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IOANA ANCA MIRANDA VLAD
1942–2012

Preamble

Spring, this season of renewal and Resurrection, which returns timid and cold each year, often after a heavy winter, brings to the individual and collective memory of our colleagues of the Civil Engineering and Building Services Faculty, "Gh. Asachi" Technical University of Iasi, the variegated personality of our distinguished colleague, **Professor Dr. Eng. Ioana Anca Miranda VLAD**, born **Missir**.

Biographical data

Ioana Anca Miranda VLAD (Missir) was born in Botosani, on 5 December 1942.

She originated from a well known family of Armenians who settled down in Bucovina in the 18th century. Her father, Ioan Missir, a reputed lawyer, head of the Bar and mayor of Botosani (1931 – 1932 and 1941 – 1942, respectively), also a veteran of the First World War, died when his daughter was only three years old. She was confronted, from early childhood, with the persecutions of the communist authorities, due to her „unhealthy social origin”. Her family had to face considerable difficulties, being deprived of the right to survivors pension, and having half of their house confiscated. These inequities hardened her and stimulated her in getting a solid instruction and in graduating from the „Mihai Eminescu” College as a valedictorian.

Being endowed with a special gift for painting and foreign languages, she found the balance in the exact sciences. She attended the courses of the Iasi Polytechnic School, graduating successfully in Civil Engineering in 1966. We will soon find the young engineer Ioana Missir among the teaching staff members of the Department of Strength of Materials and Statics, nowadays known as the Department of Structural Mechanics, recommended by **Professor Anton Sesan**, outstanding creator of the Earthquake Engineering School in Iasi. Starting her teaching career as a junior assistant, she went up all the steps of the academic career to the position of full Professor that she obtained in 1994 respectively, within the same Department.

In 1981, she defended her PhD thesis in the field of civil engineering, specialization „Applied Theory of Elasticity and Plasticity” at the Cluj-Napoca Polytechnic Institute. Her PhD. Thesis developed the topic *”Problems of Statics, Stability and Dynamics of Orthotropic Plates”*, under the guidance of the renowned professor from TU Cluj, **Vasile Ilie**.

She continued to work in the university, even after he retirement, as a Honorary Professor, being highly appreciated by the students of the „Structural Engineering” Master’s Programme. In 1976 Ioana Anca Miranda Missir got married, her husband, Nicolae Vlad, being a member of the teaching staff within the same faculty. Their son, Ioan Vlad, graduated from the Faculty of Geophysics, Bucharest University and got his Master’s degree from Stanford University, USA, working now as a researcher in a company in Houston, Texas, USA.

Teaching Activity

Gifted with an inquisitive intelligence, and having great expertise in the field of computational mechanics, she was animated by the desire for progress and self-improvement all along her professional career. For 45 years she worked with competence and dedication teaching, within the same department, *Statics and Strength of Materials/Structural Mechanics*, becoming teaching assistant in 1970, Sn. lecturer in 1975, Associate professor in 1990 and full Professor in 1994, until her retirement in 2008. This dedication to educating and instructing students constituted her motivation in delivering, as a Honorary Professor, courses within the Master’s Programme of Studies in Structural Engineering, through English medium, between 2008 and 2012.

From the very start of her teaching career, 1975, to its end, 2008, she taught courses and conducted applied activities (seminars, lab works) for the following subject matters: Strength of Materials, drafted in Romanian and in English, Theory of Elasticity and Plasticity (in Romanian and in English), Calculus of Thin Curved Plates, Theory of Plane and Curved Plates, PC Programming and Use, Applied Informatics, Numerical Methods in Technology, Advanced Structural Calculus, Computer assisted design, Applied Informatics, Structural Analysis, Advanced Computational Methods, both in the Faculty of Civil Engineering for the specializations: Civil, Industrial and Agricultural Constructions, Railroads, Roads and Bridges and Building Services, and in the Faculty of Hydrotechnical Engineering, within the programs of study for engineers, Master’s and post-graduate courses, respectively.

