

CURRICULUM VITAE

Prof.dr.ing. Cosmin-Gruia CHIOREAN

www.cosminchiorean.com

1. Informatii personale

Numele si prenumele: Chiorean Cosmin-Gruia

Data si locul nasterii: 11 Octombrie 1971, Cluj-Napoca, Romania

Starea Civila: Casatorit (cu Laura-Elena), 1 copil (Alexandru-Gruia)

Pozitia academica ocupata in prezent: Profesor Universitar, Univ. Tehnica din Cluj-Napoca

Adresa: Str. Memorandumului, Nr. 28, 400114, Cluj-Napoca, Romania

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Web: www.cosminchiorean.com



2. Educatie

2013-Abilitat (Conducator de doctorat) in domeniul inginerie civila, Universitatea Tehnica de Constructii, Bucuresti.

2002-2004- Postdoctorat, Facultatea de Stiinta si Tehnologie, Univ. din Lisabona, Portugalia.

2001- Doctor in inginerie civila, Univ. Tehnica din Cluj-Napoca.

1997- Master in inginerie civila, Univ. Tehnica din Cluj-Napoca, Facultatea de Constructii.

1999- Universitatea Babes-Bolyai, Facultatea de Matematica, Sectia Informatica.

1995- Universitatea Tehnica din Cluj-Napoca, Facultatea de Constructii.

1990- Liceul Emil Racovita, Matematica-Fizica, Cluj-Napoca.

3. Experienta profesionala

- Profesor universitar, (2009-), Universitatea Tehnica din Cluj-Napoca, Facultatea de Constructii
- Conferentiar universitar (2006-2009), Universitatea Tehnica din Cluj-Napoca, Facultatea de Constructii
- Cercetator bursier (postdoctorat) (2002-2004), Facultatea de Stiinta si Tehnologie, Departamentul de Inginerie Civila, Universitatea Nova din Lisabona, Portugalia.
- Sef de lucrari (2002-2006) Universitatea Tehnica din Cluj-Napoca, Facultatea de Constructii
- Asistent universitar (2000-2002), Universitatea Tehnica din Cluj-Napoca, Facultatea de Constructii.
- Doctorand cu frecventa (bursier) (1996-2000), Universitatea Tehnica din Cluj-Napoca
- Inginer proiectant (1995-2000), S.C. Consort Constructii SRL, Cluj-Napoca, Romania

4. Zece publicatii selectionate –[Citari/H-Index: ISI (113/5); SCOPUS (149/5)]

1. **Chiorean C.G.**, Marchis I.V., Buru M., A Computer Method for Design and M-N- Φ Analysis of Prestressed RC Cross-Sections, *Journal of Structural Engineering* (CSIR-SERC), Vol. 42, No.1 (April), pp. 64-77, 2015. <http://www.scopus.com/inward/record.url?eid=2-s2.0-84930341312&partnerID=MN8TOARS>.

