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ICIAM

The ICIAM Dianoia
Vol. 2, No. 2, April 2014

Cover illustration: Jennings Hall at The Ohio State University, site of the ICIAM Board meeting in May 2014, adorned with leaves from the Ohio Buckeye (*Aesculus glabra*), state tree of Ohio.

Subscribing to the ICIAM Newsletter

The ICIAM Newsletter appears quarterly, in electronic form, in January, April, July and October. Issues are posted on the ICIAM Web Page at `www.iciam.org/News`. If you would like to be notified by e-mail when a new issue is available, please subscribe to the Newsletter. There is no charge for subscriptions. To subscribe or unsubscribe, visit the webpage given above, or go directly to `groups.google.com/group/iciam-news`.

Thirty years of SMAI: 1983–2013

by THIERRY HORSIN

Last year was the 30th birthday of SMAI, the French learned society dedicated to "Mathématiques Appliquées et Industrielles". The first thing to notice in this name is that there is no reference to France in it and trying to give a reason could probably lead to a serious historical debate.

The most likely initial spark leading to the existence of SMAI is a consequence of a French political decision concerning the community of academics, precisely the equivalent of what is now named the CNU[1]. This committee, since it is a committee, was changed in 1983 and gathered the whole community of mathematicians into one unique "section"[2], whereas before applied mathematicians were bound together with computer scientists.

Then arose, probably under some tension, the idea to promote applied mathematics in this quite large community. Different meetings at the IHP eventually led to the constitution of SMAI. The first president was R. Temam, the first secretary and the first treasurer were P. Lascaux and J.-P. Puel (whom I asked to tell me about the history of SMAI in order to write these lines). Of course, famous mathematicians gathered for these birth councils: J.-L. Lions and R. Dautray were the first benefactors; statutes were written by F. Murat and J.-P. Puel, secretary staff from CMAP at the Ecole Polytechnique were proposed by J-C. Nédélec (who became the second president three years later) to give some help, P. A. Raviart and many others were there.

Let us mention that there already existed the two learned societies SMF ("Société Mathématique de France"), and SFdS ("Société Française de Statistiques").

It appeared simpler and probably necessary to create this independent piece. Mechanics had also at least its own society. Abroad in Europe, there existed also GAMM, which, at that moment, was mainly turned toward Eastern and Central Europe. But SMAI was probably the only society in Europe to include also senior mathematicians in the area of probability. One group, the so-called GAMNI (devoted to engineering numerical recipes), existed before SMAI and found a natural place inside SMAI later, and is still very active.

About 5,000 letters were sent to the whole worldwide mathematical community announcing the birth of SMAI. Then followed the "congrès d'analyse numérique" of 1983. The official first member of SMAI was probably C. Bardos, who enrolled during this conference. This encounter between SMAI and the "congrès d'analyse numérique" was the prelude to a formal collaboration. The event now called CANUM (the acronym was decided after one session in Lyon under the name CANU[3] and one session in Ardèche under the name CANARD[4]) became then an official conference organized by SMAI, with a scientific committee. For some years now, CANUM takes place every year, and every two years is included in the SMAI Congress.

In 1984, during an informal meeting at the ICIAM Council in Seattle, with F. Chatelin, R. Glowinski, G. Golub and J.-P. Puel, a proposition was raised: SMAI would organize the following ICIAM in Paris. Mostly prepared by P. Lascaux with the idea that it could be done in the very center of Paris, this event finally took place in 1987 at "La Villette"[5] and welcomed more than 1500 par-

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[1] In order to simplify, CNU stands for "comité national d'évaluation" and is an evaluation committee constituted by peers.

[2] "Section" is used in France, for the CNU, as a group of academics of same speciality whose duty is to evaluate their peers. Nowadays 25 and 26 are the two CNU sections dedicated to mathematics.

[3] CANUT is a french word referring to silk-weavers toiling hard in a district of Lyon.

[4] Literally 'duck'. Ardèche is a French county and thus the "Congrès d'Analyse Numérique en ARDèche".

[5] Nowadays, an important place for music and expositions, site of "La cité des sciences et de l'industrie", formerly the "La Vilette" abattoirs and the cattle market up until the 50s.

ticipants. The president of the congress was R. Temam.

And then the life of this learned society went on. Among important things developed by SMAI, one may cite industrial mathematics meetings on the initiative of Y. Maday, the 'mathematics and applications' series created by J. M. Ghidaglia, the ECOMAS conference of the GAMNI group, the CEMRACS[6], and the different prizes, among which is the Blaise Pascal prize co-sponsored by the French Academy of Sciences.

Of course, it was natural that the conferences dedicated to J. L. Lions, as well as the subsequent publications, were organized under the supervision of the SMAI.

Currently, computers help to manage all these tasks and SMAI has owned its own domain and servers for the past 20 years. With this it has been possible to create the ESAIM publications (ESAIM COCV, ESAIM PS, ESAIM PROC, also continuing M^2AN). All the problems stemming from the publication process therefore have become SMAI's concerns too: plagiarism, subscription fees, etc.

SMAI has also consistently promoted employment of young researchers. Every year a position promotion operation is organized to facilitate enrolment, with a website collecting data about new positions (in France, but also abroad). With the help of SFdS and AMIES[7] a math job fair is organized, mainly for graduate students, involving about 80 booths, to welcome about 1500 people. Let us mention also the maths-industry days, gathering young and senior researchers around industrial problems.