Professor Ioana VLAD managed the students site practicum and the topographic practical works and conducted ample and enthusiastically sustained

research and design activities with her students. She was an advanced user of structural analysis software FEA: SAP 2000 (all versions), AXIS software, LUSAS software, ARCHON software, MATLAB software, SPSS software, a.s.o., being their promotor within the faculty.

Since she was continuously concerned with her development as a professional and an academic, **Professor Ioana VLAD** attended a series of specializations in Romania and abroad, such as: in 2004 participation to the Seminar organised by DAAD in Montenegro, 22-26 September, on DIPLOMA AND MASTER THESES OF YOUNG ENGINEERS – Education in the Balkans and integrating young graduates in Civil Engineering; in 2003, a training at The Twente University and IVLOS, The Institute for the Sciences of Education of Utrecht, The Netherlands, within the Leonardo da Vinci programme, contract no. RO-2002-89043-EX, in the field of quality management in higher education; in October 2001 she paid a study visit to The Netherlands within the project MATRA/PSO – MATO/RM/9/1 – *Developing a national strategy in assuring the quality of higher education in Romania*, financed by *The Netherlands*.

In April 1998 she participated in a TEMPUS mobility with the Metal Structures Department, Technical University of Athens, Greece; in 1996 she took part in the EUROHOT Seminar – European Community TEMPUS, JEP 2719RO, UTCB Bucharest. In March/April 1993 she won an individual TEMPUS training with Reading University, Engineering Mechanics Department, Great Britain.

Professor Ioana VLAD carried on a rich educational and instructional activity, besides her academic responsibilities. She elaborated and played an active role in developing numerous programs of study, as well as in the evaluation and monitoring of such programs. She published a series of documents among which one can mention: "The freshman's Guide" for the students in Civil Engineering, being afterwards involved in writing the same type of guide at university level. She contributed to the updating of teaching methodologies, by installing the Computer Assisted Teaching Software for the Strength of Materials studies in the Numerical Methods Laboratory. She sponsored the TUIasi library with approx. 150 volumes of her own handbooks; she insisted on using mathematical programming media in educational version for the Strength of Materials problem solving and implemented the use of the educational soft SAP 2000 by the 3rd year students in Railroads, Roads and Bridges for the study of Numerical Methods, as well as for the 5th year Civil Engineering students (English medium training). Between 1997 – 2000 she organised the Strength of Materials Contest for the 2nd year students in Hydrotechnical Engineering, while during 2001-2002 she initiated the same type of contest with the Civil Engineering students, local level. In 2001 she participated with the qualified contestants in the national competition, held in Cluj- Napoca.

Professor Ioana VLAD took an active part in the elaboration and implementation of the Programme MATO-RM/9/1 on quality management in higher education, contributing to the drawing up of the *Preliminary self-assessment report* and the *Self-assessment report* for the external auditing of the Programme of Civil Engineering studies (English medium training), in October 2002. She was also part of the commission for the preliminary audit of the Faculty of Aerospace Engineering, University „Politehnica”, Bucharest.

Research Activity

The distinguished **Professor IoanaVLAD** was actively engaged in multidisciplinary research fields, as her scientific portfolio shows it, in the spirit of innovation and dedication, of which we could mention: Mechanics of Deformable Solids (fundamental and inter-disciplinary research); Applied Theory of Elasticity and Plasticity; Numerical Methods in Engineering; Computer Assisted Design, as well as Quality assurance in the technical higher education in Romania.

The scientific contracts she took part in, within the department, or in collaboration with other departments or institutions, over her entire teaching career, are in excess of 70 (in approximately 30 being head of contract).

Between 1973 and 1992 she was head of project in scientific research contracts implemented with INCERC Iasi Branch, and institutes of design and research (IPCT) in the field of special structures behaviour (reservoirs, industrial halls, pneumatic roofs, etc.) to seismic actions. During 2003 – 2008 she participated in two CNCSIS grants and in a project on the urban seismic risk, financed by UE, its outcome being two scientific monographs for which she was a co-author, and participated in different workshops on this topic.

