

THE HISTORY AND DEVELOPMENT OF THE YSESM FROM 2002 TO 2011

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Abstract

This article reviews the origin and development of the *Youth Symposium of Experimental Solid Mechanics* (YSESM), since the first germinal idea to its tenth 2011 edition in Germany.

Introduction and origin

When I became President of the Technical Committee of IMEKO International Measurements Confederation after prof. Laermann completed his presidency, I was interested to explore any form of development in the committee's activities. In spite of the great attention and care of my predecessor, TC15 had to compete with many other events on Experimental Mechanics around the world. After exchanging views about the possibility to regionalize the role of TC15 with prof. Laermann, who had become Honorary President of TC15, I organized a TC15 meeting during the "XXV AIAS International Conference on Material Engineering" in Gallipoli-Lecce, (Italy) in Sept. 4-7, 1996. It was then a sensible result to gather together 12 representative members of TC15 and, one year later, on the occasion of the "XIV IMEKO World Conference" in Tampere, Finland, in June 2-6 1997, the Technical Committee organized a special session on Experimental Mechanics with a remarkable plenary lecture by Dr. Akira Umeda (Osaka, Japan).

Finally, during a break at the ICEM Conference in Oxford in 1998, some colleagues, convened in a place to relax and discuss whilst refreshing with ale, showed significant interest in

the idea of organizing conferences at very low cost, in a Centre created by Bologna University to be devoted to Summer Courses and other cultural activities in Bertinoro, a medieval castle along the Roman "Via Emilia", (close to the Adriatic Sea), (<http://www.centrocongressibertinoro.it/>).

The problem was and still is deciding what to do in the field of Experimental Mechanics without conflicting with other initiatives which, in Europe only, are numerous, such as, ICEM or Danubia-Adria and a large number of national meetings in the same field. On the contrary, the scope of TC15 should be to collaborate in a joint effort to create a network for the exchange of informal ideas, especially in the interest of the new generations.

Some time was necessary to implement this idea, since it was essential to explore the feasibility of this initiative, discussing it with several colleagues, authorities and friends. Dominating the scene were the relations between these international societies and also the changing character of some of these institutions: ICEM was going to generate the EURASEM Society, Danubia-Adria was considerably extending its influence in Central Europe, and IMEKO was considering

reviewing its relationship with YSESM, in the interest of a greater participation of young researchers. This point was in fact extensively discussed and a solution found with the IMEKO Secretary some years later during the YSESM in Castrocaro Terme.

The first conference in the YSESM series took place in Bertinoro, in the early Spring 2002. As an outcome of this conference, an organizing

committee was formed with the enthusiastic help of many young PhD students and young researchers, whom I wish to remember in this primitive digital picture.



Among others, first from left is PhD C. Fragassa, who was the chief Executive of the Organizing Committee, who would continue to organize, stimulate and promote the consecutive editions of the Symposium for almost six years. (He was also the webmaster of the websites of these editions). Next is Prof. Francesca Cosmi, Professor at Trieste Engineering Faculty, currently a Regular Member of the Scientific Committee of Danubia-Adria Society (as Italian Representative on behalf of the Italian Society of Stress Analysis). On the right-hand side of the picture are PhD P. Morelli and PhD A. Zucchelli, both Assistant Professors at Bologna University Faculty of Engineering.

The new scientific society took on naturally the *modus operandi* of the Danubia-Adria Society that was and is the main sponsor of YSESM in helping to organize the annual meeting, and in sending young graduates, PhDs and Post Docs.

PhD G. Minak, Assistant Professor at Bologna University, is not in the picture, but was and is an active member. He will be the future Italian Representative in YSESM (again on behalf of the Italian Society of Stress Analysis).

Organisation

The organizational model of YSESM was empirically adapted to the specific needs by the young spirits of its members, but special attention was paid to the Danubia-Adria experience, which represents a mature example of a mixture of good tradition and a more informal spirit of experimentation. The institutional habit can be seen in the fact that the Representatives of the different Countries are nominated by the National Societies of Experimental Mechanics and a special link with IMEKO TC15 is defined in a protocol presented to the IMEKO Secretary, (at the time, Prof. Tomas Kemeny, who personally attended the third Symposium in Castrocaro

Terme, Italy). The experimental attitude will probably bring the society to a more formalized structure, with the planning of a statute.

