

Professor Stefan Jerzy MEDWADOWSKI

Note written by Jan B. Obrębski, Warsaw, 9 Marc, 2018

1. ESSENTIAL BIOGRAPHICAL DATA ABOUT

The information listed below were collected from authorised, C.V. (written by red CALIBRI fonts) delivered by Professor S.J.Medwadowski by fax at 21 February, 1996 written down during interview in Nagoya and from Ref 1. We try to close of the attainments of Prof. S.J.Medwadowski, for wider circle of peoples.

Professor Stefan Jerzy Medwadowski born in 1924 in Poland in town Łódź, as the youngest - third child of general of Polish Army - Jan Aleksander Florian Medwadowski and mother Zofia Teodozja Medwadowska. His brother was civil engineer and associated professor of Łódź University of Technology. His sister was the author of plays for music theatre.

Education: In years 1936-1942 He was attending to gymnasium St. Staszica by Noakowskiego street in Warsaw. In period of German occupation it was secret school. Besides of it parallel He was attending to public school - to Technical Lyceum on Constructional Faculty, where were lectured such professors of Warsaw University of Technology as: Wierzbicki, Zarankiewicz and Otto. These Lyceum He finish in 1943. Next, He has attending through one year to High Technical School (**Warsaw University of Technology (Politechnika Warszawska) 1943-44,**) on Faculty of Civil Engineering, where was admitted without entrance exam. There He was studying up to the moment of Warsaw Uprising at 1.08.1944.

Arrested by German Secret State Police (Gestapo) in His birthday in round up on Krzywickiego street in Warsaw. He was shortly kept on "Pawiak Prison".

Military Service: Member AK, participated in the Warsaw Uprising 1944, com. 1st platoon, com. *Genowefa*, bat. *Harnas*.

During Warsaw Uprising He was active soldier of Native Army (Armia Krajowa - AK), under pseudonym "*Numer*" (Number). He fight in platoon 1 of company "*Genowefa*" - in battalion "*Harnaś*". He took the part in fights for church of "Saint Cross" (Świętego Krzyża) by Krakowskie Przedmieście street. Twice wounded and at the moment of finishing of Warsaw Uprising internee for six months in prisoner-of-war camp.

Education continued after Second World War: **Universita di Roma** in Italy He attest one year, 1945-46, **Polish University College – University of London, 1946-49** (3 years), obtaining **Diploma of Engineer** in January 1950, on Faculty of Civil Engineering with specialization *constructions.*, 1956.

The follow school to which He attend, is **University of California Berkeley, 1954-56,**, where in record time of 2.5 years attest doctor studies obtaining Doctor degree (**Ph.D.**) in June 1956

Professional Practice:

Through next years (1950-52) He works in London in the firms: *Trust Concrete Steel Company* and in *Lummus Company*. Then He remove himself over ocean to Toronto in Canada, where in the firm *Canadian National Railways* is designing buildings. It is period of years 1951-53.

After it He remove himself to Montreal where in firm *FEMCO* up to February 1954 govern by team of designers occupying with metallurgy objects. There He was designing many innovative structural solutions.

After doctorate He undertake work as *Chef Structural Engineer* in the firm *Consulting Engineers John Carollo Associates*. In His authorised CV Professor mention position of **Consulting Engineer, San Francisco, since 1958. Designer of the structures of numerous projects, including buildings and bridges. Many of the projects received awards for excellence of designing.** Simultaneously it is the fact, that in 1958 He found own firm, which is active up to the moment (2004?). For outstanding achievements in range of designing, He was rewarded several times by: *American Institute of Architects*, by *Progressive Architecture* and by *Association of Timber Producers*.

Teaching: For many years served on the Faculty of Civil Engineering on University of California Brekeley, 1958-89. He was working there in following periods:

- 1958-1964 He leads lectures on *Structural Mechanics* and from z *Bridge Designing*. This work He undertake on invitation of Prof. E.P. Popov.
- In years 1975-1989 up to retiring age - 65, He works second time on University of Berkeley in California, leading permanent lectures concerning of *Design and analysis of structural systems*. These lectures concern steel and reinforced structures, prestressed concrete and from timber. Besides of it He was lecturing: *Theory of Shells, Designing and analysis of large span roofs, Stability of beams, structural roofs and shells* and *Steel structures I and II*. In beginning He was employed „outside professor” – lecturer, and next as *adjoin professor* on second permanency. Crowning of His didactic activity was conferring the professor’s title by Board of Regents state of California.

2. OTHER FORMS OF SCIENTIFIC, DIDACTIC AND TECHNICAL WORKS OF PROFESSOR S.J. MEDWADOWSKI

Research: Published numerous papers on theory of plates, theory of shells, analysis and design of structures and aesthetics of structures in refereed journals.

