



Aurel Stratan

WORK EXPERIENCE

2020 – CURRENT Romania

PROFESSOR POLITEHNICA UNIVERSITY TIMISOARA

Lectures: Structural Dynamics and Earthquake Engineering (undergraduate); Basis of Structural Design (undergraduate); Performance Based Seismic Design (master); Seismic Assessment and Retrofit of Existing Buildings (master). Project: Steel Structures (undergraduate).

2017 – CURRENT Romania

HEAD OF LABORATORY POLITEHNICA UNIVERSITY OF TIMISOARA

Materials and Structural Testing Laboratory

2016 – CURRENT Romania

PHD COORDINATOR POLITEHNICA UNIVERSITY OF TIMISOARA

2008 – 2020 Romania

ASSOCIATE PROFESSOR POLITEHNICA UNIVERSITY OF TIMISOARA

2005 – 2008 Romania

LECTURER POLITEHNICA UNIVERSITY OF TIMISOARA

1997 – 2008 Timisoara, Romania

STRUCTURAL ENGINEER (PART-TIME) SC BRITT SRL

2002 – 2005 Romania

ASSISTANT PROFESSOR POLITEHNICA UNIVERSITY OF TIMISOARA

2001 – 2002 Romania

ASSISTANT POLITEHNICA UNIVERSITY OF TIMISOARA

EDUCATION AND TRAINING

2016 Romania

HABILITATION IN CIVIL ENGINEERING AND INSTALLATIONS Granted by the Ministry of National Education and Scientific Research

Habilitation procedure carried out at the Politehnica University of Timisoara

2004 Romania

PHD IN CIVIL ENGINEERING Politehnica University of Timisoara

Magna cum laude distinction

● LANGUAGE SKILLS

Mother tongue(s): **ROMANIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C2	C1	C1	C2
RUSSIAN	C2	C2	B1	B1	B2
ITALIAN	B1	B1	A2	B1	A1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● ADDITIONAL INFORMATION

PUBLICATIONS

General

- Papers in journals and conference proceedings indexed by Web of Science: 39
- Papers in journals and conference proceedings indexed by other international databases: 41
- Books and book chapters as author: 22
- Books as editor/coordinator: 3
- Citations excluding self-citations (Web of Science): 276
- H-index: WOS - 11, SCOPUS - 12, Google Scholar - 17

Selective list of publications

Stratan, A. (2007). "Dynamics of Structures and Earthquake Engineering", Ed. Orizonturi Universitare, Timisoara, ISBN 978-973-638-388-0, 223 pages (in Romanian).

Vamvatsikos, D., Bakalis, K., Kohrangi, M., Pyrza, S., Castiglioni, C. A., Kanyilmaz, A., Morelli, F., Stratan, A., D'Aniello, M., Calado, L., Proença, J. M., Degee, H., Hoffmeister, B., Pinkawa, M., Thanopoulos, P., and Vayas, I. (2020). "A risk-consistent approach to determine EN1998 behaviour factors for lateral load resisting systems." *Soil Dynamics and Earthquake Engineering*, 131, 106008.

Voica, T. F., & Stratan, A. (2022). Controlling Drift Demands in Steel Moment Resisting Frames at Frequent Earthquakes Using Tuned Mass Dampers. In F. M. Mazzolani, D. Dubina, & A. Stratan (Eds.), *Proceedings of the 10th International Conference on Behaviour of Steel Structures in Seismic Areas* (pp. 726–733). Springer International Publishing. https://doi.org/10.1007/978-3-031-03811-2_79

Dubina, D., Stratan, A., Dinu, F. (2008). "Dual high-strength steel eccentrically braced frames with removable links". *Earthquake Engineering & Structural Dynamics*, Vol. 37, issue 15, pp. 1703-1720.

Fajfar, P., Dolsek, M., Marusic, D. and Stratan, A. (2006). "Pre- and post-test mathematical modelling of a plan-asymmetric reinforced concrete frame building". *Earthquake Engng Struct. Dyn.* 2006; 35: 1359–1379.