Maths in education is also a main concern of SMAI, as well as its partners in France (SMF, SFdS and ROADEF[8]), to the point that, in addition to an education office in SMAI, half of the 30th birthday celebration last November, organized under G. Allaire, the current president of SMAI, was dedicated to MOOC. It is rather difficult to describe the numerous feelings that writing this single acronym provokes and provoked during that day. Hitherto, though it is difficult to say exactly when they achieved so much attention, MOOCs were probably considered as some kind of advertising spots. But they have become so important that many famous teaching institutions in Europe (Ecole Polytechnique de Lausanne is probably the pioneer in Europe at least for MOOCs in French) have decided to venture into developing their own MOOCs. An impression that appears to be shared among many participants is the difficulty in creating some flow between the teacher and the students. All the sweat that you give on a blackboard with a piece of chalk can no longer tire you while doing a MOOC. Some institutions, like mine for example, are currently facing this problem of lack of communication with online teaching, and it is a real challenge to overcome this difficulty. Not only thinking about the evaluation of people attending MOOCs— self evaluation is the only easy way up until now—one has also to think about some individual meetings (not so common in France until recent years) in many specific ways (to be defined or re-invented) in order to answer questions, help students, and even help them choosing their future according to what they expect from these MOOCs. Some colleagues shoot films (very impressive, such as in one of the Lille universities), some record explanations, some use videoconferences, some produce PDFs that are works of art. Strikingly, it is almost surely true that no instructor really feels good without watching the expression of some faces just a few meters away. It was interesting to watch a film, during this birthday party, on learning how to tie one's shoes. It was also a masterpiece, but the audience was (probably) used to doing so? Could we imagine making films to be shown to babies in order to learn walking? One may think of von Neumann's sentence, "In mathematics you don't understand things. You just get used to them", which is probably quite difficult to connect with the velocity of internet learning.

Of course, one could imagine returning to or keeping traditional courses—and they are still, fortunately in my opinion, the common way. The full range of possibilities may be impossible to imagine, but MOOCs (when broadly distributed) can be used very surprisingly. S. Méléard was very puzzled, while creating probably the first MOOC in France (at least in maths) at the Ecole Polytechnique in Palaiseau, to discover that among the logs of connections, lots of student were using mobile phones in very isolated areas of countries of the third world . . . which surely is, whatever opinions one may have about MOOCs, something universally positive?

For those intrigued by these new ideas, videos of the sessions are available at `smai . emath . fr / smai2013 / smai30ans`.

Thierry Horsin is a full professor at the Conservatoire National des Arts et Métiers (CNAM) in Paris France, an old institution dedicated to courses for adults and mainly interested in connecting science and industry. His main field of research is the control of PDEs. He is a corresponding member of the EMS.

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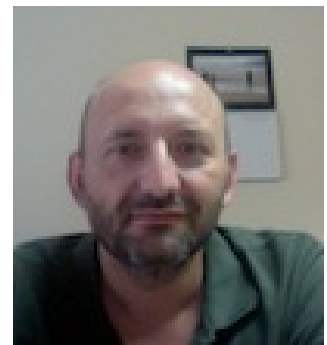
[6] A summer-camp-like event dedicated to numerical analysis.

[7] AMIES is a cluster of excellence devoted to the relationship between mathematics, industry and society.

[8] French learned society for operational research.

ICIAM 2015 Call for Mini-symposia

by Scientific Program Committee of ICIAM 2015

Mini-symposia

Each mini-symposium consists of at least four 25-minute presentations, with an additional five minutes for discussion after each presentation. In general, mini-symposia will be scheduled as four-presentation sessions. Multiple-session mini-symposia may be submitted. Preference will be given to mini-symposia that list all speakers and talk titles. Prospective mini-symposium organizers are asked to submit a proposal consisting of a title, a description (not to exceed 100 words), and a list of speakers and titles of their presentations.

It is recommended that a mini-symposium organizer make the first presentation. Each mini-symposium speaker should submit an abstract of at most 75 words. The organizing committee will referee mini-symposium proposals. The number of mini-symposia may be limited to retain an acceptable level of parallelism in the conference sessions. Participants are normally limited to presenting two talks at most during ICIAM in order to maximize the opportunity for all participants to speak. If you are invited to speak in more than one mini-symposium, we suggest you use the opportunity to nominate a collaborator to present your work.

To ensure balance, ICIAM prefers that a single individual not be the organizer of more than one mini-symposium. In addition, ICIAM discourages mini-symposia in which most of the speakers come from the same organization or if all co-authors of the papers being presented in a mini-symposium are from the same organization.

To encourage the submission of more and high quality mini-symposia, a limited number of mini-symposia will be selected by the organizing committee according to the number and diversity of speakers as well as the significance of the topics, and the registration fee of one speaker of these selected mini-symposia will be waived.

Industrial Mini-symposia

An industrial mini-symposium is quite the same as a mini-symposium in form. The subject must be relevant to real industry, and there should be at least one speaker coming from industry.

Prospective industrial mini-symposium organizers are asked to submit a proposal consisting of a title, a description (not to exceed 200 words), and a list of speakers and titles of their presentations. Each industrial mini-symposium speaker should submit a 75-word abstract. The organizing committee will referee mini-symposium proposals.

To encourage this format, the organizing committee will provide financial support to organizers of accepted industrial mini-symposia.

Important Dates

Mini-symposia
March 30, 2014: Mini-symposium online submission opens;
August 30, 2014: Early decisions announced for mini-symposium proposals;
September 30, 2014: Submission deadline for mini-symposium proposals;
October 30, 2014: Final decisions announced for mini-symposium proposals;
December 30, 2014: Submission deadline for accepted mini-symposium abstracts.

Contributed Papers
July 30, 2014: Contributed papers online submission opens;
December 30, 2014: Submission deadline for contributed paper abstracts.

Posters
July 30, 2014: Poster online submission opens;
April 30, 2015: Submission deadline for contributed poster abstracts.

Conference Registration

Early Bird Registration: January 1–April 30, 2015;
Regular Registration: May 1–July 31, 2015;
Late and On-site Registration: August 1–August 10, 2015.

Abel Prize 2014 Press Release

Russian mathematician receives 2014 Abel Prize

The Norwegian Academy of Science and Letters has decided to award the Abel Prize for 2014 to Yakov G. Sinai (78) of Princeton University, USA, and the Landau Institute for Theoretical Physics, Russian Academy of Sciences, "*for his fundamental contributions to dynamical systems, ergodic theory, and mathematical physics*".

