



Universitatea Tehnică din Cluj-Napoca  
Facultatea de Construcții  
Departament de Structuri  
**Conf. dr. ing. Zsolt NAGY**

## **L I S T A**

### **lucrărilor științifice în domeniul disciplinelor din postul didactic**

#### **A. Teza de doctorat**

STUDIUL SOLUȚIILOR CONSTRUCTIVE ȘI PERFORMANȚELOR STRUCTURALE ALE HALELOR UȘOARE CU STRUCTURA REALIZATĂ DIN PROFILE DE OȚEL FORMATE LA RECE

Teze de doctorat ale UPT, Seria 5, Nr. 3, Editura Politehnica, 2006, 188 pagini, 124 figuri, 20 tabele. ISSN:1842-581X, ISBN (10):973-625-389-9, ISBN (13):978-973-625-389-8

#### **B. Cărți si capitole în cărți publicate în ultimii 10 anii**

##### **Internaționale– în colaborare:**

1.Publicație ECCS nr. 21: „The Testing of Connections with Mechanical Fasteners in Steel Sheeting and Sections”, ISBN 92-9147-000-91

2.Publicație ECCS nr. 123: „Worked examples according to EN 1993-1-3 Eurocode 3, Part 1.3”, ISBN 92-9147-000-86



## Naționale – prim autor :

3. Studiul soluțiilor constructive și performanțelor structurale ale hanelor ușoare cu structura realizată din profile de oțel formate la rece, ISBN 973-625-389-9

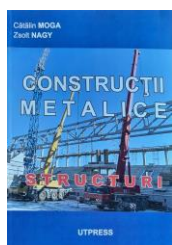


## Naționale – în colaborare:

4. Calculul și proiectarea construcțiilor din profile metalice cu pereți subțiri formate la rece, ISBN 973-86509-4-1



5. Construcții metalice - Structuri, ISBN 978-606-737-599-2



## Editor :

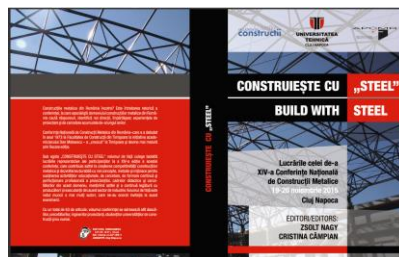
6."Construiește cu STEEL – Ediția 1” Volumul seminarului organizat cu ocazia aniversării profesorului VASILE PĂCURAR la 70 de ani, ISBN 978-973-713-271-0,



7."Construiește cu STEEL – Ediția 2” Volumul seminarului organizat la Cluj, ISBN 978-973-713-286-4,



8. "Construiește cu "steel" : lucrările celei de-a XIV-a Conferințe Naționale de Construcții Metalice”, Volumul conferinței organizat la Cluj, ISBN 978-973-713-334-2,



