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Research Group Webpage: <https://sgerasimidis.wixsite.com/mysite>

Appointments/Work Experience

- 2015-today **Assistant Professor**, University of Massachusetts, Amherst, MA, USA
- 2011-2015 **Post-doctoral Research Fellow**, Columbia University, New York, NY, USA
Supervision: Professor G. Deodatis
- 2007-2011 **Graduate Research Assistant**, Aristotle University of Thessaloniki, Thessaloniki, Greece
Supervision: Professor C.C. Baniotopoulos
- 2006-2007 **Structural Engineer**, Thornton Tomasetti Engineers, New York, NY, USA
Supervision: M. Squarzini
- 2005-2006 **Graduate Teaching Assistant**, MIT, Cambridge, MA, USA
Supervision: Professor J.J. Connor
- 2003-2004 **Structural Engineer**, Santiago Calatrava SA, Athens, Greece

Education

- 2011-2015 **Columbia University, NY, USA**
Post-Doctoral Research Fellow in Civil Engineering and Engineering Mechanics
Research Topic: **“Progressive Collapse and Resilience of Structures”**
Advisors: Prof. George Deodatis, Prof. Raimondo Betti
- 2007-2011 **Aristotle University of Thessaloniki, Greece**
Doctor of Philosophy (Ph.D.) in Civil Engineering with honors
Ph.D. Thesis Title: **“Alternate Load Path Methods for Disproportionate Collapse Analysis of Steel Structures via Direct Methods of Plasticity”**
Advisors: Prof. Charalampos Baniotopoulos, Prof. George Deodatis, Prof. Christos Bisbos
- 2005-2006 **MIT, MA, USA**
Master of Engineering in Civil and Environmental Engineering
Followed the track of High Performance Structures
Individual thesis title: **“Application of knee-bracing system on high-rise buildings”**
Group thesis title: **“Cable-stayed Steel Bridge over the Cape Cod Canal”**
Advisor: Prof. Jerome J. Connor
- 1999-2005 **Aristotle University of Thessaloniki, Greece**
Diploma, M. Eng., in Civil Engineering specialized in Structural Engineering
Thesis Topic: **“Study of the behavior of the Steel Roof of the Olympic Stadium in Athens because of possible cable failures”**
Advisor: Prof. Charalampos Baniotopoulos