The President of the Norwegian Academy of Science and Letters, Nils Chr. Stenseth, announced the winner of the 2014 Abel Prize at the Academy in Oslo today, 26 March. Yakov G. Sinai will receive the Abel Prize from His Royal Highness The Crown Prince at an award ceremony in Oslo on 20 May. The Abel Prize recognizes contributions of extraordinary depth and influence to the mathematical sciences and has been awarded annually since 2003. It carries a cash award of NOK 6,000,000 (about EUR 750,000 or USD 1 million). Yakov Sinai is one of the most influential mathematicians of the twentieth century. He has achieved numerous groundbreaking results in the theory of dynamical systems, in mathematical physics and in probability theory. Many mathematical results are named after him, including Kolmogorov-Sinai entropy, Sinai's billiards, Sinai's random walk, Sinai-Ruelle-Bowen measures, and Pirogov-Sinai theory.

Sinai is highly respected in both physics and mathematics communities as the major architect of the most bridges connecting the world of deterministic (dynamical) systems with the world of probabilistic (stochastic) systems. During the past half-century Yakov Sinai has written more than 250 research papers and a number of books. He has supervised more than 50 Ph.D.-students.

Yakov Sinai has trained and influenced a generation of leading specialists in his research fields. Much of his research has become a standard toolbox for mathematical physicists. The Abel Committee says, "His works had and continue to have a broad and profound impact on mathematics and physics, as well as on the ever-fruitful interaction between these two fields."

Awards and honours

Yakov G. Sinai has received many distinguished international awards. In 2013 he was awarded the Leroy P. Steele Prize for Lifetime Achievement from the American Mathematical Society. Other awards include the Wolf Prize in Mathematics (1997), the Nemmers Prize in Mathematics (2002), the Henri Poincaré Prize from the International Association of Mathematical Physics (2009) and the Dobrushin International Prize from the Institute of Information Transmission of the Russian Academy of Sciences (2009).

Many mathematical societies and academies have elected Sinai to membership or honorary membership: the American Academy of Arts and Sciences (1983), the Russian Academy of Sciences (1991), the London Mathematical Society (1992), the Hungarian Academy of Sciences (1993), the United States National Academy of Sciences (1999), the Brazilian Academy of Sciences (2000), the Academia Europaea (2008), the Polish Academy of Sciences (2009) and the Royal Society of London (2009).

The Abel Prize: The prize is awarded by the Norwegian Academy of Science and Letters. The choice of the Abel Laureate is based on the recommendation of the Abel Committee, which is composed of five internationally recognized mathematicians. The Abel Prize and associated events are funded by the Norwegian Government.

For more information about the laureate, his achievements and the Abel Prize, please consult the Abel Prize website www.abelprize.no

2016 CIMPA Research Schools Call for Projects

Proposals in applied mathematics or related to applications of mathematics are especially welcome.

Proposals in the most mathematically or economically deprived areas are encouraged and will be given priority.

The aim of the International Centre for Pure and Applied Mathematics (CIMPA) is to promote international cooperation in higher education and research in mathematics and their interactions, as well as related subjects, for the benefit of developing countries. Our action concentrates at the places where mathematics emerges and develops, and where a research project is possible.

CIMPA is a UNESCO centre based in Nice, financed by France, Switzerland, Norway and Spain, counting with the support of the University of Nice Sophia-Antipolis and the University of Montpellier 2.

We organize research schools of about two weeks in developing countries. The purpose of these schools is to contribute to the research training of the new generation of mathematicians, women and men.

The Scientific Council and the Steering Council of CIMPA evaluate the projects and select the best and most appropriate. The research schools are organized locally with the help of CIMPA. CIMPA's financial contribution is essentially for young mathematicians from neighbouring countries to be able to attend the research school. CIMPA can help with obtaining funds from other sources. Additional and essential information can be found in the roadmap (available on the web site of CIMPA). You can also write to CIMPA for further information.

Research schools call for projects begins on
March 1st, 2014.
The deadline for a (non-mandatory) pre-proposal is
June 15, 2014.
The complete proposal is due
October 1, 2014.
The application form is available on the CIMPA website:
proposals.cimpa.info

ICSU and ICIAM

by Tom Mitsui

ICSU is the acronym of the International Council for Science, which is a non-governmental organisation with a global membership of national scientific bodies and International Scientific Unions and whose main Secretariat is based in Paris. Since ICSU's mission is to strengthen international science for the benefit of society, it is beneficial for ICIAM to have common activities with ICSU. In fact, ICIAM has been an International Scientific Associate of ICSU since April of 2011 and many of ICSU's activities connect with ICIAM's mission. However, we feel our engagement is not sufficient, and we hope to develop further ties. Therefore, at our Board Meeting of 2013, held in Beijing, we voted to form a committee which seeks closer links with ICSU; this committee will work to ensure that ICIAM obtains the maximum possible traction from its connection with ICSU. To start the functioning of the committee, which I chair, I will try to describe ICSU and its potential connections with ICIAM.

ICSU's stated mission is to mobilize the knowledge and resources of the international science community toward the following items.

- Identify and address major issues of importance to science and society.

- Facilitate interaction amongst scientists across all disciplines and from all countries.

- Promote the participation of all scientists—regardless of race, citizenship, language, political stance, or gender—in the international scientific endeavour.

- Provide independent, authoritative advice to stimulate constructive dialogue between the scientific community and governments, civil society, and the private sector.

Hence, as you see, the aims of ICIAM have much overlap with those of ICSU, and we believe that mathematics and its applications can underpin ICSU's mission firmly. (In fact, we believe that an understanding of the role of mathematics in science and technology is necessary for ICSU to operate effectively.) For instance, on February 14 ICSU released a report on a review it commissioned of CODATA, the Committee on Data for Science and Technology. CODATA is a committee of ICSU, and the review was carried out during the course of 2012–13. Since one of the goals of ICSU's Strategic Plan for 2006–2011 was a coordinated, global approach to data and information, such a report is

a quite natural response to a significant problem in modern society and in modern science. (You can refer to the report at `www.icsu.org/publications/reports-and-reviews/codata-review-2013`) We already know that analysis of big data is a challenging issue in mathematical sciences, and, in fact, many presentations have focused on this issue in our recent ICIAM congresses. Thus we shall be able to contribute to the issue through ICSU as well.