9. Rolul inginerului proiectant de structuri, ISBN 978-973-0-36192-6



### C. Lucrări indexate ISI/BDI publicate - Reviste

1. Nagy, Zs; Bacs, B. ; Kelemen A. ; Sanduly, A.; Nagy O. ; Barnabas L. , Rafter-purlin connection stiffness impact on the stress skin effect of corrugated sheet claddings, Journal of Thin-Walled Structures, <https://doi.org/10.1016/j.tws.2023.110615>
2. Nagy, Zs; Kelemen. A, Nedelcu M., The influence on portal frame buckling of different cladding systems—A comparative numerical study considering stressed skin effect, Journal of Thin-Walled Structures , <https://doi.org/10.1016/j.tws.2022.110310>
3. G. Taranu, V. Ungureanu, Nagy, Zs; M. Stratulat, I. O. Toma, S. G. Luca, Shake table test and numerical analyses of a thin-walled Cold-Formed Steel structure: Part 1— Investigation of the structural skeleton without claddings, Journal of Thin-Walled Structures, <https://doi.org/10.1016/j.tws.2022.110258>
4. Zs. Nagy, A. Sánduly, Upright Base Connection Impact on Structural Design of Steel Storage Rack Systems in Seismic Zones, Proceedings of the 10th International Conference on Behaviour of Steel Structures in Seismic Areas, DOI: 10.1007/978-3-031-03811-2\_125
5. Zs. Nagy, M. Nedelcu, A. Dező, Stabilization effect on portal frames given by stressed-skin action of sandwich panels, Proceedings of The Seventh International Conference on Structural Engineering, Mechanics and Computation, Cape Town, South Africa, 2-4 September 2019
6. Zs. Nagy, A. Dező, A.A. Muresan, Parametric study of cold formed steel joints using the component method, Proceedings of The Seventh International Conference on Structural Engineering, Mechanics and Computation, Cape Town, South Africa, 2-4 September 2019
7. Zs. Nagy, A. Muresan, R. Fodor, Experimental Investigations for Joints Made by Cold-Formed Sigma Profiles, in Proceedings of 17-th edition International Technical-Scientific Conference Modern Technologies for the 3-rd Millennium, 4-5 April, 2019 - Oradea (Romania), pp/247 – 251, ISBN 978-88-87729-61-0
8. Zs. Nagy, R. Ballok and A. Dező, FEM Investigation of Cold-Formed Joints for Multi-Storey Steel Frames in Proceedings of 17-th edition International Technical-Scientific Conference Modern Technologies for the 3-rd Millennium, March 22-23, 2018 - Oradea (Romania), pp/329 – 334, ISBN 978-88-87729-49-8
9. Nagy, Zsolt; Gîlia, Lucian , Călin Neagu , EXPERIMENTAL INVESTIGATIONS OF COLD-FORMED JOINTS FOR MULTI-STOREY STEEL FRAMED STRUCTURES, Proceedings of the Romanian Academy Series A-Mathematics Physics Technical Sciences Information Science, ISSN : 1454-9069, Volum 18, Nr. 3/2017, pp : 256-264

10. Zs. Nagy, A. Pop, I. Moiş and R. Ballok, Stressed Skin Effect on the Elastic Buckling of Pitched Roof Portal Frames (extended version of conference article), Journal of Structures, Volume 8 , pp/227 – 244, 2016  
DOI: <http://dx.doi.org/10.1016/j.istruc.2016.05.001>
11. Nagy, Zsolt; Gîlia, Lucian; Ballok, Robert, Romanian application of cold-formed steel beams with screwed corrugated webs, Steel Construction 6 (2013) ISSN 1867-0520, Journal for ECCS members - European Convention for Constructional Steelwork, No. 2, published by Ernst &Sohn pp/139-143
12. Zs. Nagy, L. Fülöp, A. Talja, ARE WE TOO CAPITALISTS FOR A COMFORTABLE LIFE? BUSINESS MODELS FOR FUTURE AND EXISTING FLAT BUILDING ADMINISTRATION, QIEM 2012 Proceedings, Special Issue of the Journal “Quality-Access to Success, Vol. 13, S5, November 2012, indexed in Elsevier SciVerse Scopus (Dec. 2012), pp. 205-210
13. P. Pernes, Zs. Nagy, FE modeling of cold-formed steel bolted joints in pitch-roof portal frames, Acta Technica Napocensis: Civil Engineering & Architecture Vol. 55, No. 3 pp. 234-242 (2012)
14. P. Pernes, Zs. Nagy, C. Câmpian, M. Pop, Optimized sections for cold formed steel channel profiles under compression and bending according to EN1993-1-3, Acta Technica Napocensis: Civil Engineering & Architecture Vol. 55, No. 3 pp. 243-250 (2012)
15. Zs. Nagy, D. Dubina, THERE IS POSSIBLE TO BUILD LOW RISE MULTI STOREY COLD-FORMED STEEL FRAMED STRUCTURES IN ROMANIA?, BULETINUL INSTITUTULUI POLITEHNIC DIN IAȘI, Publicat de Universitatea Tehnică „Gheorghe Asachi” din Iași, Tomul LIV (LVIII), Fasc. 4, 2011, Secția CONSTRUCȚII - ARHITECTURĂ, pp. 97-108
16. Zs. Nagy, Z. Kiss, I.M. Cristuțiu, Penthouse Steel Structure for a Five Story Building – Extension of the “Sigma” Office Building, Cluj-Napoca, Romania, Acta Technica Napocensis: Civil Engineering & Architecture Vol. 54 No. 2 pp. 135-143 (2011)
17. L. Gîlia, Zs. Nagy, V. Păcurar, Structural Behavior of Corrugated Web Cold-formed Girders, Acta Technica Napocensis: Civil Engineering & Architecture Vol. 53, pp.221-230 (2010)
18. D. Dubina, V. Ungureanu, A. Stratan, Zs. Nagy, FULL – SCALE TESTS ON COLD-FORMED STEEL PITCHED-ROOF PORTAL FRAMES WITH BOLTED JOINTS, Advanced Steel Construction Vol. 5, No. 2, pp. 175-194 (2009)