Dubina, D., Ciutina, A., Stratan, A. (2001). "Cyclic Tests of Double-Sided Beam-to-Column Joints", *ASCE, Journal of Structural Engineering*, Vol.127, No.2, pp.129-136.

Dubina, D. and Stratan, A. (2002). "Behaviour of welded connections of moment resisting frames beam-to-column joints", *Engineering Structures*, Vol. 24, No. 11, 1431-1440.

Ioan, A., Stratan, A., Dubină, D., Poljanšek, M., Molina, F. J., Taucer, F., Pegon, P., and Sabău, G. (2016). "Experimental validation of re-centring capability of eccentrically braced frames with removable links." *Engineering Structures*, 113, ISSN 0141-0296, 335–346.

Stratan, A. and Dubina, D. (2004). "Bolted links for eccentrically braced steel frames". *Proc. of the Fifth AISC / ECCS International Workshop "Connections in Steel Structures V. Behaviour, Strength & Design"*, June 3-5, 2004. Ed. F.S.K. Bijlaard, A.M. Gresnigt, G.J. van der Vegte. Delft University of Technology, The Netherlands. pp. 223-232

Dubina, D., Stratan, A., Vulcu, C., and Ciutina, A. (2014). "High strength steel in seismic resistant building frames." *Steel Construction: Design and Research*, 7(3), 173–177.

HONOURS AND AWARDS

2019

"Anghel Saligny" award of the Romanian Academy granted to Cristian Vulcu, Aurel Stratan and Adrian Ciutina for the series of papers with the common title "Beam-to-CFT high-strength joints with external diaphragm".

2008

1st award at the contest "Technical Book 2008" for the book "Structural dynamics and earthquake engineering (in Romanian)" awarded by the General Association of Engineers from Romania (AGIR), Timis branch.

2007

"ECCS European Award for Steel Structures 2007" for the design of the Tower Center International building (D. Dubina, F. Dinu, A. Stratan, A. Ciutina).

2007

1st prize of the Romanian Association of Structural Engineering (AICPS) for the design of the Tower Center International building (D. Dubina, F. Dinu, A. Stratan, A. Ciutina).

2004

"Best Paper Award – ICTWS'04" for the paper "Monotonic and cyclic performance of joints of cold formed steel portal frames", by D. Dubina, A. Stratan, A. Ciutina, L. Fulop & Zs. Nagy.

2004

Honour of the General Association of Engineers from Romania (AGIR) For the book "Buildings in high-seismicity areas (in Romanian)". Coord: Dubina, D. and Lungu, D.; auth: Aldea, A., Arion, C., Ciutina, A., Cornea, T., Dinu, F., Fülöp, L., Grecea, D., Stratan, A., Văcăreanu, R.

2003

"ECCS European Award for Steel Structures 2003" for the design of the building Banc Post Timisoara (D. Dubina, F. Dinu, A. Stratan, A. Ciutina).

ORGANISATIONAL SKILLS

Project and team management experience, gained within national and international research projects as coordinator, as well as head of the laboratory of the CMMC department.

COMMUNICATION AND INTERPERSONAL SKILLS

Teamwork capability gained through my experience within research projects; capability to adapt to multicultural environments, gained during international research stages; communication skills gained during teaching experience.

JOB-RELATED SKILLS

Seismic-resistant design of steel and composite structures; Modelling of nonlinear response of structures; Seismic performance assessment; Vibration measurements and modal analysis of structures; Experimental techniques; Computer-aided design.

RESEARCH PROJECTS AND CONTRACTS

General

- International research projects obtained through competition: 11 (as member in the research team).
- National research projects obtained through competition: 21 (5 as coordinator; 16 as member in the research team).
- Research/consultancy contracts: 15 (6 as coordinator; 9 as member in the research team).

Selective list of research projects as coordinator

512PED/2020 (2020-2022). Hybrid replaceable links from stainless and high-strength steel (HYLINK).

Beneficiary: UEFISCDI. Value: 392,490.00 RON.

BC56/26.06.2023, Experimental tests on buckling restrained braces for the „Maria Skłodowska Curie” clinical hospital. Beneficiary: KEMFORT STEEL IND S.R.L. Value: 68,068.00 RON.