On October 26, 2012 ICSU issued a communique concerning the six scientists in the L'Aquila case. As you might remember, they were found guilty of manslaughter and sentenced to six year prison terms because of their role in providing scientific advice prior to the earthquake in L'Aquila, Italy, in 2009. In its statement, ICSU supported the scientists and expressed its opinion relating to science and its responsibility to society. In the face of this issue and ICSU's communique, ICIAM's members may wish to consider what, if anything, is our position on issues like this.

In another direction, we endorsed the Mathematics of Planet Earth 2013 initiative (Mαth) last year and the mathematical sciences community staged various events over the world. ICSU is now conducting a 10-year international research initiative, 'Future Earth', that will develop the knowledge needed for responding effectively to the risks and opportunities of global environmental change and for supporting transformation towards global sustainability in the coming decades. This initiative has many factors and developments in common with MPE 2013. In addition, ICSU has declared 2015 to be the International Year of Light and Light-based technologies (IYL2015). Light is of course a significant topic in physics. However, beginning with the work of Isaac Newton, it is also a topic in mathematics.

Hence, we can see many possible developments which are shared with ICSU. However, since ICSU is trying to cover the entire scope of science, the issues are broad and, in some cases, appear to be far from our interests. (I admit such issues may turn out to be closer in the future.) Yet, on the other hand, we also concern ourselves with problems (like scientific ethics and misconduct) that are faced by all scientific communities all over the world. For such problems, ICSU is capable of serving as a very strong channel for developing solutions.

The highest governing authority of ICSU is the General Assembly, made up of National and Scientific Union Members. Although ICIAM is not a Scientific Union Member (because we are are not constituted by the scientific academies of our respective countries; by contrast, the IMU is a member), we can send a non-voting member to the ICSU General Assembly and join its discussion. Thus, our influence is a bit restricted but we participate in carrying out ICSU's developments and responsibilities. The Headquarters as well as the Secretariat of ICSU bring many documents and information to its Scientific Associates through the internet. Also, ICSU often calls nominations for responsible positions (executive members, chairs of its committees, and so on) of ICSU. Can ICIAM see this as an opportunity and take advantage of it?

One other feature of ICSU is its National Scientific Members, which include the Académie des Sciences of France, Deutsche Forschungsgemeinschaft of Germany, Royal Society of the United Kingdom, the National Academy of Sciences of the United States, the Science Council of Japan and so on. This means that through ICSU we may be able to influence the National Scientific Members of our own countries. In particular, we can work to increase their awareness of the mathematical sciences.

All the circumstances surrounding ICSU suggest that we need to study the activities and information of ICSU carefully, and we should present our opinion actively in the cases which we should be involved with. For the reasons stated above, we are now opening a discussion about the engagement of ICIAM with ICSU. When we attain a consensus, we will make recommendations to the ICIAM community. I hope you will be interested in ICSU and that you will give information and opinions to the committee.

Final remark: You might wonder why the acronym of International Council for Science is ICSU. This has a historical background. The international organization, starting as 'International Council of Scientific Unions' in 1931 changed its name to the present one, but the acronym remained unchanged.

Taketomo (Tom) Mitsui is Professor Emeritus of Nagoya University, Nagoya, Japan. He received his doctoral degree from Kyoto University and has been engaged with several universities, the last one was Doshisha University, Kyoto, Japan. His main research interest is numerical analysis of ordinary differential equations and related topics. He is a Fellow of Japan Society for industrial and Applied Mathematics, and now serving ICIAM as Officer at large.

ICIAM 2015 Call for Proposals of Satellite Meetings

by Scientific Program Committee of ICIAM 2015

A satellite meeting is a meeting that takes place within a few weeks of ICIAM 2015 on a topic of interest to ICIAM attendees in a location that make it convenient for ICIAM participants to combine the events into a single trip. Satellite meetings have no official connection to ICIAM beyond a cross listing on the ICIAM 2015 webpage.

ICIAM does not provide any financial or other support for satellite meetings. Satellite meetings are organized and run by independent organizations or groups.

If you are organizing or considering organizing a meeting that would qualify as a satellite meeting, please contact Prof. Jianhua GUO at jhguo@nenu.edu.cn as soon as possible with the following information:

- Name of meeting
- Estimated number of participants
- Location
- Dates
- Conference webpage (if available)
- Other relevant information, such as scope or content of the meeting, organizing society or affiliate, etc.

Feel free to contact us with tentative information for meetings that are not fully planned. This information may be useful to others planning related meetings. A notification of acceptance/rejection will be sent to the contributors within two months after submission.

Important Dates

Satellite Conferences
January 1, 2014: Submission opens;
October 30, 2014: Submission Due.
Embedded Conferences
January 1, 2014: Submission opens;
October 30, 2014: Submission Due.

Conference Registration

January 1–April 30, 2015: Early Bird Registration;
May 1–July 31, 2015: Regular Registration;
August 1–August 10, 2015: Late & On-site Registration.

ICIAM, Past and Future: A Conversation Between Two Former Presidents - Part I

by Olavi Nevanlinna

This is part one of a two-part article. Part two will appear in the July issue of DIANOIA.

ON (Olavi Nevanlinna): Dear Rolf, as you know ICIAM President Barbara Keyfitz asked whether I could interview you now when your term as Past President is over. It was easy to say "yes", as I do have already some experience in this. And by this experience I knew that all I have to do is to guide a little bit, while you take care of talking, with your characteristic clear voice. So, this is "another interview" as I did interview you already 2006 [1]. That time we still met physically in Santiago de Compostela during breaks of IMU GA meeting, but now you are at home in Zurich, I am in our country home and we talk face to face using Skype. You have just come home from Hong Kong and after your retirement 2011 you have been additionally in Portugal, Denmark and I hear you are going to Brazil. And I am going to Cambridge, UK

for sabbatical.