**Lucrări publicate în reviste și volume de conferințe cu referenți**

1. Zsolt NAGY, Zoltán KISS, Andrea KELEMEN, Károly BÁLINT, Annabella SÁNDULY, Case study: Roof truss structure with large cut out and elliptic glazing surface, Proceedings of the IASS Annual Symposium 2020/21 and the 7th International Conference on Spatial Structures Inspiring the Next Generation 23 – 27 August 2021, Guildford, UK, S.A. Behnejad, G.A.R. Parke and O.A. Samavati (eds.) – *Paper selected for the IASS Journal – under publication*
2. Zs. Nagy, A. Kelemen, A. Sánduly, 3D scanning applications in structural design, IABSE Symposium, Prague 2022: Challenges for Existing and Oncoming Structures At: Prague, DOI: 10.2749/prague.2022.1079
3. Zs. Nagy, A. Kelemen, G. Zaharia, B. Bács, Comparative study between stressed skin effect of trapezoidal sheet and sandwich panel roof cladding, Wiley Online Library, ce papers vol, 4, issue 2-4 <https://doi.org/10.1002/cepa.1312>
4. Zs. Nagy, M. Nedelcu, A. Dező, Stabilization effect on portal frames given by stressed-skin action of sandwich panels, Proceedings of The Seventh International Conference on Structural Engineering, Mechanics and Computation, Cape Town, South Africa, 2-4 September 2019
5. Zs. Nagy, A. Dező, A.A. Muresan, Parametric study of cold formed steel joints using the component method, Proceedings of The Seventh International Conference on Structural Engineering, Mechanics and Computation, Cape Town, South Africa, 2-4 September 2019
6. Zs. Nagy, A. Dező and R. Ballok APPLICATION OF THE COMPONENT METHOD FOR COLD FORMED JOINTS ASSISTED BY FINITE ELEMENT ANALYSIS, Proceedings of The Eighth International Conference on THIN-WALLED STRUCTURES - ICTWS 2018 Lisbon, Portugal, July 24-27, 2018
7. Zs. Nagy, I. Mois, A. Pop and A. Dező, THE INFLUENCE OF PURLIN-TO-BEAM CONNECTION STIFFNESS IN STRESS SKIN ACTION ON PORTAL FRAMES Proceedings of The Eighth International Conference on THIN-WALLED STRUCTURES - ICTWS 2018 Lisbon, Portugal, July 24-27, 2018
8. Zs. Nagy and R. Ballok , LOCAL AND GLOBAL STABILITY ANALYSIS OF CFS STRUCTURAL MEMBERS WITH PARTICULAR SHAPES USING SPOT WELDING TECHNOLOGY, Proceedings of The International Colloquium on Stability and Ductility of Steel Structures – SDSS 2016, 30 May – 01 June 2016, Timisoara, Romania
9. Zs. Nagy, V. Ungureanu, D. Dubina and R. Ballok, EXPERIMENTAL INVESTIGATIONS OF COLD-FORMED STEEL TRAPEZOIDAL BEAMS OF SCREWED CORRUGATED WEBS, Proceedings of The International Colloquium on Stability and Ductility of Steel Structures – SDSS 2016, 30 May – 01 June 2016, Timisoara, Romania
10. Zs. Nagy, A. Pop, I. Moiş and R. Ballok, Stressed Skin Effect on the Elastic Buckling of Pitched Roof Portal Frames, Proceedings of The Eighth International Conference on Advances in Steel Structures, 21-24 July 2015 - Lisbon, Portugal
11. Kiss, Z., Balint, K., Toader, N., Nagy, Z., A long span structure in Romania (2013) Long Span Bridges and Roofs - Development, Design and Implementation, PUBLISHER: International Association for Bridge and Structural Engineering (IABSE), ISBN: 9783857481284, DOI: 10.2749/222137813815776313

