

## ISIMM Past and Present

ISIMM, the Society for the Interaction of Mathematics and Mechanics, was founded in 1977 in Kozubnik in Southern Poland. There had been a planning period before that time which had culminated in a meeting in Lecce, Apulia, Italy two years earlier. That meeting was organized by Gaetano Fichera along with some of his colleagues from Rome and with Polish colleagues. Indeed, Fichera seems to have been the main driving force behind the foundation of ISIMM. At the time the cold war was still on and it looked as if the Soviet Union with its satellite states was there to stay. For scientists from different sides of the iron curtain it was not altogether easy to meet; Russian scientists, in particular, found it difficult to obtain a passport for going to a western country; but less so, if they were invited by a scientific society. Hence the idea of ISIMM came naturally, a society with an impressive constitution and with the backing of a truly international group of scientists from all over the world, even though the European element was predominant. I was told that Fichera wrote the constitution and that he modelled it to resemble constitutions of national academies. Also Fichera – mathematical fundamentalist that he was – insisted at first that the Society should apply itself to the interaction of *pure* mathematics and mechanics. But that proposition had no chance given that most prospective members were applied mathematicians and physicists and mechanicians.

The meeting in Kozubnik was impressive. Everybody who was somebody in the field was there: Sneddon, Chadwick and Spencer from the UK, Fichera, Graffi and Grioli from Italy, Becker, Meister, and Kröner from Germany, i.e. West Germany, Koiter and Besseling from the Netherlands, Choquet-Bruhat, Germain, and Lions from France; and, of course, all of the tycoons of the Polish Academy of Science were there: Nowacki, Olszak, Fiszdon, Sawczuk, Zorski. But no Russians; they had not been able to procure passports for visiting their socialist *brother country* Poland. I myself, along with Wilmanski, Maugin, Galetto, Dafermos, Ball and many others, was in the junior crowd.

The constitution stipulated that no membership dues were to be levied, and that a biannual meeting should be held with no conference fee. That was important at first, particularly for the members from the East who found it difficult or impossible to obtain hard currency, the so-called *valuta*. The meetings are called STAMM, Symposia on Trends in Application of Mathematics to Mechanics. A list of the Symposia follows together with the names of the organizer, or main organizer, in brackets:

Lecce 1975 (Fichera)  
Kozubnik 1977 (Zorski)  
Edinburgh 1979 (Knops)  
Bratislava 1981 (Brilla)  
Palaiseau near Paris 1983 (Ciarlet)  
Bad Honnef 1985 (Kröner)  
Wassenaar, near The Hague 1987 (Besseling)  
Hollabrunn near Wien 1989 (Ziegler)  
Tbilisi 1991 (Vashakmadse) CANCELLED  
Warszawa 1996 (Zorski)  
Nizza 1998 (Ioss)  
Galway 2000 (Hayes)  
Maiori near Napoli 2002 (A. Romano)  
Seeheim-Jugenheim near Darmstadt 2004 (Hutter)  
Wien 2006 (W. Schneider)  
Levico near Trento 2008 (Visintin)  
Schmöckwitz near Berlin 2010 (W.H. Müller)  
Haifa 2012 (Durban)

On two occasions – in 1991 and 1993 -- a STAMM had to be cancelled, one in Delaware for lack of attendance, because European members shrank away from the expenditure of a transatlantic fare, and one in Tbilisi, because a disruptive civil war was raging in Georgia at the time.

Right from the beginning the constitutional stipulation of “no conference fees” proved inconvenient for most organizers. However, for STAMM 4 in Bratislava – then Czechoslovakia -- the participants at least had the possibility to pay in roubles rather than *valuta*. After the eastern block faded away the stipulation was blithely ignored. Yet, despite several attempts to get an amendment of the constitution in the matter of “no membership fees”, that injunction remained in place. The quorum could never be reached, let alone approval.

Apart from STAMM symposia for the Society as a whole, members are encouraged to organize mini-symposia, devoted to particular subjects and attended by small groups of invitees. There have been many of those – at least as many as STAMMs – but they remained unrecorded and so I cannot even begin to assemble a complete list. I just remember a few in which I participated or which I helped to organize: Bayreuth (von Wahl), Bologna (Ruggeri), Potsdam (Wilmanski), Darmstadt (Alber).