RJ (Rolf Jeltsch): That is right, but let me remind that I have also interviewed you once, 1999 when you were elected as President of ICIAM, [2]. Of course our common history started much earlier than these interviews. We met in August 1976 in Dundee after I had moved to Bochum from North America. Our collaboration started when I received a fellowship from the Swiss National Science Foundation for 9 months. I went first to Stanford and you visited with your whole family and a question. The result was our first paper. Then I stayed for a beautiful summer with your family in Helsinki and the country place you are now. There we proved many theorems in our swimming trunks at the lake shore.

ON: You want to jump to 1999?

RJ: Indeed, 1999 was a crucial year for ICIAM as it changed its name and structure. I just read the detailed protocol by Alain Damlamian of the important CICIAM Group-Meeting in Paris 3 May 1999 and the protocol of the CICIAM board meeting in Edinburgh. I think it would be of interest to our community that these protocols are made public to everybody and people can read it. Many things written there are still important. Alain Damlamian became secretary and we are thankful for all the effort he has put in this office.

My personal strong involvement with ICIAM started when CICIAM changed to ICIAM. I just had become president of EMS. Hence I could propose at the Board Meeting in Pairs in 2000 that EMS and SMG become members. In addition I made a pre-bid for the ICIAM2007 to be held in Zurich. For you Olavi 1999 was the crucial year as you had been elected as president.

Can we switch our roles for a moment. After all, I only interviewed you when you began your term. So, which main points happened during your term?

ON: I stepped out from the ICIAM Office of Past President in October 2005 and you came in as President Elect. This fall it was your turn to step out and Maria Esteban began as President Elect. By the way, things do change: currently the President and President Elect of ICIAM and President of IMU are all women!

Main points, well. The first thing was to get a legal home for ICIAM and modify the By-Laws to meet the requirements of the home place. Also, there were already some ICIAM prizes, but the procedures had to be unified so that they really were ICIAM Prizes rather than individual prizes which were handed out during ICIAM congresses. And, I also remember very well the first time I was invited to IMU EC meeting to discuss mutual interests. That took place at IAS in Princeton while Jacob Palis was President and Phillip Griffiths the Secretary. Palis I have met later also in connection with ICSU matters.

I shall ask you about IMU and ICSU later but here is a question for you: how do you see the ICIAM Bylaws and governing structures, do they function the way they should?

RJ: Let me, however, first congratulate you and Ian Sloan and my successor Barbara Keyfitz and in fact all officers for the efforts to enlarge the ICIAM family. In the Board Meeting in 1999 14 member societies had been represented. When I took over the number had jumped to 31 and by now we have 38 members. This is of course a great success story but it also has implications on the way ICIAM operates.

Functioning of the governing structure? It is clear that the Board Meetings will become much larger. Up to now the largest Board Meeting was in Vancouver with 31 voting delegates and overall 50 persons in different functions attending. The smallest I ever attended was in 2002 in Tokyo with 9 voting representatives, 3 non-voting officers and one guest. As you see the attendance varies dramatically. This is partially true due to non-voting members which are not motivated to make a long and costly trip just for a Board Meeting. It is different when there is a Congress. For this reason I initiated the discussion to change the voting structure. However giving at least a vote for each member the large members would lose influence and hence needed more votes. This should be done without enlarging the number of persons attending. I am very happy that my successor Barbara Keyfitz was able to bring this process of change to a successful end.

When reading the two protocols from meetings in 1999 mentioned before I noted that postal voting was suggested. However during my tenure it was difficult to do a postal or electronic voting. One reason was that the contact between ICIAM and its members is often very unstable. Representatives are selected by the member society often only very shortly before the Board meeting. Changes of presidents are not reported. These problems will become worse the more members ICIAM has. Therefore even electronic votes have a tendency not to be representative.

Even Board Meetings are not always representative. As mentioned before attendance varies a lot. This is also a question of finances of certain Members in particular from developing countries. It would probably make more sense to do a board meeting only during the ICIAM congress or at least every odd year as important decisions have to be made in the years in the middle between two congresses. However if one does that one probably would have to give more power to an executive committee which should replace the officers and be more representative.

I am aware that serving ICIAM as president is an eight year commitment. In my case it was even longer as I was ICIAM07 congress director, which meant that I was overall involved from 2001 to 2013. As congress director one builds up one's own organization and I can say that ETH, its department of mathematics and the Seminar for Applied Mathematics and in addition the University Zurich and its mathematics department all supported me dramatically. However as president one does not really have good support. I could not ask my colleagues in the seminar for applied mathematics to give to me more than my usual share on secretarial help. Also I hesitated to ask my PhD students to devote more time for ICIAM administrative tasks. They had already devoted more than a usual amount for organizing the congress. I think it would make sense to have some permanent staff solely devoted to ICIAM as a society. EMS has almost a hundred corporate (57) and institutional (40) members. It would make sense that ICIAM gets a permanent site as IMU, Berlin, and EMS, Helsinki, with staff working only for ICIAM. As you know ICIAM is financially a weak society as it lives only on membership fees of societies which get their funds from individual members. In all our professionalism has not grown with the number of members.

ON: I have not followed closely these changes in ICIAM. Let me mention that I was involved in a working group for ICSU which prepared the current membership dues principles. This is a chronic problem with this kind of international organizations: everybody understands that these organizations are needed but it is very complicated to get them to function with small budgets based on membership dues only. And there is the problem how to balance the voting rights and the dues—can money decide? ICSU have now ten categories and the dues (for countries) are tied with GNP so that, if I simplify a little, the voting rights grow logarithmically with the dues.

RJ: Since membership fees are in general not paid by governments these have to be low. For example the Swiss Mathematical Society pays for ICIAM this year only 175 USD. Our change had been pragmatic. We doubled the number of votes of the societies which had already a vote and gave the non voting members one vote. Hence depending on the member it could have 1, 2 or 4 votes. The number of delegates however stays as it was. In fact now every member could actually send only one delegate who could carry the vote of the member. The dues are linear with respect to the number of votes. Indeed I felt that involvement of ICIAM in ICSU is very important. We need to get mathematics early in the project planning of ICSU. Let me thank first IMU which took me onto its delegation for the ICSU General Assembly in Maputo in 2008. It was very interesting to see the functioning of ICSU. In 2011 I participated at the General Assembly in Rome as a representative of ICIAM. I think it is important to be present at the committee meetings the days before the GA. In addition it is also important to do networking in the breaks and during the social events. To be effective in this our ICIAM delegation should have a couple members not just one as in Rome. I understand that ICIAM will have a larger delegation at the GA in Auckland, New Zealand. I heard that you are part of the delegation this year.