12. Zs. Nagy, M. Cristuțiu, "Required performance level of an existing building for overroofing", Proceedings of The second International Conference on Structures & Architecture – ICSA2013, Guimaraes, Portugal, (2013)
13. Zs. Nagy, M. Cristuțiu, "Reconversion process of an old building into a modern commercial centre", Proceedings of The second International Conference on Structures & Architecture – ICSA2013, Guimaraes, Portugal, (2013)
14. Zs. Nagy, M. Cristutiu, Local and Global Stability Analysis of a Large Free Span Steel Roof Structure, Proceedings of The Eleventh International Conference on Computational Structures Technology, 4-7 September 2012 - Dubrovnik, Croatia, ISBN: 978-1-905088-54-6, paper 31
15. Zs. Nagy, P. Pernes, A Parametric Study of Cold-Formed Steel Bolted Joints in Pitch-Roof Portal Frames, Proceedings of The Eleventh International Conference on Computational Structures Technology, 4-7 September 2012 - Dubrovnik, Croatia, ISBN: 978-1-905088-54-6, paper 33
16. I.M. Cristuțiu, Zs. Nagy, (2012) Behaviour of a large steel pitched-roof portal frame with welded plate tapered members and king post truss rafter at the mid span, Proceedings of 10th International Conference on Advances in Steel Concrete Composite and Hybrid Structures, Singapore, 2 – 4 July 2012, ISBN: 978-981-07-2615-7 : doi:10.3850/978-981-07-2615-7 294, pp. 134-141
17. Zs. Nagy, I.M. Cristuțiu, Nunes, L. - Seismic behaviour of a large span welded steel structure considering lateral restraints and initial imperfections: a case study, Proceedings of 7th International Conference - BEHAVIOUR OF STEEL STRUCTURES IN SEISMIC AREAS – STESSA 2012, Santiago Chile, CRC Press/Balkema, ISBN: 9780415621052 pp. 479-484 (2012)
18. P. Pernes, Zs. Nagy, CALIBRATION OF A FINITE ELEMENT MODEL FOR EVALUATION OF COLD-FORMED STEEL BOLTED JOINTS IN PITCH-ROOF PORTAL FRAMES, Proceedings of the 6th International Conference on Thin-walled Structures, ICTWS'2011, 5-7 September 2011 Timișoara, pp.537-544
19. Zs. Nagy, D. Dubina, V. Ungureanu, APPLICATION OF COMPONENT METHOD: BOLTED JOINTS FOR LOW RISE MULTI STOREY COLD-FORMED STEEL FRAMED STRUCTURES, Proceedings of the 6-th European Conference on Steel Structures, Eurosteel 2011, August 31 - September 2, 2011, Budapest, Hungary, Vol. A. pp. 273-278
20. Zs. Nagy, M. Cristutiu, APPLICATION OF MONITORING TO ENSURE STRUCTURAL ROBUSTNESS, Proceedings of the 6-th European Conference on Steel Structures, Eurosteel 2011, August 31 - September 2, 2011, Budapest, Hungary, Vol. C. pp. 1965-1970
21. S. Brad, A. Chioreanu, Zs. Nagy, Product Innovation in SMES: a Web Based supporting Tool, Proceedings of the METNET seminar 2011, 12-13 October, Aarhus, Denmark, ISBN: 978-951-784-556-4, pp.110-122
22. D. Dubina, A. V. Ungureanu, Zs. Nagy, L. Nunes, P. Pernes, IMPERFECTIONS' SENSITIVITY ANALYSIS OF PITCHED ROOF COLD FORMED STEEL PORTAL FRAMES, Proceedings of SDSS-2010 conference - Stability and Ductility of Steel Structures, Rio de Janeiro, Brasil, pp. 929-936 (2010)
23. Zs. Nagy, I.M. Cristuțiu, ADVANCED NONLINEAR INVESTIGATIONS OF A 50 M SPAN FRAME CASE STUDY: THE STEEL STRUCTURE OF THE ICE RINK, CITY