Professor S.J. Medwadowski is the author app. 120 publications from domain of theory plates and shells (analytical and numerical methods) and on bar structures including beams under overhead travelling cranes.

Books: Co-editor of *Concrete Thin Shells*, published with A. Scordelis and Schnobrich by the ACI in 1971, and *Stability of Concrete Shells*, published with E.P. Popov by the ACI in 1980.

Conferences: He was one of the three members of *Steering Committee* (with A. Scordelis and E.P. Popov) of the IASS conferences at 1962 in San Francisco, and simultaneously main editor of the conference book. Besides of it He was editor of plenty conference publications of smaller rank.

Professional Associations: Chairman of Concrete Shells Committee, ASCE-ACI, 1979-83. He is the IASS member since from 1960. From 1970 in frames IASS (*International Association for Shell and Spatial Structures*) He was the Member of IASS Working Group No.5 on Concrete Shells, 1971-1983. Chairman of IASS Working Group No.5 on Concrete Shells, 1974-78, resulting in the publication of the *IASS Recommendations Concrete Thin Shells* in 1979; Editor-in-chief, *Bulletin of IASS*, 1983-91; Member of the Executive Council of IASS, 1973- ; Vice President of IASS, 1983-91; President IASS, 1991-2000; Past President 2000- . So, Professor Stefan Jerzy Medwadowski was Vice President of IASS through 9 years and President of IASS through 9 years. In 2000 in Istanbul during IASS Symposium has completed third terms (1991-2000) as President of the International Association of Shell and Spatial Structures.

In 2001 He was distinguished by title *Honorary member of IASS*.



Professor S.J. Medwadowski during opening ceremony of the Symposium IASS, Nagoya
9.10.2001

Distinctions: Elected Fellow ASCE, and Fellow ACI; Received the *Eduardo Torroja Medal of IASS* in 1990. Listed in *Who's Who in Engineering* and in *Who's Who in America*.

Honorary Member of IASS. At the 9 October 2001, during IASS Symposium in Nagoja, Japan, (9-14.10.2001). Professor S.J.Medwadowski was nominated as Honorary Member of IASS. It was given during Opening Ceremony.



Moment of nomination of Professor S.S.Medwadowski on Honorary Member of IASS at
9.10.2001

Pioneer of distinguished contributions in the field of space structures

Professor S.J.Medwadowski was awarded during the Fifth Internatinal Conference on Space Structures, organized by Faculty of Civil Engineering, University of Surrey, Guildford, Surrey, United Kingdom. Award was given by Space Structures Research Centre of the University of Surrey, UK, at 21 August 2002 during special Pioneers' Award Ceremony directly before closing Ceremony. The diploma was accepted in the name of Prof. S.J. Medwadowski, on His written authorization, by Prof. J.B.Obrębski, Warsaw, Poland.



Pioneers' diploma for Professor Dr S.J. Medwadowski

Honorary Professor of University of Warmia and Mazury, Olsztyn, Poland

During Sixth Scientific-Technical Conference on *Actual problems scientific-exploring of civil engineering*, Olsztyn-Kortowo, 25-26 April 2003, Prof. S.J. Medwadowski was nominated as Honorary Professor of University of Warmia and Mazury. The nomination was accepted in the name of Professor S.J. Medwadowski his brother-in-law Mr. W. Maciejewski. The nomination was handed in at 25 April 2003, at 11:35 during Opening Ceremony in aula of Institute of Civil and Sanitary Engineering on terrain of University of Warmia and Mazury, Kortowo, Olsztyn, str. Heweliusza 4.

Commemorative Medal with number 1 for Prof. S.J. Medwadowski, founded by Prof. J.B. Obrębski, Charman of Polish Chapter of International Association for Shell and Spatial Structures, in occasion of:

The XI th anniversary of LSCE from 1995 to 2005 & Ten Years of IASS Polish Chapter
in Warsaw at 12-14 September, 2005.

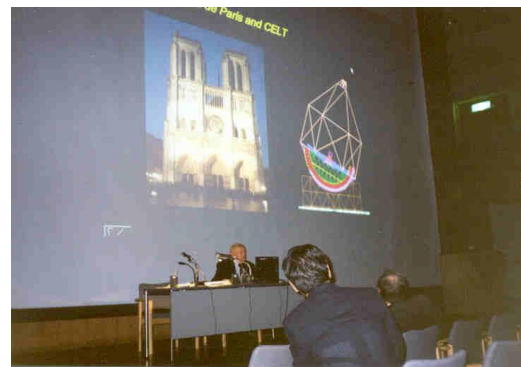
It was given in Warsaw, at 12.09.2005, [3]. The medal was dedicated for Professor as thanks for His activity:

- Participant of LSCE 1995, 96, 2002,
- Member of Advisory Panel LSCE 1995,
- Member of Honorary Committees LSCE 1998, 2002, 2004, 2005,
- Promoter of PC IASS,
- IASS President 1991-2000.