Olavi, you know much more about this as you are a member of the Finnish Delegation at ICSU and you are the Chair of the Management Group for the European Group of ICSU. Do you have some advice on how ICIAM could help making Applied Mathematics much more visible in ICSU projects?

ON: These international umbrella organizations are important. People often fail to realize that there simply is nobody else than us scientists who have to co-operate, talk and work for science! But let us first look at the brother organization IMU. Now about a dozen years after this meeting in Princeton, how has the co-operation with IMU and ICIAM worked in practice?

RJ: I think I had asked you this question in 1999 and you asked me the same in 2006. Let me first mention, that I had already quite some contact with IMU much earlier. Since 1998 I am a member of the Swiss Adhering Organization to IMU and participated first time IMU

General Assembly in Dresden 1998. As president of EMS I was together with IMU involved in the setting up of the Abel Prize in 2002. In addition I was a member of the Committee on Electronic Information and Communication, CEIC, and co-chair of the DMathLIB from 2002–2006.

When you did the interview with me in 2006 I was convinced that the relation with IMU would become even better. In fact either late in 2006 or early 2007 IMU approached Ian Sloan to agree that the three organizations IMU, ICIAM and IMS (Institute of Mathematical Statistics) form a committee of three persons to make recommendations on the topic of 'Quantitative Assessment of Research'. The result was the report called 'Citation statistics'. The report was excellent but did not cover all possible aspects.

In 2008 I was invited to attend the IMU EC committee meeting in Budapest and to be a guest of the IMU delegation at the GA of ICSU. A year later I also participated as ICIAM president in a joint meeting with IMU and representatives of the Hungarian National UNESCO Committee in Budapest. The idea was to apply jointly with IMU, ICIAM and ICMI (International Commission on Mathematical Instruction) for funds to do capacity building in developing countries and in particular in Mali. The idea to have ICIAM on board was to try to introduce applied mathematics early into the education of mathematics. Unfortunately when suddenly funds flowed and one had to react fast ICIAM got forgotten. Generally it is difficult when several organizations want to work together to do the coordination if a fast reaction is needed.

After the successful collaboration with IMU on the citation statistics I was approached by IMU early in spring of 2010 to continue in a more general approach. A joint 'Working group on Journal Ranking and Pricing' was then formed. Unfortunately the charge was again too large and the group could not come up with clear recommendations. I think the biggest controversy in the committee was whether IMU and ICIAM should create a ranking of journals. Another point was how to evaluate individuals. I cannot report here on the details as the executive summary of the report contains 11 different points. The EC of IMU then proposed to split the task in different subtasks and formed an action plan. Again the volume is too large to be discussed here. The action plan has been discussed during ICIAM2011 among the president of IMU, Ingrid Daubechies, my successor Barbara Keyfitz, the chair of the above working group Nalini Joshi and myself. The action plan has been reported during the congress.

Let me just mention two items on the action plan. One was to start a blog on the journal questions and to create a small committee on the problem on how to evaluate individuals. The blog has been closed in October 2012. The committee on how to evaluate individuals is still working. At our board meeting in Beijing the guest

from IMU, Yiming Long, reported that IMU has decided to take no action concerning ranking of the journals. This closed in a sense this topic also for ICIAM. I got a little bit the impression, that if the EC of IMU is controversial on an issue IMU has the tendency to make decisions without discussing matters with ICIAM.

As you know countries like Australia have done such an exercise of classifying journals. I think you mentioned also Finland. How did you do it?

ON: The government asked the science community to do it voluntarily—so that the government could then assess the performance of universities and also use the related statistics in its funding model. First all of sciences (including humanities and social sciences) were divided into 22 panels which divided journals into 3 levels. And the aim is to revise and refine these lists every 3 years [3]. Initial skepticism has perhaps decreased somewhat as the process has provided some eye-openers. For example, you learn to avoid too simplistic conclusions based on indicators like h-index when you compare different areas against each other, rather than say, against world averages within those areas.

[1] EMS newsletter March 2007, p 32–35, see `www.ems-`
`ph.org/journals/journal.php?jrn=news`
[2] EMS newsletter December 1999, vol 34, p 28, see `www.ems-ph.org/journals/journal.php?jrn=news`
[3] `www.tsv.fi/julkaisufoorumi/english.html`

Part two of this article will appear
in the July issue of DIANOIA.

Currently on sabbatical at University of Cambridge from the Aalto University where he has served as department head

Currently on sabbatical at University of Cambridge from the Aalto University where he has served as department head. He has served as the Helsinki University of Technology Vice-Rector from 2003–2005, and the president of the International Council for Industrial and Applied Mathematics from 1999–2003.

The ICIAM Officers Meeting

by Barbara Keyfitz

Before I became President, the ICIAM Officers traditionally met once a year between Board meetings, usually in November, and then had a short meeting just before the annual Board meeting, to prepare the agenda. The purpose of the fall meeting was to keep in touch with each other and to handle any executive business that might arise between board meetings. For the past couple of years, though, we've handled our tasks a bit differently. We now arrange a telephone meeting in the fall, usually by Skype, and we have a two-day-long meeting a couple of months before the Board meeting. The spring meeting in 2013, which took place in Zurich, was important because it gave us a chance to compare notes and write reports on the site visits for the ICIAM 2019 site.

This year we met in Paris, courtesy of SMAI and the Institut Henri Poincare, which lent us meeting space for two very pleasant days in the middle of March (thanks to Maria for arranging this). The fruits of this meeting will appear in the agenda and discussion items at the May 2014 Board meeting in Columbus.

The picture shows five of us: Alistair Fitt, Barbara Keyfitz, Poti Cuminato, Maria J Esteban and Tom Mitsui; Mario Primicerio joined a part of the meeting by telephone. — Image used with permission.

