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**AMCA**  
 please contact:  
**Victorio Sonzogni**  
 sonzogni@intec.unl.edu.ar  
 http://amcaonline.org.ar

**ENIEF 2013**  
**XX Congress on Numerical Methods and their Applications**  
**Mendoza, Argentina**  
**18 - 22 November 2013**

The Argentine Association for Computational Mechanics (AMCA) announces the XX Congress on Numerical Methods and their Applications, which will be held in Mendoza, Argentina, organized by the National Technological University of Mendoza.

The Conference topics includes application of numerical methods in engineering problems, among which:

Fluid Mechanics, Solid Mechanics, Constitutive Modelling of Materials, Stability and Non Linear Structures, Structural Dynamics, Aerospace Technology, Heat and Mass Transfer, Failure Modelling of Materials, Computational Geometry, Control and Optimization, Problems in Multiphysics, Simulation of Turbulent Flows, Teaching Numerical Methods in Engineering, Inverse Problems and Application, Industrial Applications, Wind Engineering, Multibody Systems, High Performance Computing in Computational Mechanics, Acoustics and Mechanical Vibrations, Uncertainties and Stochastic Modelling, Computational Modelling in Bioingeniería y Biomedical Systems, Numerical Simulation of Environmental Problems, Multiscale Modelling of Materials, Computer Methods in Seismic Engineering, Multiphase Flows, Structural Analysis.

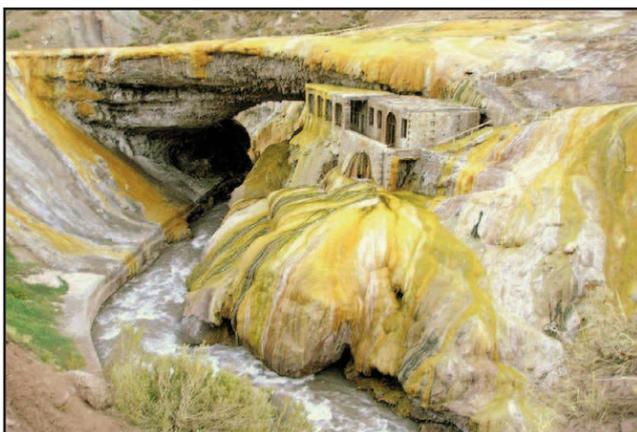
The relevant dates are:

- Deadline for presenting a one-page abstract: *May 20, 2013*
- Acceptance of the one-page abstract: *June 3, 2013*
- Deadline for submitting the full length paper : *July 31, 2013*
- Acceptance of the full length paper: *August 31, 2013*
- Deadline for early payment: *September 15, 2013*
- Congress: *November 18-22, 2013*



**Figure 1:**  
 Mendoza City and the the  
 Andes Mountain behind

Mendoza is a beautiful city, in the mid-western Argentina, land of high mountains and fine wines. Mendoza holds the largest wine producing area in Latin America. As such, Mendoza is one of nine cities worldwide in the network of Great Capitals of Wine, and the city is an emerging enotourism (Wine tourism) destination and base for exploring the region's hundreds of wineries located along the Argentina Wine Route. Aconcagua Mount is the highest peak of America. From its 6,962 m.a.s.l., it leads this entire province, where geography is generous in mountains, eternal snow, valleys, rivers, hot springs, plains, deserts and magical oasis offering different tourist possibilities.



More informations may be found at:

Email: [enief2013@frm.utn.edu.ar](mailto:enief2013@frm.utn.edu.ar)

Web: [www.enief2013.frm.utn.edu.ar](http://www.enief2013.frm.utn.edu.ar) ●

**Figure 2:**  
 Puente del Inca (Inca's bridge):  
 natural formation at the Andes Mountain

## New Research Centre in Computational Mechanics

On March 14th 2013 a new independent Research Unit has been created in Argentina. The Research Centre in Computational Methods, CIMEC (for Centro de Investigación de Métodos Computacionales), has been created by agreement between the Argentinean National Council for Scientific and Technological Research (CONICET) and the National University of Littoral, Santa Fe, Argentina (UNL).

This unit has been created based on the former International Centre for Computational Methods in Engineering, which depended from the Institute for Technological Development of the Chemical Industry (INTEC). This is the first independent Research Unit from CONICET entirely dedicated to Computational Mechanics, and constitutes the largest research Institution in Argentina working in this field.