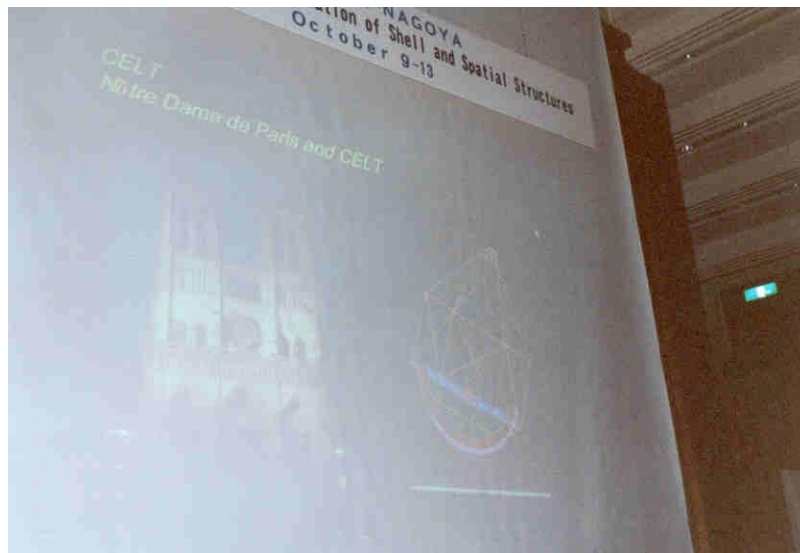
Honorary Member of IASS PCs. Also at the 12 September 2005, during **XI th anniversary LSCE** [4] the certificate was handed-in and accepted by His sister and brother-in-law Ms. & Mr. W.Maciejewski..

4. OUTSTANDING PROJECTS AND STRUCTURES:

Besides of just mentioned achievements, worthy of presentation is paper written by John F. Abel from Cornell University, Ithaca, NY, USA [1] under title - *Structures by Stefan J. Medwadowski*. The paper presents more interesting structures designed by Professor. It is worthy to turn attention, that Professor is one of main designers of series of the biggest optical telescopes in the world. In the beginning with diameter of mirror 10m, and lately with diameter 30m! The moving part of such telescope is similar to façade of Notre Dame cathedral in w Paris. Below are listed some more important project, only, quoted after Ref [1].



Professor S.J. Medwadowski during inauguration lecture of IASS Symposium in Nagoya, 9.10.2001)



Comparison of size of optical telescope designed with participation of prof. S.J. Medwadowski, with façade of Notre Dame cathedral in w Paris

4.1. Arenas

- Athletic Center at the University of California at Santa Cruz (1964), steel space frame
- Maples Pavilion of Stanford University in Palo Alto (1968), multipurpose arena seats 5,500
- Spanos Center at the University of the Pacific in Stockton (1981) seats 6,000 glued-

laminated timber, has a radial grid of wood trusses.

- Multipurpose Center at the University of California at Santa Barbara, 1984, seats 6,000, roof is a grid of glued-laminated wood trusses.

4.2. Theatres and churches

- United Church of Squaw Valley, undertaken with architect Roy Waranabe, 1960
- Zellerbach Theater and Playhouse at University of California at Berkeley, 1968, 2,000-seat theatre and 600-seat playhouse, with cooperation with architects Demars and Wells..

4.3. Concrete buildings

- Calaveras Cement Company in Redding, 1960
- The Summit at 999 Green Street in San Francisco, 32-level building, 1965
- The Mount Angel Abbey Library

4.4. Pedestrian bridge

- Pedestrian bridge across a wooded canyon on the campus of the University of California at Santa Barbara, 200-foot span, 1966.

4.5. Spatial structures for optical telescopes

- Keck Telescope at Manua Kea, Hawaii, an alt-az telescope with a 10-meter diameter mirror, 1979-1991 (completed)
- Hubby-Eberly Spectroscopic Survey Telescope (SST) for Mc Donald Observatory in Texas, nearly 10-meter segmented mirror, 1997.
- California Extremely Large Telescope (CELT), segmented mirror of 30m in diameter, under designing.

5. CONNECTIONS OF PROFESSOR S.J. MEDWADOWSKI WITH POLAND

It is worthy to mention, that scientific and didactic attainments is well known in Poland. They say, that from His books were learning himself Professors: Prof. dr hab. Jan Badur and Prof. dr hab. Zofia Kurlandzka.