2. **Chiorean, C.G.**, A Computer Method for Nonlinear Inelastic Analysis of 3D Composite Steel-Concrete Frame Structures, *Engineering Structures*, 57, Elsevier Science Publisher, 2013. <http://dx.doi.org/10.1016/j.engstruct.2013.09.025>
3. **Chiorean, C.G.**, A Computer Method for Rapid Design of Composite Steel-concrete Cross-sections, *Open Civil Engineering Journal*, 7(1), pp. 1-17 Bentham Science Publisher, 2013 <http://dx.doi.org/10.2174/1874149501307010001>
4. **Chiorean, C.G.**, Computerised Interaction Diagrams and Moment Capacity Contours for Composite Steel-Concrete Cross-Sections, *Engineering Structures*, 32(11), pp. 3734-57, Elsevier Science Publisher, 2010. <http://dx.doi.org/10.1016/j.engstruct.2010.08.019>.
5. **Chiorean, C.G.**, A Computer Method for Nonlinear Inelastic Analysis of 3D Semi-Rigid Steel Frameworks, *Engineering Structures*, 31(12), pp. 3016-33, Elsevier Science Publisher, Oxford, 2009. <http://dx.doi.org/10.1016/j.engstruct.2009.08.003>
6. **Chiorean, C.G.**, Barsan, G.M., Large Deflection Distributed Plasticity Analysis of 3D Steel Frameworks, *Computers & Structures*, 83 (19-20), pp. 1555-71, Elsevier Science Publisher, 2005. <http://dx.doi.org/10.1016/j.compstruc.2005.02.011>
7. Silva, M.G., Cismasiu, C., **Chiorean, C.G.**, Numerical Simulation of Ballistic Impact on Composite Laminates, *International Journal of Impact Engineering*, 31 (3), pp. 289-306, Elsevier Science Publisher, 2005. <http://dx.doi.org/10.1016/j.ijimpeng.2004.01.011>.
8. Barsan, G.M., **Chiorean, C.G.** Computer Program for Large Deflection Elasto-Plastic Analysis of Semi-Rigid Steel Frameworks, *Computers & Structures*, 72(6), pp. 699-711, Pergamon-Elsevier Science Publisher, 1999. [http://dx.doi.org/10.1016/S0045-7949\(98\)00310-1](http://dx.doi.org/10.1016/S0045-7949(98)00310-1).
9. **Chiorean C.G.**, A fast incremental-iterative procedure for ultimate strength analysis of composite cross-sections of arbitrary shape, *WIT Transactions on Modelling and Simulation*, WIT Press Publisher, 2011. <http://dx.doi.org/10.2495/CMEM110321>.
10. **Chiorean C.G.**, Aplicatii Software Pentru Analiza Neliniara a Structurilor in Cadre, Editura UTPRES, Cluj-Napoca, pp. 309, 2006. ISBN (10) 973-662-231-2; ISBN(13) 978-973-662-231-1.

5. Domenii de cercetare de interes/Aplicatii software dezvoltate

Aplicarea metodelor numerice in analiza structurala; Analiza statica si dinamica neliniara a structurilor; Analiza pushover pentru evaluarea performantelor seismice a structurilor; Metoda Elementelor Finite cu aplicabilitate in ingineria geotehnica; Impact balistic; Materiale compozite; Dezvoltator aplicatii software: GFAS-Finite Element Analysis System for Geotechnical Engineering (www.geostru.com; www.cosminchiorean.com/software.html); NEFCAD&ASEP-Analiza Neliniara Avansata a Structurilor (www.cosminchiorean.com/software.html).

6. Proiecte de cercetare pe baza de grant/contract

1. Grantul PNII-IDEI/193/2008 (Proiecte de cercetare exploratorie) finantat de CNCIS-UEFISCDI "Proiectarea si evaluarea performantelor seismice a structurilor in cadre spatiale prin analiza statica neliniara avansata"-Perioada de implementare: 2009-2012. <http://users.utcluj.ro/~ccosmin/RESEARCHPROJECT.htm>
2. Grantul POC-A1-A1.1.4-E-2015 (P-37-229) finantat ANCSI "[Smart Systems for Public Safety through Control and Mitigation of Residential Radon linked with Energy Efficiency Optimization of Buildings in Romanian Major Urban Agglomerations](http://www.cosminchiorean.com/software.html)" (coordonator Prof. Carlos Sainz Univ. Cantabria, Spania –Universitatea Babes-Bolyai) – responsabil tema: *Configurare modele numerice avansate de predicție asistate de experiment, simulare numerică*. Perioada de implementare 2016-2019..
3. Grantul POCTI/36055/ECM/2000 finantat de Fundatia pentru Stiinta si Tehnologie (FCT), Portugalia, "Aplicacao de Algoritmos Geneticos e Redes Neurais a Optimizacao e Fiabilidade Estrutural", 2004.- Univ. Nova din Lisabona (coordonator