Research Interests/Experience

- 2017-today **Mechanics of materials - New architected mechanical metamaterials**
- Research in the field of new ultra-lightweight and high-strength and stiffness nano and micro-lattice architected mechanical metamaterials in collaboration with Prof. Bertoldi (Harvard University). The originality of the work is based on studying defective geometries aiming at 3D printing of metamaterials in large volumes for applications in engineering structures.
 - Research in the field of development of new hierarchical designs for coronary artery stents.
- 2017-today **Aging Infrastructure – Load rating procedures for deteriorated steel bridges**
- Projects funded by the MassDOT (\$198,718, \$98,795) on the development of new load rating procedures of steel bridges with deteriorated steel beam ends. The first part gathered a large amount of real data from the state of MA on the condition of more than 800 steel beam ends across the state. Computational work on the prediction of the capacity of deteriorated beam ends. Experimental testing of actual deteriorated steel beam ends from real bridges provided by MassDOT.
- 2015-today **Structural Stability of Cylindrical and Conical Shells in the Elastic and Inelastic Range**
- Geometric imperfection sensitivity and residual stresses effects on the buckling of steel cylindrical and conical thin shells in collaboration with Prof. John Hutchinson and Prof. Rubinstein from Harvard University. Research work on establishing new knock-down factors for cylindrical shells and the identification of local and global buckling thresholds. Research work on imperfection insensitive cylindrical shells. A second part involves natural gas pipelines under seismic ground motion in collaboration with Prof. Sextos from University of Bristol, UK.
- 2017-today **Cold-formed Steel Framed Shear Walls under lateral loading**
- Computational work on the stability of sheathed cold-formed steel framed shear walls subjected to lateral loads. The objective is to introduce a robust high fidelity finite element computational model, capable of accurately capturing the stability of wood sheathed cold-formed steel framed shear walls under lateral loading with potential use in a full building finite element simulation.
- 2017-today **Podium Buildings under earthquake loading**
- Main goal of the project is to determine how vertical stiffness and mass discontinuities, and their severities, manifest themselves during a seismic event and to investigate system effects and the efficacy of the two-stage analysis paradigm.
- 2011-today **Progressive collapse of Buildings**
- Computational and analytical methods on progressive collapse and infrastructure resilience, funded by the Department of Homeland Security (DHS). This work involves a collaboration between academia and industry. The Industrial partner has been Weidlinger Associates INC. (now Thornton Tomasetti), a world leading applied research structural engineering firm based in New York City.
 - The originality of the work is based on stability induced progressive collapse, either due to individual-member (short-wave) buckling or global-system loss-of-stability mechanisms (long-wave) and the development of novel analytical methodologies to predict the governing collapse mechanism of damaged structures based on simple procedures.
- Fire & Progressive collapse of Steel Structures**
- Main researcher for a project in the field of post-event fire considerations and Stability Induced Progressive Collapse Modes of Steel Buildings in collaboration with Prof. Garlock (Princeton University).
- Blast & Progressive collapse of Structures**
- Main researcher for a project in the field of Blast Analysis of Steel Buildings in collaboration with Prof. Deodatis (Columbia University) and Prof. Mullen (University of Mississippi).
- High Strength Tubular Towers for Steel Wind Turbines 2 - HISTWIN2 (2011-2012)**
- Member of WP2: “Optimization of foundation for high rise steel tower” and WP5: “Optimal range of application of different structural concepts”. Funded by the European Commission, Research Fund for Coal and Steel (RFCS).
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- 2007-2011 **Ph.D. Work at Aristotle University of Thessaloniki**
- Addressed the assessment of the collapse load of steel frames for the event of initial damage of structural elements in the spirit of limit and shakedown analysis of damaged structures. Global robustness measures were developed for steel structures using the so-called direct methods of plasticity coupled with FEM.
- European COST action TU0601, “Robustness of structures” (2010-2011)**
- Member of Working group 2, “Modeling of exposures and vulnerability”.
 - Part of the research group from Aristotle University representing Greece in the project.
- European COST action C26, “Urban Habitat Constructions & Catastrophic Events” (2007-2010)**
- Member of Working Group 4: “Risk assessment and catastrophic events”.
 - Member of the committee on the study case of the volcano Vesuvius in Napoli, Italy.
- 2002 **Queen’s University, Kingston, ON, Canada**
- Built and prepared in laboratory concrete beams and worked on investigating the freeze – thaw durability of the bond of fiber reinforced polymer (FRP) sheets to concrete beams. Part of I.A.E.S.T.E. program (International Association for the Exchange of Students for Technological Experience).
- 2001-2004 **EU FP5 project “Rediscovering the Urban Realm and Open Spaces”**
- Built and worked on a new meteorological station with equipment measuring sound, light, humidity.

Publications

- 23 Referred Journal Publications.
- 1 Referred Journal Papers Under Review.
- 63 Conference Presentations.
- See list of Publications for detailed information.

Teaching

- 2015-2016 **UMass, Amherst, Assistant Professor**
- Fall semester 2015, 2016, 2017, 2018: Structural Analysis CEE331.**
Introductory structural analysis. Calculation of forces, moments, and deformations for axially loaded and flexural structures including trusses, beams, frames, arches, and cables. Classical and computer methods.
- Spring semester 2016, 2017, 2019: Structural Stability CEE549.**
Linear and nonlinear buckling of columns, beam-columns, frames and plates. Role of linearization in formulation of stability problems. Adjacent equilibrium, kinetic, imperfection and energy criteria for stability analysis. Variational approaches for formulating and solving buckling problems.
- 2008-2011 **Aristotle University of Thessaloniki, Steel Structures Teaching Assistant**
- Teaching assistant for the undergraduate courses: Steel Structures I & Steel Structures II. Assisted students with homework problems/material and performed oral exams for the individual project.
- 2006 **MIT, Steel Structures Teaching Assistant**
- Teaching assistant for the graduate course: Design of Steel Structures. Assisted students individually with homework problems.

Institutional responsibilities – Service

- 2018-today **UMass, Amherst, CEE**
- Member of the Curriculum Committee and Member of the Committee on the ABET Certification for the Department of Civil and Environmental Engineering.
 - Member of the Pathways search committee for a tenure-track Assistant Professor in the Department of Civil and Environmental Engineering.

2018-today **UMass, Amherst**
Manager of the UMass ABAQUS License for the campus.