However, the main feature of the current structure, in the same way as Danubia-Adria, is its fully democratic organisation, since every year the Organizing Committee changes and takes full responsibility for the Symposium, from the financial to the scientific and organisational aspects, and equality among members is obtained through the rotation of the tasks. It may well be that not all members have the same opinion of the method, but the mother society Danubia-Adria demonstrates the success of this idea in about thirty years of activity.

In principle, the society is open to countries all over the world, and, from the beginning, a large number of active members came also from very distant parts of the globe, especially from Latin America (Argentina and Brazil) and also from Georgia, and they generally continue to be present at the annual meeting.

Problems exist in extending the knowledge of this society for young people to other countries (even if the countries represented are now reaching the remarkable number of twelve). Some efforts, as my talk and invitation to the 13th ICEM Conference Committee in Alexandroupolis, were devoted to find other interested countries (like, for example, United Kingdom, France, etc.).

A very important extension is this year's organisation done by Germany. The entering of a nation of this weight is a great event that will probably have a positive effect on the Danubia-Adria Symposium. It is not the first time that YSESM favoured opening the doors to other National Societies for joining the mother society. The same happened with Serbia, which, after organizing the YSESM, decided to enter into the Danubia-Adria.

Rationale

It is worth examining the mission of the largest Experimental Mechanics Society in the world, SEM United States, to understand the development of this scientific discipline and human society in the last fifty years:

"The Society for Experimental Mechanics, [was] originally called The Society for Experimental Stress Analysis, with the original goal to "further the knowledge of stress and strain analysis and related technologies."

In the years since its founding, SEM has continued to adapt itself to the needs of the members in the experimental mechanics

community.This international network of engineers and scientists is interested in the **research and application of engineering measurements and test methods** with the mission to promote and encourage the furtherance of knowledge pertaining to the education, research and application of experimental mechanics to the **determination of materials and system behaviour....**" (see <http://www.sem.org/>)

These points can be wholly subscribed to, as well as the attractive revisiting of the old name *Experimental Stress Analysis* in the title of the Proceedings of the 13th ICEM, as *Experimental Analysis of Nano and Engineering Materials and Structures*, which launches the new nano-materials perspective.

In the writer's opinion, therefore, the new approach of YSESM does not consist in a new mission, but in the commitment of the young branch of researchers to organize occasions for comparing experiences, proposing joint researches and exploring new or unusual ways of scientific

collaboration and, last but not least, convivial life. The main focus of this collaboration is not experimenting in itself but experimenting **for design** as a meeting point for widely differing research disciplines. YSESM wishes to facilitate the establishment of new research programmes, to provide input to policy makers, and to identify suitable funding sources for research in mechanical design. YSESM can survive only if it provides both a scientific and organisational framework for this research.

Symposia series

The dates and venues of the symposia which followed the Bertinoro First Symposium are given in the following table, together with the websites containing information about the programmes and, (although not always), the titles of the presentations. After the first edition, the proceedings of the extended summaries were printed with ISBN reference numbers.

Sequence of first ten YSESM Symposia

Date	Venue	Remarks
2002 6-9 March	Bertinoro, Italy	www.yesem.ing.unibo.it/yesem2002/bertinoro.html http://diem1.ing.unibo.it/imeko/Copia%20di%20imeko/Activities.htm
2003 7-10 May	Milano Marittima, Italy	www.yesem.ing.unibo.it/yesem2003/index.html
2004 12-15 May	Porretta Terme, Italy	www.yesem.ing.unibo.it/yesem2004/index.html
2005 4-7 May	Castrocaro Terme, Italy	www.yesem.ing.unibo.it/Photo%20Show/MainFrame.htm
2006 10-13 May	Puchov, Slovakia	fpt.tnuni.sk/conferencehistory/yesem/index.htm www.otomar.cz/index.php?obsah=gal_puch&menuleve=fotogalerie (a private photo gallery)
2007 28 May	Varnjaska Banja, Serbia	yesem.maskv.edu.yu/ (no longer active)
2008 14-17 May	Wojcieszycze, Poland (near Szklarska Poreba)	www.yesem.pwr.wroc.pl/index.php?dest=prev
2009 20-23 May	Győr, Hungary	www.gte.mtesz.hu/8_YSESM/announcement.pdf
2010 7-10 July	Trieste, Italy	www.gruppofrattura.it/pdf/eventi/2010/summerschool/Brochure_9thYSESM.pdf
2011 25-28 May	Chemnitz, Germany	www.tu-chemnitz.de/mb/FestKoerpMech/YSESM