CIMEC has currently five research areas:

- Numerical Methods in Fluid Mechanics
- Numerical Methods in Fluid Structure Coupling
- Numerical Methods in Solids and Mechanisms
- Bioengineering
- Computer Methods and Programming Techniques

A total of fifty people are currently working in this new research unit, twenty of whom are researchers from CONICET or UNL. The group started working in 1980 within INTEC, and was founded by Prof Sergio Idelsohn. This group has gain reputation for its three decades of constant activity in the field, with publications in the most renowned scientific journals.

The Centre occupies a 500 sq meters modern building with a nice view over the Parana River, with spaces for its computers clusters and a conference room. This building will now be expanded to reach a total of 1250 sq meters thanks to a grant recently obtained from the Argentinean National Ministry of Science and Technology.

Researchers from CIMEC give support to the Postgraduate Program in Computational Mechanics of the UNL. The group has also gained strong recognition in Argentina for its activity in computational mechanics applications for industries all along the country, within which we can mention YPF, Yaciretá Binational Entity, Ternium-Siderar, Mahle Argentina SA, Nuclear Regulatory Authority, and many others.

This new era will give CIMEC a strong impulse to increase its productivity, develop stronger links with industry and produce new and exciting research in the field of Computational Mechanics. ●

**Alberto Cardona**  
Interim Director  
CIMEC



**Figure 3:**  
*CIMEC building*



**Figure 3:**  
*Architects view of projected  
CIMEC building*

## Sergio Idelsohn and the Development of Computational Mechanics in Argentina

by:

**Pablo M. Jacovkis**

Universidad Nacional

de Tres de Febrero

[pjacovkis@untref.edu.ar](mailto:pjacovkis@untref.edu.ar)

and

Universidad de Buenos Aires

[jacovkis@dc.uba.ar](mailto:jacovkis@dc.uba.ar)

Sergio is a world known specialist in numerical simulation of problems related to mechanical engineering, in particular in computational fluid dynamics, and is one of the developers of the Particle Finite Element Method (PFEM). His positions, prizes and grants include professorships at the National University of Rosario, the National University of the Littoral in Santa Fe, the Polytechnical University of Catalonia in Barcelona, the Institute of Advanced Study in Princeton, the University Paris VI Pierre et Marie Curie, the direction of the International Center for Numerical Methods in Engineering in Santa Fe, the Houssay Prize, the Konex Prize, the Scopus Prize, the SEMNI Prize, and a 2.5 million euro grant from the European Research Council.

Sergio graduated in 1970 at the National University of Rosario. That was a particularly complicated year in the ever complicated history of Argentina. The military dictatorship which ruled the country after having famously overthrown the legal President Illia in 1966 (and having replaced the legal authorities of the Universities with people more interested in detecting communists and guerrillas than in improving teaching and science) began to be immersed in a process of instability. The first dictator, General Onganía, was himself overthrown in 1970 by General Levingston, who was in turn overthrown by General Lanusse in 1971. Curiously, some decisions of the dictatorship were positive: the University of Rosario, formerly part of the National University of the Littoral, had just been created as part of a policy of creating Universities in the country which permitted many young people to enroll as undergraduate students.

After graduating, Sergio wanted a scientific career. It was very unusual for engineers in Argentina to obtain a Ph. D., as most engineers thought of themselves as professionals, not scientists. So Sergio applied for several scholarships and accepted one in Liege, Belgium. (His former professor, Orengo, had heard about a new method, something called "the finite element method" and had bought a book on this subject, the first Zienkiewicz.)

It was not easy to study under the distinguished scholar Veubeke. He suggested a problem which, after one year, Sergio realized had no solution. When Sergio dared to tell him, he said "Yes, I agree, better work in this other problem". Despite this, he succeeded in finishing his Ph. D. dissertation in three years, and in 1974 returned to Argentina.