A somewhat problematic stipulation of the constitution makes every member an honorary member at the age of 70. Doubtless this was intended as a friendly gesture toward the elderly, but by the year 2000 it had led to a situation in which most members were indeed honorary members. Several attempts were made to recruit active young scientists in order to lower the average age and to keep the Society on the qui-vive. And although those efforts were not entirely unsuccessful, it is in the nature of things that the problem repeats itself, and it remains a challenge for each new triple of officers

Over the years the officers of the Society – president, vice president, secretary -- were

Nowacki/ Brook Benjamin / Zorski (1978-1982)  
Fiszdon/ Capriz/ Dafermos (1983-1986)  
Kröner/ Barenblatt/ Wendland (1987-1991)  
Knops/ Kröner/ Parker (1992-1995)  
Capriz/ Knops/ Trimarco (1996-2000)  
Müller/ Capriz/ Wilmanski (2001-2004)  
Pitteri/ Müller/ Montanaro (2005-2008)  
Truskinovsky/ Pitteri/ Bigoni (2009-2012)

From the fourth term onward it was decided, not to elect a vice president anymore. Rather the post of vice president was to be filled by the previous president. This measure was intended to guarantee some continuity.

From the very beginning there was a certain tendency to forget the mid-term elections of the Executive committee. In fact, the first triple of officers missed the end of their own term until half a year after the deadline for new elections had elapsed. So they stayed one more year in office.

At the beginning there was also an effort to advertise the activity of the Society by publishing books. Alan Jeffries was the chairman of the publishing committee for many years and Pitman, London was the publisher of what was to become the “The Interaction of Mechanics and Mathematics Series.” That series, however, after two genuine monographs – one of them mine on thermodynamics – deteriorated into mere proceedings of STAMM conferences. And after Pitman was taken over by Longman the interest declined on all sides and then disappeared altogether. There was no publishing under the name of the Society for about a decade until the early years of the new century. As president between 2000 and 2004 I was able to interest the Springer Verlag in becoming the new publisher and Truskinovsky became the chairman of the publishing committee. Since that time I believe that 5 or 6 monographs have appeared in a series with the old name. That branch of ISIMM thus seems to be active and efficient.

Occasionally awards have been given from the meagre funds of ISIMM. Thus in Vienna a student from Padova was given an award for an exceptionally good doctoral dissertation. And in Schmöckwitz J.L.Ericksen was honoured for his lifelong dedication to science. I myself received the same award quite recently at the latest STAMM meeting in Haifa.

Friendly relations have always existed between ISIMM and IUTAM, the International Union of Theoretical and Applied Mechanics, and I believe that the previous secretary, Davide Bigoni, has negotiated an agreement by which ISIMM may take advantage of IUTAM’s office facilities at CISM in Udine.

On some occasions there has been a certain amount of friction between ISIMM and two similar-sized societies with a more or less similar agenda: The Society of Natural Philosophy and a group known as CMDS, for Continuous Models of Discrete Systems. The Society of Natural Philosophy has the center of gravity of its members in the US, although the present president is Cesare Davini from Udine. The CMDS group grew out of Kröner's activities at about the same time when Fichera advocated ISIMM. In the late 1990s there was a move by Capriz, then president of ISIMM, to absorb CMDS into ISIMM. That move was resisted and some acrimony was created. And recently Truskinovsky attempted to hold the STAMM conference in Haifa jointly with the annual meeting of the Society for Natural Philosophy. That friendly overture seemed to meet with sympathy at first, but was then brusquely rejected as I understand. It may take more than a gifted diplomat to reach an understanding between those groups even though all three of them might be more effective together than separately.

Ingo Müller,

Potsdam, 08.05.13

P.S. The above account was originally written for our new president Augusto Visintin, who was too young at the time to have been one of the founding members. Originally I relied on memory, but then Robin Knops helped me out with *his* memory and his files and corrected some of my recollections. Now, seeing that this report will be published in the new *Forum* of the Society, I think it appropriate to invite all members to contribute their own recollections, particularly on mini-symposia. Thus maybe in time we shall come close to a true and reliable history of ISIMM.