- OF TARGU-MURES, ROMANIA, Proceedings of SDSS-2010 conference - Stability and Ductility of Steel Structures, Rio de Janeiro, Brasil, pp. 649-656 (2010)
24. Zs. Nagy, C. Cîmpian, M. Cristuțiu, I. Benke, Case study: The supporting steel structure of the ice rink – city of Tg. Mureș, Romania, Proceedings of The 1-st International Conference on Structures & Architecture – ICSA2010, Guimaraes, Portugal, pp. 167-168 (2010)
  25. Zs. Nagy, M. Cristuțiu, IMPERFECTION SENSITIVITY ANALYSIS OF PITCHED ROOF PORTAL FRAMES, The 7th EUROMECH Solid Mechanics Conference (ESMC2009), September 7-11, 2009, Lisbon, Portugal, pp. 691-692 (2009)
  26. Dubina, D., Stratan, A. and Nagy, Zs. (2007). *Full – scale testing of cold-formed steel pitched-roof portal frames of back-to-back channel sections and bolted joints*. The Sixth International Conference on Steel and Aluminum Structures, Oxford, UK, pp. 931-939.
  27. Stratan A., Nagy Zs., and Dubina D. (2006) Cold-formed steel pitched-roof portal frames of back-to-back plain channel sections and bolted joints. Proc. of the 18th int. Specialty conf. "Recent advances and developments in cold-formed steel design and construction", Orlando, Florida, USA, Oct. 2006. Univ. of Missouri-Rolla (pp. 351-365)
  28. Nagy, Zs., Stratan, A., Dubina, D., Application of Component Method for Bolted Cold-formed Steel Joints. Proceedings Int Conference in Metal Structures: Steel – A New and Traditional Material for Building, Poiana Brasov, Romania, September 20-22, 2006, Eds. D. Dubina & V. Ungureanu, Taylor & Francis Group / Balkema, ISBN (10)0-415-40817-2, ISBN (13)0-415-40817-2, pp. 207-215
  29. Dubina, D., Fulop, L., Aldea, A., Demeteriu, S., Nagy, Zs., Seismic performance of Cold-formed Steel Framed Houses, Proceedings 5 th International Conference on Behaviour of Steel Structures in seismic areas - STESSA 2006, 14-17 August 2006, Yokohama, Japan, Taylor&Francis / Balkema, London, 2006, (Eds. F.M. Mazzolani, A. Wada), pp. 429-435
  30. Dubina, D., Nagy, Zs., Stratan, A., Fulop, L., Ungureanu, V., Design assisted by testing of cold-formed steel frame structures, Proc. 10<sup>th</sup> Nat. and 4<sup>th</sup> Int. Conf. "Planning, design, construction and the construction industry", Editors R. Folic, V. Radonjanin, M. Trivunic, Novi Sad, November 22-24, 2006, pp. 203-212
  31. Dubina, D. , Stratan, A., Ciutina, A., Fulop, L., Nagy, Zs. (2004). "Performance of ridge and eaves joints in cold-formed steel portal frames". Proc. of the 17th int. Specialty conf. "Recent advances and developments in cold-formed steel design and construction", Orlando, Florida, USA, 04-05 Nov. 2004. Univ. of Missouri-Rolla, Ed. R.A. LaBoube, W-W. Yu, p. 727-742.
  32. Dubina, D., Stratan, A, Ciutina, A., Nagy, Zs. (2004). "Experimental research on monotonic and cyclic performance of joints of cold-formed pitched roof portal frames". Proc. "The Second Int. Conf. on Steel & Composite Structures ICSCS'04", Ed. C.K. Choi, H.W. Lee, H.G. Kwak, 2-4 September 2004, Seoul, Korea. pp: 176-190.
  33. Dubina, D. , Stratan, A., Ciutina, A., Fulop, L., Nagy, Zs. (2004). „Strength, stiffness and ductility of cold-formed steel bolted connections”. Proc. Of the Fifth International Workshop, Ed. F.S.K. Bijlaard, A.M. Gresnigt, G.J. van der Vegte, Amsterdam, The Netherlands, 3-4 June 2004, pp: 263-272
  34. Dubina, D., Stratan, A, Ciutina, A., Fulop, L., Zs, Nagy. (2004). "Monotonic and cyclic performance of joints of cold formed steel portal frames". 4-th International Conference