Those were difficult years in Argentina, politically, economically and personally. He had a part-time position at the School of Engineering of the University of Rosario (thanks to Orengo). He taught at the Faculty of Economics and, by night, at the Technological University. After the 1973 election, the military had (provisionally) retired from government, the formerly ousted President General Perón was President again, and a paramilitary group, the "three A" (Argentine Anticomunist Alliance), began murdering political opponents and supposed friends of the guerrilla. Perón died in July 1974 and was replaced by his wife, Isabel Martínez de Perón. Living in Argentina and belonging to the University became very uncomfortable. People were afraid, and the situation worsened. In 1976 the military, with the desire of exterminating the guerrilla, overthrew the government, and the bloodiest dictatorship in contemporary Argentina (General Videla's) started. Sergio's economic situation worsened

**Figure 1:**  
First ENIEF in Bariloche, Argentina, July 1983, with the participation of Professor Richard Gallagher



and eventually, after five extremely difficult years, Sergio accepted a postdoctoral scholarship from the CONICET (National Council for Scientific and Technical Research), and in 1979 they returned to Liege where he knew people who could help him get an academic position.

In 1980, things began to improve. The worst period was over, although killings and disappearance of people continued until a civilian President, Raúl Alfonsín was elected. Alberto Cassano offered him a position in Santa Fe to organize a scientific group in mechanics in the Institute for Technological Development in Chemical Industries (INTEC), founded by Dr. Cassano. So in 1981 Sergio and his family were re-installed in Santa Fe, working at INTEC. Here Sergio's scientific career in Argentina truly began. In 1983 the Bariloche group (whose director was Sergio Pissanetzky) organized a course on finite elements jointly with ENIEF'83, the first National Meeting of Researchers and Users of the Finite Element Method, and Sergio was invited to this meeting, as was the late professor Richard Gallagher. Both Sergio's decided to organize ENIEF on a regular basis. New ENIEFs took place in Bariloche in 1984 and 1985.

Meanwhile, in 1981 Prof. Gallagher, Oden and Zienkiewicz established the IACM. The idea naturally appeared to Idelsohn and other scientists to establish a similar society in Argentina, which would be a member of IACM. In 1985 the AMCA was created; Sergio was its first President and remained so for 20 years. Sergio was simultaneously becoming an outstanding and internationally prestigious scientist, thanks not only to his brilliant personal career but also to his successful efforts in creating an important center of research in Santa Fe, where many distinguished scientists and disciples of Sergio's worked.

In December 1983 the political difficulties ceased in Argentina, when the new democratic Alfonsín administration was inaugurated. But nothing was simple compared to research in other countries. On the one hand, during the first years of democracy, it was uncertain whether the government would be overthrown by a new coup d'état, and many scientists and intellectuals did not know whether they would need to go abroad again. On the other hand, the scientific budget was still scarce, and for many scientists going abroad, this time for economic, not political, reasons, was the only option. Sergio remained in Santa Fe, sometimes maintaining intermittent visiting positions abroad, and with his usual optimism managed to transform the small community of CM specialists into an important group, aiding not only Santa Fe but also other regions. (He was also a consultant for several national or provincial agencies and private firms.)

In 1986, the 4th ENIEF took place in Bariloche, organized by Luis Godoy from Córdoba. Luis invited the Spanish scientist Eugenio Oñate to Bariloche. Sergio and Eugenio met and began a productive scientific collaboration that continues hitherto; the "Barcelona-Santa Fe" axis has become a rich bi-national scientific joint venture of which both countries may be proud.

But Argentina is a very curious country. Just when, in the last decade, the government began to significantly back science, both financially and politically, some bureaucratic authority at the CONICET decided that Sergio should not be allowed to spend part of the year in Barcelona. Needless to say, many scientists in many countries spend part of the year abroad, with no objections but often encouragement. So in 2006 Sergio was fired from CONICET (but not from the University of the Littoral). However, Sergio continues collaborating with Santa Fe and Argentina.

Sergio Idelsohn's scientific merits are internationally known. What is perhaps less known, both in and out of Argentina, in circles of younger researchers who (fortunately) did not live through the dark years of military dictatorships and instability, and then through the years with minimum budgetary support, is that being successful in Argentina, both as a teacher, a scientist, a scientific manager and a specialist in preparing human resources, requires fighting against all odds, and a will and a strength that few people have, and which Sergio has. ●



**Figure 2:**  
*First meeting of Eugenio Oñate with Sergio Idelsohn in Bariloche, July 1986.*



**Figure 3:**  
*Prof. Olek Zienkiewicz visiting Santa Fe (center) with Victorio Sonzogni and Sergio Idelsohn, Argentina, February 1987*