Professional Experience - Consulting

2008-2011 **Licensed Structural Engineer, Thessaloniki, Greece**

- Designed from the conceptual stage to the construction drawings the two major interventions on the biggest Byzantine monuments of Thessaloniki, **the Rotunda and the Eptapyrgion**. Both interventions were part of a project improving the accessibility of Byzantine monuments, the design and the construction of which were funded by the European Union and the Greek Program of Public Works through the Ministry of Culture.
- The Rotunda intervention included the complete design and supervision of a **Steel Truss Footbridge** spanning 19m above Byzantine antiquities, connecting today's street level and the monument level, allowing for the long-awaited opening of the prestigious emperor's entrance of the monument.
- The Eptapyrgion intervention included the complete design and supervision of two steel ramps through a Byzantine fortifying wall.
- Worked as a consulting engineer mainly on the design and supervision of construction of private buildings and other structures made of steel, concrete and timber. Cooperated with public agencies, design/architectural offices and construction companies.

2006-2007 **Structural Engineer, Thornton Tomasetti Engineers, New York, NY, USA**

- Worked in the team designing the new steel/concrete **New York Yankees Stadium** under the direction of Tom Scarangelo and Mike Squarzini, based in the Bronx, NY.
- Represented the firm in meetings with the contractor and the architect and in structural supervisions at the construction site. Supervised different parts of the stadium, including concrete foundation, concrete superstructure and steel construction on site.
- Part of the team that reviewed and checked all the concrete and steel shop drawings. Part of the team modeling and updating the geometry of the structure of the stadium using a structural building information modeling (BIM) system (TEKLA).
- Calculated and modeled the steel high-rise tower for the Chicago Spire project under the direction of Tom Scarangelo, architecturally designed by **Santiago Calatrava**, a 2000ft high tower at Chicago.
- Worked closely with managing principal Manny Velivassakis for the formation of HATS (Hellenic American Technical Society), based in New York City.
- Represented the firm in the annual Civil and Environmental Engineering Department Career Fair in 2007, at Massachusetts Institute of Technology (MIT).

2003-2004 **Structural Engineer, Santiago Calatrava SA, Athens, Greece**

- Calculated and remodeled in detail:
 - the emblematic Arch/Dome-like steel structures for the coverage of the main **Olympic Stadium and the Olympic Velodrome**,
 - the Steel superstructure and foundation of the **"AGORA"**,
 - the Steel **"Entrance Canopies"**,
 - the Frame-type Steel structure for the **"Nations' Wall"**,
 - the Tubular-Steel structure for the **"MONUMENT"**, and
 - the **cable-stayed Steel footbridge "CALATRAVA"**, at the "KATEHAKI" metro station (Project Owner ATTIKO METRO S.A.).
- Calculated and designed various special structures, like the light removable structure of the side-lateral shading system for the perimeter of the Velodrome and the construction of the rigid protective wall, made of steel framework and transparent polycarbonate panels, on the central island of the cycling tracks area of the Velodrome, various building structures (reinforced concrete) for the various new electro-mechanological installations (substations, workshops, electro shops, etc.), various new constructions of reinforced concrete arranged within the surrounding area of O.A.K.A., such as various retaining walls, high masts' foundations, water fountains, large/high external staircases and conducted studies for the structural adequacy and for the possible

reinforcing requirements for various existing structures, inside the surrounding area of O.A.K.A., due to the addition of new steel and concrete structures upon the old ones.