on Thin-walled Structures, ICTWS'2004, Ed. J. Loughlan, Loughborough, UK, 23-24 June 2004 pp:381-388.

## **E. Proiecte de cercetare**

*Contracte de cercetare naționale, rol de colaborator (3) :*

1. Proiectul MEC-CNCSIS, Grant 3853 A11/164 "Studiul experimental al cadrelor pentru construcții civile și industriale în zone seismice", încheiat în 2006;
2. Proiect de cercetare între UTCN și SC. Teraplast SA Bistrița: SISTEM INTEGRAT INOVATIV PENTRU CONSTRUCȚII: STRUCTURĂ METALICĂ ASAMBLATĂ DIN PROFILE UȘOARE ZINCATE ȘI ANVELOPĂ DIN PANOURI TERMOIZOLANTE DIN SPUMĂ POLIURETANICĂ”, cu Nr.inreg/ Cod SMIS: 329/5754, Nr. contract 109/09.03.2010 POSCCE, total contract 12,000 Euro
3. Proiect cercetare în parteneriat UTCN și Proman Romania SRL, PN-III-P2-2.1-CI-2017-0113 : Sistem integrat de proiectare, verificare la cutremur și ofertare a structurilor de rafturi, total contract 45,000 Lei

*Contracte de cercetare internaționale, rol de responsabil din partea partenerului la contract (1) :*

1. Proiectul EUREKA cu titlul : “SISTEM E-FORUM PENTRU IMPLEMENTAREA EUROCODURILOR PENTRU STRUCTURI METALICE ÎN ROMÂNIA – SEFIE-RO; încheiat în anul 2006

*Contracte de cercetare internaționale, rol de director proiect (1)*

1. Contract Eureka PNCDI III „Instrument de proiectare structurală pentru structuri din bare cu pereți subțiri” (Cold Formed Steel Expert), desfășurare 2020-2021, buget 1,538,640 Lei (324,000 euro)

*Contracte de cercetare naționale, rol de director proiect (1)*

2. Bursă Postdoc cu proiectul ÎNCERCĂRI EXPERIMENTALE PE NODURI INOVATIVE DE CADRE MULTIETAJATE CU PROFILE DIN OȚEL FORMATE LA RECE PENTRU CLĂDIRI CIVILE ÎN ZONE SEISMICE, desfășurare 2010-2013, buget 34,000 euro

*Contracte de cercetare cu mediul economic (5):*

1. Dezvoltarea produsului „Construcții Ușoare” - proiect dezvoltat de SC Lindab în colaborare cu UP Timișoara, responsabil proiect din partea Lindab, total 30,000 euro
2. Tabele cu capacități portante pentru profile Z, C, Sigma, contr. 62/2013 între Universitatea Tehnică Cluj și Plastsistem SA, buget 5,600 euro
3. Tabele cu capacități portante pentru panouri sandwich, contr. 4645/27.02.2014 și 11162/21.05.2014 între Universitatea Tehnică Cluj și Plastsistem SA, buget 5,000 euro



4. Consultanță pentru realizarea cursului *Calculul avansat al structurilor metalice parte după Eurocode 3*, contr. 36707/05.12.2019 între Universitatea Tehnică Cluj și AICPS, buget 3,400 euro
5. Teste pe diafragme din table cutate și panouri sandwich, contracte între Universitatea Tehnică Cluj și parteneri industriali, Contracte de sponsorizare pentru programul de cercetare doctorală privind studiul efectului de șaibă drd. Andrea Kelemen și drd. Barnabás Lőrincz, în valoare totală de 25,000 Euro.

**Data: 07.03.2023**

**Semnătura**