- Prof. J.R. Almeida), Facultatea de Stiinta si Tehnologie, Departamentul de Inginerie Civila, Universitatea Nova din Lisabona, Portugalia. Perioada de implementare: 2004.
4. Grantul **POCTI 43228/EME/2001-** finantat de Fundatia pentru Stiinta si Tehnologie (FCT), Portugalia, "*Impact on Plates of Composite Materials Protected with Polymeric Mortar*", **2002-2004-** (coordonator prof. MAG Silva), Facultatea de Stiinta si Tehnologie, Departamentul de Inginerie Civila, Universitatea Nova din Lisabona, Portugalia. Perioada de implementare: 2002-2004.
 5. Grantul **POCTI No. 36019/99** finantat de Fundatia pentru Stiinta si Tehnologie (FCT), Portugalia -"*Aplication of Pushover Analysis on Reinforced Concrete Bridge Model*" 2003-2004, (coordonator prof. MAG Silva), UNIC-Centro de Investigacao em Construcção e Estruturas Universidade Nova de Lisboa, Facultatea de Stiinta si Tehnologie, Universitatea Nova din Lisabona, Portugalia. Perioada de implementare: 2003-2004.
 6. **Contractul "Software development for geotechnical engineering" nr. 4/02.11.2007,** "*GFAS-Finite element systems for geotechnical applications*" (Beneficiar S..C. Geostru Software, Italia (www.geostru.com)). Perioada de implementare: 2007-2010.
 7. **Contractul 34/1998 Tema 49/106** finantat de catre Ministerul Educatiei si Cercetarii "Program de calcul pentru selectarea tipurilor de structuri-flexibile sau rigide- in analiza seismic a structurilor. Perioada de implementare 1998.
 8. **Contractul 7003/1997 Tema 95** finantat de catre Ministerul Educatiei si Cercetarii "Program de calcul performant pentru analiza de ordinul al II-lea a cadrelor din beton armat cu conexiuni semi-rigide". Perioada de implemetare 1997.
 9. **Contractul 7003/1997 Tema 96** finantat de catre Ministerul Educatiei si Cercetarii "Evaluarea avarierilor structurale ale structurilor in cadre folosind metode dinamice pentru identificarea sistemelor mecanice". Perioada de implementare 1997.
 10. **Contractul C5003/1996 Tema 94** finantat de catre Ministerul Educatiei si Cercetarii "Program de calcul performant pentru analiza elasto-plastica de ordinul al II-lea a structurilor in cadre cu noduri flexibile". Perioada de implementare 1996.

7. Responsabilitati academice complementare (selectie)

- Membru in Consiliul National de Atestare a Titlurilor si Diplomelor si Certificatelor Universitare, Comisia de Specialitate Inginerie Civila, 2011-2012.
- Membru in Consiliul National al Cercetarii Stiintifice ([CNCS](http://www.cnsc.ro)), Panelul Stiinte Ingineresti (2012-2013).
- Director al departamentului [de Mecanica Constructiilor](#) din cadrul Facultatii de Constructii din Cluj-Napoca (2011-2015; 2015-).
- Membru in Consiliul Cercetarii si al CSUD (Consiliul Studiilor Universitare de Doctorat) al Universitatii Tehnice din Cluj-Napoca. 2012-2016.
- Editor sef al revistei [Acta Technica Napocensis: Civil Engineering & Architecture](#).
- Membru in colectivul editorial al revistelor: [Open Civil Engineering Journal](#), Bentham Science Publisher; [International Journal of Earthquake and Impact Engineering](#), InderScience Publisher;
- Membru in colectivul editorial [International Conference on Computational Structures Technology \(CST\)](#), 2012-2014-2015, Civil Comp Press, Stirlingshire, UK. Membru in comitetul stiintific al conferintei "[The international colloquium on stability and ductility of steel structures – SDSS 2016](#)".
- Evaluator pentru [Young Researcher Best Paper Competition](#) in cadrul conferintelor "The Fifteenth International Conference on Civil, Structural and Environmental Engineering

Computing (Civil Comp 2015)” si “Eleventh International Conference on Computational Structures Technology (CST 2012)”.