The occasion of the annual Board meeting provides a confluence of distinguished applied mathematicians from around the world. This workshop provides a forum to exchange ideas, to review recent developments in applied mathematics, and to allow the local community of mathematical scientists to share this international perspective.

The theme of the meeting will be broad, reflecting the range of expertise of these scientists.

ICIAM

2014 ICIAM Scientific Workshop

Organizing committee: Barbara Keyfitz, *chair (Ohio State University)*, José A. Cuminato (*University of São Paulo*), Maria J. Esteban (*CNRS and Université Paris-Dauphine*), Alistair Fitt (*Oxford Brookes University*), Tom Mitsui (*Nagoya University*) and Mario Primicerio (*Università degli Studi di Firenze*)

May 15-16, 2014

The workshop is hosted by the Mathematical Biosciences Institute at OSU, with additional funding provided by the Mathematics Research Institute of OSU and by the Institute for Mathematics and its Applications (University of Minnesota).

The grant from the IMA allows us to support speakers and participants from neighboring institutions in Ohio and throughout the Midwest. In particular, we would like to invite graduate students to attend.

Partial support is available for students and junior participants. We solicit contributions for a poster session.

mbi Mathematical Biosciences Institute

IMA Institute for Mathematics and its Applications

MRI MATHEMATICS RESEARCH INSTITUTE

THE OHIO STATE UNIVERSITY

Confirmed Speakers Include:

Gregoire Allaire, *Ecole Polytechnique*
Weizhu Bao, *National University of Singapore*
Peter Benner, *Max Planck Institute for Dynamics of Complex Technical Systems*
Jean-Paul Berrut, *Université de Fribourg*
Sean Bohun, *University of Ontario Institute of Technology*
Iain Duff, *Rutherford Appleton Laboratory*
Irene Fonseca, *Carnegie Mellon University*
Ian Frigaard, *University of British Columbia*
Martin Golubitsky, *The Ohio State University*
Michael Guenther, *Bergische Universität Wuppertal*
Rob Kass, *Carnegie Mellon University*
Hiroshi Kokubu, *Kyoto University*
Chang-Ock Lee, *Korea Advanced Institute of Science and Technology*
Helena Lopes, *Universidade Federal do Rio de Janeiro*
Yuan Lou, *The Ohio State University*
Pierangelo Marcati, *Università degli Studi di L'Aquila*
Shin'ichi Oishi, *Waseda University*
Tomas Chacon Rebollo, *Universidad de Sevilla*
Le Hung Son, *Hanoi University of Technology*
Dan Thompson, *The Ohio State University*
Pingwen Zhang, *Fudan University*

For more information and to apply, please visit www.mbi.osu.edu

ICIAM (the International Council for Industrial and Applied Mathematics) is the premier international organization for industrial and applied mathematics.

Call for Nominations for ICIAM Officers: Secretary, Treasurer, Officer-at-Large

The ICIAM Board Meeting in Beijing (August, 2015) will include elections to fill all the ICIAM officer positions except President/President-Elect (which was filled in 2013): The ICIAM By-Laws state that elections for Secretary, Treasurer and Officers at Large take place on years congruent to 3 mod 4. The terms, which are four years in duration, begin on October 1 of the election year.

The current president is Barbara Keyfitz (USA), and the president-elect is Maria J. Esteban (France), whose term as President will begin October 1, 2015. The other officers are as follows.

- Alistair Fitt (UK), Secretary, will have served two terms in 2015.
  NOT eligible for renewal
- Jose A. Cuminato (Brazil), Treasurer, will have served one term in 2015.
  ELIGIBLE for renewal
- Taketomo (Tom) Mitsui (Japan), Officer-at-Large, will have served one term in 2015.
  ELIGIBLE for renewal
- Mario Primicerio (Italy), Officer-at-Large, will have served two terms in 2015.
  NOT eligible for renewal

The duties of these positions are described in the By-Laws as follows.

The **Secretary** maintains the records of the organization in cooperation with the President and in accordance with the decisions made by the Board.

The **Treasurer** is responsible for the funds of the organization and annually presents a report on these funds to the Board.

Officers-at-Large do not have specific duties assigned by the By-Laws. At present Mario Primicerio chairs the membership committee and Tom Mitsui chairs the ICSU committee.

Nominations for all of these positions are solicited, and may be sent to any of the current officers, any time before the 2015 Board Meeting, but preferably before July 10, 2015, so that information may be circulated to the Board in advance. ICIAM Officers serve without remuneration; however, reasonable officer expenses in carrying out their duties are reimbursed from ICIAM funds.

Anyone with an interest in becoming or nominating an ICIAM Officer is invited to discuss the positions with any of the current officers.

SAVE THE DATE!

August 10-14, 2015

Beijing, China

The Secretariat of ICIAM 2015

Siyuan Building,
No. 55, Zhongguancun East Road,
Beijing 100190,
P.R. China

Email: iciam2015@amss.ac.cn
Tel: 8610-62613242
Fax: 8610-62616840

Conference Registration

Early Bird Registration: January 1 - April 30, 2015
Regular Registration: May 1 - July 31, 2015
Late & On-site Registration: August 1 - 10, 2015

Contributed Papers

Submission Open: July 30, 2014
Submission Due: December 30, 2014

Mini-symposia

Submission Open: March 30, 2014
Early Decisions Notification of Proposals:
August 30, 2014
Submission Due of Proposals:
September 30, 2014
Final Decisions Notification of Proposals:
October 30, 2014
Submission Due of Accepted Mini-symposium Abstracts:
December 30, 2014