Among the significant participations in international scientific events we could mention: the conference *Performance Based Engineering (PBE)*, august 2004, Iasi; the 16th *ASCE Engineering Mechanics Conference*, July 16 -18 2003, University of Washington, Seattle, USA; UE Pre-accessing EU Project MATRA/PSO – MATO/RM/9/1 entitled „Development of national strategy for quality assurance in the Romanian higher education” in whose seminars she participated and presented 8 papers.

Published scientific works

Professor Ioana VLAD wrote, either as sole author or as co-author, over 80 scientific papers published in scientific journals or in the proceedings of some scientific conferences, in Romania or abroad. A selective list of her published works, between 1993 – 2005, is attached in the Annex to this article.

At the same time, she wrote and published 19 scientific books and monographs, of which 17 are teaching writings: handbooks, treatises, guides, etc, and two are monographs resulting from her scientific research. From all these, a monograph was published in the Republic of Moldova, 9 monographs were published by different publishing houses, 8 of them being in-house publishings and one being published online-web. Eight monographs are published in English, while one of them is in French. She was sole author or first author of 9 books. Among the relevant books we could mention: Ioana Missir Vlad, *Strength of Materials. Selected Problems*, Ed TehnoPress Iasi 2004- ISBN 973- 702-028-6; Ioana Missir Vlad, et al., *The Strength of Materials*, Ed. CERMI, 1998, ISBN-973-9378-51-X; Ioana Missir Vlad - *Strength of Materials - Combined States of Loading*, Ed. Tehnica Info Chişinău, 2002- ISBN 9975-63-171-1, as well as others.

Participation in academic community life

Being highly appreciated on a local and national scale, **Professor Ioana VLAD** was nominated and participated as a highly valued member in numerous scientific and professional communities, at a local or national level: member in the CNADTCU Commission of the Ministry of Education and Research, Civil Engineering Commission for granting the titles of associate professor and professor (2004 – 2009); CNCSIS Assessor; Head of Examination Board for the Civil Engineering (English medium training) graduates (2004 – 2008); member of competition boards to fill teaching positions in the Faculty of Constructions and Architecture, U.T. Iasi; member of the doctoral theses defense committee in U.T. Iasi and U.T. Cluj-Napoca She was a member of other professional associations at national level: The Professional Association of Roads and Bridges in Romania, The Romanian Society of Tunnels, The Academic Society *Anton Sesan*, The Genealogical Society *Sever Zota*.

Professor Ioana VLAD was, with good reason, a complex personality, both scientifically and culturally, endowed with remarkable competences, mastering many foreign languages: English, French, Russian, talented in painting and the fine arts. Ioana Missir was not a stranger to the artistic world. She liked to paint and she did it with talent. Unfortunately, the professional duties and the daily obligations did not give her time to express herself completely in his respect. She rarely painted and seldom exposed, mostly during some events held in the Technical University. In January 1980 she had a solo exhibition in Iasi, at the „Gh.Asachi”City Library. On that occasion, Aurel Leon, the art critic and journalist, wrote in the local weekly CRONICA: ”Convinced that artistic design is, first, an act of intelligence, Ioana Missir-VLAD strives, aided by an outstanding sensitivity, to outrank spontaneity instead of routine craft. And, to be able to impregnate her work with that nobleness which distinguishes itself by flair, the author starts from the design-awareness, conducted with engineering exactness, to the design-impression, that is the probity of art”.

Alongside her beautiful family, the distinguished **Professor Ioana VLAD** defended the essential values of the Romanian intelligentsia and was one of the outstanding female personalities in the field of Civil Engineering, which she markedly represented for more than 45 years. She was an exemplary mother and wife. She loved her family devotedly. A ruthless destiny made her die far from her country, in Houston, Texas, USA, on 18 January 2011, surrounded by her son’s family and her husband. Her remains rest in the Armenian graveyard of Iasi.

Through her entire professional and family life, the much regretted Professor Ioana Anca Miranda VLAD will always be a leading example, both educationally and scientifically, of probity and dedication and these lines written in memoriam are intended to pay a pious homage to the distinguished colleague and friend.

Gabriela M. Atanasiu

