
Université de Lille I
59655 VILLENEUVE D'ASCQ Cedex
FRANCE

§ History of Science Society

In Chicago, December 27-30, contact: HSS, 215 S. 34th St/D6, Univ. Penn., Philadelphia, Penn. 19104.

84.3 COMPUTERS AND THE HUMANITIES:
SPECIAL ISSUE ON CANADIAN ACTIVITIES
NUMERO SPECIAL SUR LES ACTIVITES CANADIENNES

At the invitation of Professor Joseph Raben, editor of Computers and the Humanities, one of the 1985 numbers of this journal will be a special issue devoted to activities in Canada. The guest editor will be Paul Bratley of the Université de Montréal. Papers for this special issue are invited from colleagues working in Canada on computing and the humanities, and from colleagues elsewhere whose work has a particular bearing on Canadian studies.

All submitted papers will be referreed before acceptance. Potential authors are invited to consult the "Information for Contributors" inside the back cover of a current issue of the journal. In particular, papers are acceptable in either English or French.

Please submit possible contirbutions to this special issue before 30th June 1984" to the guest editor:

> Paul Bratley
> Département d'informatique et de r.o.
> Université de Montréal
> C.P. 6128, Succ. A
> MONTREAL, Qué.
> H3C 3J7

A l'invitation du professeur Joseph Raben, éditeur de Computers and the Humanities, une des premières livraisons de l'année 1985 de cette revue sera consacrée aux activités canadiennes. L'éditeur de ce numéro spécial sera Paul Bratley de l'Université de Montréal. Les collègues travaillant au Canada dans le domaine des application de l'informatique aux sciences humaines, ainsi que les collègues à l'étranger dont le travail revet une importance particulière pour le études canadiennes, sont invités à soumettre des articles en vue de leur publication dans cette livraison spécial.

Les articles reçus seront examinés par un comité de lecture avant d'etre acceptés. Les auteurs éventuels sont invités à consulter la rubrique "Information for Contributors" d'un numéro récent de la revue. En particulier, ces contributions seront acceptées en français ou en anglais.

Veuillez envoyer les communications destinées à ce numéro spécial avant le 30 juin 1984 à:

> Paul Bratley
> Département d'informatique et de r.o.
> Université de Montréal
> C.P. 6128, Succ. A
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84.4 MESSAGE FROM THE PRESIDENT

A- SSHRC and CFH

Viviane Launey, the Executive Director of the Canadian Federation of Humanities is a tireless organizer who has been keeping the member organizations well informed about a considerable amount of activity which has been going on, particularly with respect to funding. I have recently received a long memorandum from her which touches on the following issues:

(1) Funding of CFH by SSHRC *

About 65% of the operating costs of CFH are provided by SSHRC. In 1982, citing the inappropriateness of SSHRC funding a body which carries out lobbies to government, SSHRC council passed a motion to phase out its financial support of CFH. The reason is ironic, since

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* CFH : Canadian Federation of Humanities
  SSHRC : Social Sciences and Humanities Research Council.

CFH had participated, at the behest of SSHRC, in an appproach to government to increase the grant to SSHRC. According to Launay, this was the first time CFH had carried out any overt lobbying. In response to the dismay at SSHRC's motion, SSHRC Council has now decided to maintain its grant to CFH at the current level.

CFH maintains a staff of four fulltime persons and has a budget of $312,575 for 1982-83. Already, some CFH committees connot function for lack of money and the Federation will have difficulty meeting salary increases.

(2) Administrative and Travel Grants from SSHRC

Since 1981, SSHRC has been making a block grant to CFH, which has then distributed money to its member organizations according to an equitable formula for administration and travel. This schemes, which is widely supported by the organizations, is to run until March 1984. In 1982, without prior notice, SSHRC announced that it was going to replace this scheme by one in which all learned societies would have to apply directly to SSHRC for funds in a "competition". Again this met with considerable resistance, in part because it would be impossible to allow societies to plan ahead effectively. This led to a revision of the programme as fellows:

> (a) grants will be continued into 1984-1985 for those supported in the current year;
> (b) when the system is in full swing, each society will be reevaluated each three years;
> (c) eligibility criteria are published, basically that the societies receiving support have been active for at least three years;
> (d) societies receiving support will have had to operated in accordance with their consitutions and maintained a satisfactory record of financial administration;
> (e) there will be a funding formula: $500 plus $13 per member up to 850 members; it is not clear whether this applies to travel or administrative grants, or both together. Ther is a condition that at least half of a society's administrative costs should be met by dues.
> (f) short term arrangements are made, financially and administratively, to phase in the new regime.
> (g) additional grants of $500 are available to groups of societies.