Professor S.J. Medwadowski many times was visiting Poland and is up to now excellently oriented himself in polish scientific and technical problems and achievements. He many times has serving us with His advise and help. He always willingly confess himself to Polish pedigree.

6. PROFESSOR S.J. MEDWADOWSKI, LSCE AND HISTORY OF IASS PC

The first international conference under name – Lightweight Structures in Civil Engineering was held in Warsaw at 25-29.09.1995, (LSCE'95). It was organized by Faculty of Civil Engineering of Warsaw University of Technology. During this conference, Prof S.J. Medwadowski as IASS President publicly express His suggestion, that in Poland should be formed IASS Chapter. Therefore, according to this recommendation, under initiative of Prof. J.B. Obrębski such Polish Chapter (*Polska Grupa IASS*) was settled up by eleven members on the first meeting at February 23, 1996, held on Warsaw University of Technology – Faculty of Civil Engineering, in Institute of Structural Mechanics. These founders were from Technical Universities in: Warsaw, Cracow, Łódź, Poznań, Rzeszów, Szczecin and Wrocław.

The second organizing meeting was held at June 28, 1996. With time joint us colleagues even from Ukraine...



Stephane Du Chateau, Z.S. Makowski and S.J. Medwadowski three great Poles during banquet in Forum Hotel

For the reason of not supporting by Faculty of Civil Engineering of WUT, the idea to continue the scientific meetings on LSCE, organization of smaller seminars or colloquiums was continued by Prof. J.B. Obrębski and by colleges forming IASS Polish Chapter. On the first Local Seminar of IASS Polish Chapter, held at 6 December 1996, was arriving specially from USA, IASS President Prof. S.J. Medwadowski. Many thanks for His effort.

Polish Chapter have organised annual scientific conferences: "*local*" or "*international*" (with foreign lecturers) in each first Friday of every December, with except of years when were organised International Colloquiums of IASS Polish Chapter in 1998, 2005 and International IASS Symposium, Warsaw, 2002. So, there were held three bigger meetings with international, even world character: 1998, 2002 and 2005. The biggest, organized as IASS annual Symposium was in 2002. The last one - LSCE 2005 is only a little bigger for the reason of tenth anniversary of IASS PC and these conferences.

So, up to the moment (1995-2017) were organised in each year 23 meetings of different size and range. In it were 14 local and 9 international conferences all under the same name LSCE.

Proceedings from all such conferences are printed in high quality in English under title "*Lightweight Structures in Civil Engineering*". They are distributed to several biggest libraries in Poland - in it National Library in Warsaw and Jagiellonian Library in Cracow. This series of books is in fact yearbook, which up to the moment has 23 editions. The 20 first were edited and issued by Prof. J.B. Obrębski.

Thanks of support of Professor S.J. Medwadowski was organised in Poland at 24-28.06.2002 international - world annual IASS Symposium also under name "*Lightweight Structures in Civil Engineering*". Previous such Symposium was organised in Kielce, Poland at 1973 (*Spatial and Shell Structures*) and next in Wrocław in 2013 (not LSCE...).

6. FINAL REMARKS

In this way, we all members of IASS Polish Chapter, try to express our warm thanks for Professor S.J. Medwadowski for his moral support and encouraging us to cooperate with IASS. It was bringing us to develop systematically our investigations over lightweight structures in civil engineering. Wider information over already history and activity of IASS Polish Chapter is given in separate pages of this document.

Moreover, we all, members of IASS Polish Chapter congratulate for Professor Dr S.J. Medwadowski of His excellent scientific and technical achievements.

7. REFERENCES

1. J.F. Abel: Structures by Stefan J. Medwadowski. Journal of the International Association for Shell and Spatial Structures, Vol. 41, (2000) n.3, 137-146
2. J.B. Obrębski: Honours for professor S.J. Medwadowski in years 2001 to 2003, LSCE 2003, pp.5-6
3. J.B. Obrębski: Forewords to LSCE 2005 book. LSCE 2005, pp.10-11.
4. J.B. Obrębski: Professor S.J. Medwadowski Honorary Member of IASS Polish Chapter, LSCE 2005, pp. 12-14
5. Authorised, C.V. (written by CALIBRI fonts) delivered by Professor S.J. Medwadowski by fax at 21 February, 1996 written down during interview in Nagoya

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Professor S.J. Medwadowski during opening ceremony of LSCE'95 in *Mala Aula* in main building of Warsaw University of Technology



Moment of nomination of Professor S.S. Medwadowski on Honorary Member of IASS at 9.10.2001

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