BC98/2021 "Vibration measurements on steel towers". Beneficiary: SC DUAL MAN SRL.

Contract no. 99/2014, CodePN-II-PT-PCCA-2013-4-2091 (2014-2017). Implementation into Romanian seismic resistant design practice of buckling restrained braces (IMSER). Beneficiary: UEFISCDI. Value: 442,558.00 RON.

12019 / 25.09.2015 (2015-2017), "SC3.T2 Steel - Joints and Connections according to EN 1993-1-8".

Beneficiary: NEN – Netherlands Standardization Institute. Value: 18,750.00 EUR.

BC79/04.07.2011 (2011-2012): "Testing and validation of braces and their connections for the Smart Park building in Bucharest". Beneficiary: SC Popp & Asociații SRL. Value: 78,666.84 RON.

Selective list of research projects as member of the research team

No. 754048 (2017-2019). "Valorisation of knowledge for European pre-QUALified steel JOINTS (EQUALJOINTS-PLUS)". Financing authority / Beneficiary: European Commission - Research Fund for Coal and Steel. Val.: 75,887.50 EUR

No. 709434 (2016-2017). "Valorization of innovative anti-seismic devices (INNOSEIS)". Financing authority / Beneficiary: European Commission - Research Fund for Coal and Steel. Val.: 40,164.00 EUR

RFS2-CT-2014-00022 (2014-2015). "Steel based applications in earthquake-prone areas (STEELEARTH)". Financing authority / Beneficiary: European Commission - Research Fund for Coal and Steel.

RFSR-CT-2013 – 00021 (2013-2016). "European pre-QUALified steel JOINTS (EQUALJOINTS)" (authorised contact person). Financing authority / Beneficiary: European Commission - Research Fund for Coal and Steel. Val.: 137,022.00 EUR.

JRC N° 31817 / 24.09.2010 (2010-2014). "Full-scale experimental validation of dual eccentrically braced frame with removable links (DUAREM)". Transnational Access within the framework of Grant Agreement No. 227887. Beneficiary: European Commission.

RFSR-CT-2009-00024 HSS-SERF 01.07.2009-30.06.2013. "High Strength Steel in Seismic Resistant Building Frames - HSS-SERF", Financing authority / Beneficiary: European Commission - Research Fund for Coal and Steel. Value: 101,736 EUR.

Investment grants

Contract no. 662/8.08.2014, project POS CCE ID1827/SMIS48741 "Platforma integrată de cercetare-dezvoltare pentru comportarea construcțiilor la acțiuni extreme (ACTEX)", Competiția POSCCE-A2-O2.2.1-2013-1, Programul Operațional Sectorial - Creșterea Competitivității Economice, Axa prioritară 2: Competitivitate prin Cercetare, Dezvoltare Tehnologică și Inovare, Operațiunea: 2.2.1. Dezvoltarea infrastructurii CD existente și crearea de noi infrastructuri CD. (member in management team). Val.: 19,632,036.00 RON

MEMBER IN TECHNICAL COMMITTEES AND PROFESSIONAL ORGANIZATIONS

Technical committee TC13 "Seismic Design" of the European Convention for Constructional Steelwork (ECCS) - member and technical secretary.

CEN/TC 250/SC 3/WG8 "Eurocode 3: Design of steel structures - Part 1-8: Design of joints ", European Committee for Standardization (CEN).

CEN/TC 250/SC 8 "Eurocode 8: Earthquake resistance design of structures", European Committee for Standardization (CEN).

Technical committee ASRO/CT 343 "Basis of Design and Structural Eurocodes", Romanian Standards Association (ASRO).

Technical committee CTS4 "Actions on constructions", Ministry of Regional Development and Public Administration (MDRAP).

AICPS - Romanian Association of Structural Engineers.

APCMR - Romanian Association of Steelwork Producers.

CODE DRAFTING ACTIVITY (SELECTIVE LIST)

EN 1993-1-8. Member in the Project Team SC3.T2 "Steel - Joints and Connections according to EN 1993-1-8" (2015-2018)

P100-1/2013. "Seismic design code – Part I – Design rules for buildings (in Romanian)". Volume I and II. The Official Journal of Romania, no. 558 bis/2013.