Posters

Submission Open: July 30, 2014
Submission Due: April 30, 2015

Satellite Conferences

Submission Open: January 1, 2014
Submission Due: October 30, 2014

Embedded Conferences

Submission Open: January 1, 2014
Submission Due: October 30, 2014

Conference venue: The China National Convention
Centre

Invited Speakers of ICIAM 2015

Bob Bixby
Gurobi Optimization, Inc., USA

Analisa Buffa
Istituto di Matematica Applicata e Tecnologie
Informatiche, Italy

Gunnar Carlsson
Stanford University, USA

Jean Michel Coron
Université Pierre et Marie Curie, France

Lisa Fauci
Tulane University, USA

Martin Hairer
Warwick University, UK

Ravi Kannan
Microsoft Research, India

Karl Kempf
INTEL Corporation, USA

Shunlong Luo
Academy of Mathematics and Systems Science,
CAS, China

Volker Mehrmann
Technische Universität, Berlin, Germany

Gabriel Nguetseng
University of Yaounde I, Cameroon

Yasumasa Nishiura
Tohoku University, Japan

Ricardo Nochetto
University of Maryland, USA

Shige Peng
Shandong University, China

Nancy Reid
University of Toronto, Canada

Mark Sagar
The Laboratory for Animate Technologies,
The University of Auckland, New Zealand

Claudia Sagastizábal
Instituto Nacional de Matem'atica Pura e
Aplicada, Brazil

Laure Saint-Raymond
École Normale Supérieure, France

Jesús Sanz Serna
Universidad de Valladolid, Spain

Ludger D. Sax
Grid Optimization Europe-System Planning
Gas & Water, Germany

Jin-Keun Seo
Yonsei University, Korea

Zuowei Shen
National University of Singapore

Ian Sloan
The University of New South Wales, Australia

Simon Tavaré
Cancer Research UK, Cambridge Institute, UK

Eric Vanden-Eijnden
Courant Institute, NYU, USA

Barbara Wohlmuth
Technische Universität, München, Germany

Yinyu Ye
Stanford University, USA

About ICIAM

The International Council for Industrial and Applied Mathematics (ICIAM) is a worldwide organisation for professional applied mathematics societies. Its members are national and regional societies dedicated to applied and industrial mathematics, and other societies with a significant interest in industrial or applied mathematics.

The Council works
- to promote industrial and applied mathematics globally;
- to promote interactions between member societies;
- to promote the goals of these member societies;

and to coordinate planning for the ICIAM Congresses, held every four years, on industrial and applied mathematics.

ICIAM is governed by a Board comprising representatives of its member societies. Programs run by ICIAM, and the bylaws of the organization, can be found on the ICIAM web page, www.iciam.org.

The Full Members and their representatives

ANZIAM (Australia and New Zealand Industrial and Applied Mathematics): Ian H. Sloan

ASAMACI (Asociación Argentina de Matemática Aplicada Computacional e Industrial): Eduardo Adrián Santillan Marcus

CAIMS-SCMAI (Canadian Applied and Industrial Mathematics Society, Société Canadienne de Mathématiques Appliquées et Industrielles): Ian Frigaard

CSCM (Chinese Society for Computational Mathematics): Xuejung Xu

CSIAM (China Society for Industrial and Applied Mathematics): Pingwen Zhang and Guiying Yan

ECMI (European Consortium for Mathematics in Industry): Michael Günther

ESMTB (European Society for Mathematical and Theoretical Biology): Vincenzo Capasso

GAMM (Gesellschaft für Angewandte Mathematik und Mechanik): Peter Benner and Sergio Conti

IMA (Institute of Mathematics and its Applications): Iain S. Duff and David Abrahams

ISIAM (Indian Society of Industrial and Applied Mathematics): Abul Hasan Siddiqi and Pammy Manchanda

JSIAM (Japan Society for Industrial and Applied Mathematics): Shin'ichi Oishi and Hiroshi Kokubu

KSIAM (Korean Society for Industrial and Applied Mathematics): Chang Ock Lee

MOS (Mathematical Optimization Society (formerly Mathematical Programming Society)): William (Bill) Cook

NORTIM (Nordiska föreningen för Tillämpad och Industriell Mathematik): Helge Holden

ROMAI (Societatea Română de Matematică Aplicată și Industrială): Costica Morosanu

SBMAC (Sociedade Brasiliera de Matemática Aplicada e Computacional): Helena J. Nussenzveig Lopes

SEMA (Sociedad Española de Matematica Aplicada): Tomás Chacón Rebollo

SIAM (Society for Industrial and Applied Mathematics): Cynthia Phillips and Irene Fonseca

SIMAI (Società Italiana di Matematica Applicata e Industriale): Alessandro Speranza and Giovanni Russo

SMAI (Société de Mathématiques Appliquées et Industrielles): Grégoire Allaire and Alain Damlamian

SPMAC (Sociedad Peruana de Matemática Aplicada y Computacional): Obidio Rubio Mercedes

VSAM (Vietnamese Society for Applications of Mathematics): Lê Hùng Són

The Associate Members and their representatives

AMS (American Mathematical Society): Don McClure

AWM (Association for Women in Mathematics): Jill Pipher

ChinaMS (Chinese Mathematical Society): Xiaoshan Gao

CMS-SMC (Canadian Mathematical Society, Société Canadienne de Mathématiques): Elena Braverman

EMS (European Mathematical Society): Franco Brezzi

IMS (Institute of Mathematical Statistics): Hans Rudolf Künsch

IMU (Israel Mathematical Union): Edriss S. Titi

LMS (London Mathematical Society): Stephen Huggett

MSJ (Mathematical Society of Japan): Yoichi Miyaoka

ÖMG (Österreichische Mathematische Gesellschaft): Alexander Ostermann

PTM (Polskie Towarzystwo Matematyczne (Polish Mathematical Society)): Łukasz Stettner

SingMS (Singapore Mathematical Society): Weizhu Bao

SMF (Société Mathématique de France): Bernard Helffer

SMG-SMS (Schweizerische Mathematische Gesellschaft - Société Mathématique Suisse - Swiss Mathematical Society): Jean-Paul Berrut

SPMPA (Sociedad Paraguaya de Matemática Pura y Aplicada): Gladys Ortiz Granada

UMI (Unione Matematica Italiana): Pierangelo Marcati

The current officers of ICIAM
President: Barbara Lee Keyfitz, USA
President-Elect: Maria J. Esteban, France
Secretary: Alistair Fitt, UK
Treasurer: Jose Alberto Cuminato, Brazil
Members-at-Large: Mario Primicerio, Italy and Taketomo (Tom) Mitsui, Japan