(3) SSHRC's New Five-Year Plan

SSHRC announced its priorities over the next five years: independent research, fellowships for young scholars, library support, national comunications, aid to small universities and introduction of a programme of national research institutes. The last is not likely to proceed very far. Supported by a document on the humanities in Canada prepared by CFH, he has yet to be finally approved by the government.

For 1984-85, SSHRC has requested $8 millions, and fears it may receive only half that.

(4) Research Caucuses in the Humanities

These are groups at various universities formed to improve lobbying effectiveness and public awareness.

(5) Humanists on Panel and Council

Following representations to increase the number of humanists on SSHRC, five humanists have been appointed.

I would be happy to send any of you a copy of the whole memorandum. There is quite a lot of supporting material which I will be happy to show you at Guelph.

Wesley Stevens is our representative at the Canadian Federation of Humanities.

B - PR'SMA

PRISMA is the union of three societies, brough into being on June 8, 1982:

    Canadian Society for History of Medecine
    Canadian Society for History and Philosophy of Science
    Canadian Society for History and Philosophy of Mathematics

Our representative to this union is Louis Charbonneau. The current president is Pat Paterson of the first society named above.

84.5 NOTES

FREDERIC RIESZ (1880-1956)
AND HIS INFLUENCE ON THE DEVELOPMENT OF
FONCTIONAL ANALYSIS

by Prof. E. Kreyszig
Dept. Math., Univ. of Windsor

The evolution of fonctional analysis began with a twenty-year period 1887-1906, during which the leading ideas started to develop gradually from problems and methods of classical analysis, 1887 being the year of Volterra's first paper on special functionals ("functions of curves") and 1906 the year in which Fréchet's thesis on metric spaces and Hilbert's fourth paper on integral equations appeared. From this year on, and continuing over a long period of almost 35 years, Frédéric Riesz participated actively in the development by several fundamental discoveries, playing a unique role among the leaders in the field (Banach, Fréchet, Hadamard, Hahn, Hilbert, von Neumann, Volterra, etc.) inasmuch as he was in close contact with both centers, Gottingen and Paris. Although he taught highschool at Leutshau (7000 inhabitants, no library!) until 1908 and in Budapest until 1912, some of his greatest accomplisments were achieved during that time. In 1906, he wrote a paper on problems in set-theoretical topology (then still in statu nascendi) which had profound influence on Hausdorff and others. A year later he discovered the famous Riesz-Fischer theorem, a completely unsuspected bridge between functional analysis and Lebesgue's theory of measure and integration. Making a first application of the Stieltjes integral, in 1909 he gave a representation of bounded linear functionals on C a, b ; this work was of greatest influence on the further development of general theory of integration, by Radon and others. In 1910 he defined the spaces L a, b for the first time and developed their duality theory. In his book of 1913 on systems of linear equations in infinitely many unknows he reformulated Hilbert's spectral theory, replacing Hilbert's quadratic forms by operators and thereby giving it the final form which is in use until the present. In 1918 he published his fundamental work on compart operators, which included Fredholm's famous theory of integral equations in an abstract form. Riesz also participated later in the development of the theory of unbounded linear operators as initiated by von Neumann as a mathematical tool in the foundation of quantum mechanics.

(I would like to thank Prof. Kreyszig for inaugurating this new regular chronique. The above text is a summary of paper he presented in Vancouver, last June, at our Annual Meeting. NOTES is open to everybody. Here will be published summaries of papers, presentation of reaserch projets, thesis, opinions, etc. L.C.)