- Editor/Chairman [International Conferences for PhD Students in Civil Engineering and Architecture](#), 2012,2014.
- Profesor invitat in cadrul programului EU LLP-Erasmus Program “SeisMath-Mathematical Models in Seismology” University of L’Aquila, Dep. Of Engineering, Computer Science & Mathematics, Italy. Cursuri sustinute: “[Computer based nonlinear inelastic analysis methods for seismic performance evaluation of 3D composite steel-concrete frameworks](#)” (Iulie 2013, Iulie 2014).
- Membru in Technical Committee TC103 (Numerical Methods in Geomechanics), [International Society for Soil Mechanics and Geotechnical Engineering](#).
- Expert/Evaluator/Raportor pentru UEFISCDI (Unitatea Executiva pentru Finantarea Invatamintului Superior a Cercetarii Dezvoltarii si Inovarii), 2011-2013.
- Coordonator de domeniu (UTCN) in cadrul Exerciitiului National de Evaluare a Cercetarii din universitati desfasurat prin proiectul “[Doctoratul in Scoli de Excelenta - Evaluarea calitatii in universitati si cresterea vizibilitatii prin publicarea stiintifica](#)”-beneficiar UEFISCDI.
- Referent stiintific pentru reviste de specialitate nationale si internationale (selectie): *Computers & Structures* (Elsevier); *Advances in Engineering Software* (Elsevier); *Finite Elements in Analysis and Design* (Elsevier); *Engineering Structures* (Elsevier); *Composite Structures* (Elsevier); *Steel and Composite Structures* (Techno Press), *Structures and Building* (Institution of Civil Engineering); *Proceedings of the Romanian Academy-Series A*; *Asia Pacific Journal on Computational Engineering* (Springer).
- Coordonator teze de doctorat (8 teze de doctorat aflate in diferite stadii de finalizare)
- Referent stiintific la teze de doctorat (peste 20), referent stiintific la teze de abilitare (5), referent stiintific pentru ocuparea postului de profesor universitar (3), coordonator stiintific teze de masterat (peste 30).

Prof. Cosmin G Chiorean

Cluj-Napoca, Aprilie 2016

CURRICULUM VITAE

Prof. Cosmin G CHIOREAN

<http://www.cosminchiorean.com>

1. Personal information

Name and surname: Chiorean Cosmin-Gruia

Marital status: Married (with Laura-Elena), one child (Alexandru-Gruia)

Date and place of birth: 11 October 1971, Cluj-Napoca, Romania

Present academic position: Professor at Technical University of Cluj-Napoca, Romania

Current address: 28 Memorandumului Str., 400114, Cluj-Napoca, Romania

Phone number, e-mail address: +40740934581, cosmin.chiorean at mecon.utcluj.ro

Web: <http://www.cosminchiorean.com>



2. Education

2013- Habilitation in Civil Engineering, Technical University of Construction, Bucharest, Romania

2002-2004 Postdoctoral Fellow, Faculty of Science and Engineering, New Univ. of Lisbon, Portugal

2001 PhD in Civil Engineering, Technical University of Cluj-Napoca

1997 MSc in Civil Engineering, Technical University of Cluj-Napoca

1999 Babes-Bolyai University, Faculty of Mathematics, Computer Science Section

1995 Technical University of Cluj-Napoca, Faculty of Civil Engineering

1990 High School "Emil Racovita", Mathematics-Physics Section, Cluj-Napoca

3. Professional experience

- Professor, (2009-), Technical University of Cluj-Napoca, Faculty of Civil Engineering
- Associate professor (2006-2009), Technical University of Cluj-Napoca, Faculty of Civil Engineering
- Postdoctoral fellow (2002-2004), Faculty of Science and Engineering, New Univ. of Lisbon, Portugal
- Lecturer (2002-2006) Technical University of Cluj-Napoca, Faculty of Civil Engineering
- Assitant professor (2000-2002), Technical University of Cluj-Napoca, Faculty of Civil Engineering
- Teaching assistant/PhD student (1996-2000) Technical University of Cluj-Napoca,
- Structural engineer (1995-2000), S.C. Consort Constructii SRL, Cluj-Napoca.

4. Ten selected publications [Citations/H-Index: ISI (113/5); SCOPUS (143/5)]

1. **Chiorean C.G.**, Marchis I.V., Buru M., A Computer Method for Design and M-N- Φ Analysis of Prestressed RC Cross-Sections, *Journal of Structural Engineering* (CSIR-SERC), Vol. 42, No.1 (April), pp. 64-77, 2015. <http://www.scopus.com/inward/record.url?eid=2-s2.0-84930341312&partnerID=MN8TOARS>.