Elaboration of the revised version of chapter 6 of the code (Design of steel structures), as well development of corresponding commentaries and design examples.

Development of Romanian versions of EN 1993-1-5, EN 1993-1-10 and EN 1993-1-12.

Member in the drafting team of national annexes to EN 1993-1-5, EN 1993-1-10, EN 1993-1-12 and EN 1998-1.

GP 082-03. "Design guide for ductile connections of steel structures in seismic areas (in Romanian)".
Bul. Constr. Vol. 16, 2004, p. 3-58.

INVITED LECTURES

06/12/2018 – 07/12/2018

Training course on "Design of Steel Structures for Buildings in Seismic Areas", Brussels, Belgium, organised by the European Convention for Constructional Steelwork (ECCS).

Lectures by Raffaele Landolfo, Dan Dubina, Mario D'Aniello, Aurel Stratan.

01/09/2006 – 08/09/2006

Invited Researcher at VTT – the Technical Research Centre of Finland in Espoo with a lecture on "Characterization of seismic action: an engineer's view".

MEMBER IN THE SCIENTIFIC COMMITTEE OF CONFERENCES (SELECTIVE LIST)

The 10th International Conference on Behaviour of Steel Structures in Seismic Areas STESSA 2021, Timisoara, Romania, 26-28 May 2021.

The 9th European Conference on Steel and Composite Structures, Eurosteel 2020, Sheffield, UK, 9-11 September 2020.

A 16-a Conferință Națională de Construcții Metalice, Timișoara, 13-14 iunie 2019.

14th Nordic Steel Construction Conference – Nordic Steel 2019, 18–20 September 2019, Copenhagen, Denmark.

The 9th International Conference on Behaviour of Steel Structures in Seismic Areas STESSA '18, Christchurch, New Zealand, 14-17 February 2018.

The 8th European Conference on Steel and Composite Structures, Eurosteel 2017, Copenhagen, Denmark, 13-15 September 2017.

PEER REVIEW

WOS journals: 43 (<https://www.webofscience.com/wos/author/record/1395184>)

(21) Engineering Structures; (7) Bulletin of Earthquake Engineering; (3) Earthquake Engineering & Structural Dynamics; (3) Structures; (2) Journal of Structural Engineering; (2) Soil Dynamics and Earthquake Engineering; (2) Steel Construction - Design and Research; (1) Journal of Constructional Steel Research; (1) Advances in Civil Engineering; (1) Steel & Composite structures

STRUCTURAL DESIGN (SELECTIVE LIST)

2005

Bucharest Tower Center, bdul Ion Mihalache nr. 15-17, Sector 1, Bucharest. The building has three basement levels, 26 floors and a total height of 106.3 m.

2001

LINDAB Administrative Building, Soseaua de Centură no. 8, Stefanestii de Jos, Ilfov. Three storey composite steel-concrete structure.

2001

Banc Post Timisoara Headquarters, B-dul Mihai Eminescu nr.2/A, Timisoara. Four storey steel structure.

TRAINING COURSES

10/11/2010 – 12/11/2010

Preparatory Course on Pseudodynamic Experimental Testing, European Laboratory for Structural Assessment (ELSA), Joint Research Center (JRC), Ispra, Italy.

18/06/2007 – 22/06/2007

Course "New Approaches to Analysis and Testing of Mechanical and Structural Systems".
International Centre for Mechanical Sciences, Udine, Italy.

10/2001 – 08/2002

Research stage at the University of Ljubljana, Slovenia, within the European project SAFERR (Safety Assessment for Earthquake Risk Reduction)

1999

Two research stages at the University of Naples "Federico II", Italy, within the research project Copernicus "RECOS" - Reliability of Moment Resistant Connections of Steel Building Frames in Seismic Areas

18/10/1999 – 20/10/1999

Training course "Seismic Resistant Steel Structures. Progress and Challenge". International Centre for Mechanical Sciences, Udine, Italy