2. **Chiorean, C.G.**, A Computer Method for Nonlinear Inelastic Analysis of 3D Composite Steel-Concrete Frame Structures, *Engineering Structures*, 57, Elsevier Science Publisher, 2013. <http://dx.doi.org/10.1016/j.engstruct.2013.09.025>
3. **Chiorean, C.G.**, A Computer Method for Rapid Design of Composite Steel-concrete Cross-sections, *Open Civil Engineering Journal*, 7(1), pp. 1-17 Bentham Science Publisher, 2013 <http://dx.doi.org/10.2174/1874149501307010001>
4. **Chiorean, C.G.**, Computerised Interaction Diagrams and Moment Capacity Contours for Composite Steel-Concrete Cross-Sections, *Engineering Structures*, 32(11), pp. 3734-57, Elsevier Science Publisher, 2010. <http://dx.doi.org/10.1016/j.engstruct.2010.08.019>.
5. **Chiorean, C.G.**, A Computer Method for Nonlinear Inelastic Analysis of 3D Semi-Rigid Steel Frameworks, *Engineering Structures*, 31(12), pp. 3016-33, Elsevier Science Publisher, Oxford, 2009. <http://dx.doi.org/10.1016/j.engstruct.2009.08.003>
6. **Chiorean, C.G.**, Barsan, G.M., Large Deflection Distributed Plasticity Analysis of 3D Steel Frameworks, *Computers & Structures*, 83 (19-20), pp. 1555-71, Elsevier Science Publisher, 2005. <http://dx.doi.org/10.1016/j.compstruc.2005.02.011>
7. Silva, M.G., Cismasiu, C., **Chiorean, C.G.**, Numerical Simulation of Ballistic Impact on Composite Laminates, *International Journal of Impact Engineering*, 31 (3), pp. 289-306, Elsevier Science Publisher, 2005. <http://dx.doi.org/10.1016/j.ijimpeng.2004.01.011>.
8. Barsan, G.M., **Chiorean, C.G.** Computer Program for Large Deflection Elasto-Plastic Analysis of Semi-Rigid Steel Frameworks, *Computers & Structures*, 72(6), pp. 699-711, Pergamon-Elsevier Science Publisher, 1999. [http://dx.doi.org/10.1016/S0045-7949\(98\)00310-1](http://dx.doi.org/10.1016/S0045-7949(98)00310-1)).
9. **Chiorean C.G.**, A fast incremental-iterative procedure for ultimate strength analysis of composite cross-sections of arbitrary shape, *WIT Transactions on Modelling and Simulation*, WIT Press Publisher, 2011. <http://dx.doi.org/10.2495/CMEM110321>.
10. **Chiorean C.G.**, Aplicatii Software Pentru Analiza Neliniara a Structurilor in Cadre, Editura UTPRES, Cluj-Napoca, pp. 309, 2006. ISBN (10) 973-662-231-2; ISBN(13) 978-973-662-231-1

5. Research interests/Software development

The research and professional interests focus on improving the structural computational methods for design of civil structures. My research includes both computational and experimental techniques with emphasis on the development and application of *advanced nonlinear analysis of structural limit states, push-over analysis for seismic performance evaluation of structures, finite element simulation of composite materials* subjected to extreme loads such as *ballistic impact* and explosions, design and behavior of *composite steel-concrete structures*, application of *FEM in geotechnical engineering*. Software developed: GFAS-Finite Element Analysis System for Geotechnical Engineering (www.geostru.com; www.cosminchiorean.com/software.html); NEFCAD&ASEP-Advanced Nonlinear Inelastic Analysis of Structures (www.cosminchiorean.com/software.html).

6. Research contracts (selections)

- **PNII-IDEI/193/2008** financed by CNCSIS “Design and seismic performance evaluation of 3D frame structures using advanced nonlinear static analysis method”, 2009-2012. <http://users.utcluj.ro/~ccosmin/RESEARCHPROJECT.htm>.
- **POCTI/36055/ECM/2000** financed by Foundation for Science and Technology (FCT), Portugal, “Aplicacao de Algoritmos Geneticos e Redes Neurais a Optimizacao e Fiabilidade Estrutural”, 2004.-**Member/Post Doctoral researcher**, New Univ. Of Lisbon, Portugal, principal investigator, Prof. J.R. Almeida, Faculty of Science and Technology, Departmanet of Civil Engineering, 2004.

- **POCTI 43228/EME/2001-** financed by Foundation for Science and Technology (FCT), Portugal, "*Impact on Plates of Composite Materials Protected with Polymeric Mortar*", **Member/Post Doctoral researcher**, New Univ. Of Lisbon, Portugal **2002-2004-** principal investigator, prof. MAG Silva, Faculty of Science and Technology, Department of Civil Engineering, 2004. www2.dec.fct.unl.pt/projectos/impacto, 2002.
- **Contract "Software development for geotechnical engineering" nr. 4/02.11.2007,** "*GFAS-Finite element systems for geotechnical applications*" (**Principal investigator**) S..C. Geostru Software, Italia (www.geostru.com), 2007-2010.
- **Contract 34/1998 Theme Grant 49/106** financed by Ministerul Educatiei si Cercetarii "Computer Program for Selecting Types of Structures-Flexibly or Rigid- in Seismic Analysis of Structures". 1998.
- **Contract 7003/1997 Theme Grant 95** financed by Ministerul Educatiei si Cercetarii "Computer Program for Second-Order Elasto-Plastic Analysis of Reinforced Concrete Structures with Flexibly Connections". 1997.
- **Contract 7003/1997 Theme Grant 96** financed by Ministerul Educatiei si Cercetarii "Evaluation of Structural Damage of Frameworks Using Dynamics Methods for Identification of Mechanics Systems". 1997.
- **Contract C5003/1996 Theme Grant 94** financed by Ministerul Educatiei si Cercetarii "Development of Software for Second-Order Elasto-Plastic Analysis of Semi-Rigid Frameworks". 1996.
- **POC-A1-A1.1.4-E-2015** "Smart Systems for Public Safety through Control and Mitigation of Residential Radon linked with Energy Efficiency Optimization of Buildings in Romanian Major Urban Agglomerations (coordonator Prof. Carlos Sainz Univ. Cantabria, Spain –Universitatea Babes Bolyai) –2016 -2019.

7. Synergistic activities (selection)

- Member of National Council for Attestation of University Titles, Diplomas and Certificates, Civil Engineering Panel, 2011-2012.
- Member of *National Research Council* (CNCS), Engineering Science Panel (2012-2013).
- Head of Structural Mechanics Department from Technical University of Cluj-Napoca (2011-2015).
- Editor in chief of the journal: *Acta Technica Napocensis: Civil Engineering & Architecture* (<http://constructii.utcluj.ro/ActaCivilEng/>)
- Member of Research Council and CSUD (Consiliul Studiilor Universitare de Doctorat) from Technical University of Cluj-Napoca. <http://research.utcluj.ro/index.php/membri-consiliului-de-cercetare.html>
- Editorial board member of the following journals: *Open Civil Engineering Journal*, *Bentham Science Publisher*; *International Journal of Earthquake and Impact Engineering*, *InderScience Publisher*;
- Editorial board member of *International Conference on Computational Structures Technology (CST)*, 2012-2014-2015, Civil Comp Press, Stirlingshire, UK.
- Reviewer for *Young Researcher Best Paper Competition* of The Fifteenth International Conference on Civil, Structural and Environmental Engineering Computing (Civil Comp 2015) and for Eleventh International Conference on Computational Structures Technology (CST 2012).

- Invited professor in the framework of EU LLP-Erasmus Program “SeisMath-Mathematical Models in Seismology” University of L’Aquila, Dep. Of Engineering, Computer Science & Mathematics, Italy. Deliver the course: “[Computer based nonlinear inelastic analysis methods for seismic performance evaluation of 3D composite steel-concrete frameworks](#)” (July 2013, July 2014).
- Member of the Technical Committee TC103 (Numerical Methods in Geomechanics), *International Society for Soil Mechanics and Geotechnical Engineering*.
- PhD supervisor (8 PhD theses under development), Reviewer for habilitation thesis (5), Reviewer for PhD theses (over 20), coordinator of MSc theses (over 30).
- Reviewer for several international journals, including: *Computers & Structures* (Elsevier); *Advances in Engineering Software* (Elsevier); *Finite Elements in Analysis and Design* (Elsevier); *Engineering Structures* (Elsevier); *Composite Structures* (Elsevier); *Steel and Composite Structures* (Techno Press), *Structures and Building* (Institution of Civil Engineering); *Proceedings of the Romanian Academy-Series A*; *Asia Pacific Journal on Computational Engineering* (Springer).

Prof. Cosmin G Chiorean

Cluj-Napoca, April, 2016