Professional Memberships - Service

- Member of the American Society of Civil Engineers (ASCE).
 - Member of the ASCE SEI Committee on Tall Buildings
 - Member of the ASCE EMI Committee on Stability
 - Member of the ASCE EMI Committee on Objective Resilience
- Member of the Structural Stability Research Council (SSRC).
 - Member of the Task Group 2: Systems: Stability of Steel Systems, Especially Frames.
 - Member of the Task Group 6: Extreme Loads: Stability under Extreme Loads.
- Member of the Progressive Collapse working group of the Council of Tall Buildings and Urban Habitat (CTBUH).
- Member of the International Association for Shell and Spatial Structures (IASS).
 - Member of Working Group 8 on Metal Spatial Structures.
- Member of the American Physical Society (APS).
- Journal Reviewer:
 - Extreme Mechanics Letters (Elsevier), Journal of Structural Engineering (ASCE), Journal of Engineering Mechanics (ASCE), Journal of Performance of Constructed Facilities (ASCE), Journal of Constructional Steel Research (Elsevier), Engineering Structures (Elsevier), Structural and Multidisciplinary Optimization (Springer), Structures (Elsevier), Thin-Walled Structures (Elsevier), Journal of Wind Engineering and Industrial Aerodynamics (Elsevier), Journal of Building Engineering (Elsevier), Structure and Infrastructure Engineering (Taylor and Francis), Structural Engineering and Mechanics (Techno Press), Advances in Structural Engineering (Sage), Journal of Applied Mechanics (ASME).
- Member of the National Committee of Young Engineers (Greek Technical Chamber).
- Member of the Technical Chamber of Greece.
- Member of the Association of Civil Engineers of Greece.
 - Elected Member of the 15 Member National Board (July 2010 – September 2011)
- Certified Professional Licensed Civil Engineer in Greece (1st Degree Level).

Invited Lectures

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| 2019 | Princeton University, Department of Civil and Environmental Engineering, Princeton, NJ, USA
Invited lecture on “Architected cellular truss-lattice metamaterials: defect sensitivity and structural applications”. |
| 2018 | ETH, Department of Civil, Environmental and Geomatic Engineering, Zurich, Switzerland
Invited lecture on “Research developments and future challenges on the performance and resilience of steel and composite structures”. |
| 2017 | Harvard University, John A. Paulson School of Engineering and Applied Sciences, Cambridge, MA, USA
Invited lecture on “Progressive Collapse of Structures”. |
| 2015 | Johns Hopkins University, Department of Civil Engineering, Baltimore, MD, USA
Invited lecture on “Infrastructure Resilience and Robustness of Structures to Extreme Events”. |
| 2015 | University of Illinois at Urbana-Champaign, Department of Civil and Environmental Engineering, Urbana, IL, USA
Invited lecture on “Urban Infrastructure Resilience to Extreme Events”. |

- 2015 **UMass, Department of Civil and Environmental Engineering, Amherst, MA, USA**
Invited lecture on "Infrastructure Resiliency and Robustness of Structures".
- 2015 **New Jersey Institute of Technology (NJIT), Department of Civil and Environmental Engineering, Newark, NJ, USA**
Invited lecture on "Infrastructure Resilience".
- 2013 **MIT, Department of Civil and Environmental Engineering, Boston, MA, USA**
Invited lecture on "Infrastructure Resiliency and Robustness of Structures".
- 2012 **University of Birmingham, Department of Civil Engineering, UK**
School of Engineering, Invited lecture on "Robustness and progressive collapse of building structures", for the workshop "Wind-Energy-Structures".

Honors - Awards

- 2018 **1st place in the Objective Resilience Committee Competition at the EMI**
For the paper of student Panos Pantidis: "Towards an analytical resilience framework of steel and concrete composite buildings".
- 2016 **Greek Diaspora Fellowship from the Stavros Niarchos Foundation**
One of the 20 awards for Greek-born scholars to create collaborative engagements between Greek and North American academics (\$20k).
- 2016 **Nominated for Distinguished Teaching Award, University of Massachusetts, Amherst**
Nominated by students for the Campus Wide Distinguished Teaching Award.
- 2015 **Open Education Initiative Award, University of Massachusetts, Amherst**
Awarded for the graduate class on Structural Stability - CEE549 (\$1000).
- 2011 **Post-Doctoral Scholarship from the Pan-Hellenic Association of Kappadocian Unions and the "Family of Filippou Savvopoulos"**
- 2010 **IRAKLITOS II PhD Scholarship**
3-year IRAKLITOS II PhD Scholarship from the Greek General Secretariat for Research and Technology

Awarded Research – Grants

Total as a PI: \$316,513

Total as a co-PI: \$15,000

- 2019 **Massachusetts Technology Transfer Center UMass Acorn Award (UMass)**
PI: Caitlyn Butler, co-PI: S. Gerasimidis. 3D printed Biomimetic Biofilm Supports for Treatment Systems (\$15,000).
- 2018 **Improved Load Rating Procedures for Deteriorated Steel Beam Ends with Deteriorated Stiffeners (MassDOT)**
PI: S. Gerasimidis, co-PI: S. Breña. The research work includes computational, experimental and analytical work (\$98,795).
- 2018 **CEE Honors Research Assistant Fellowship, University of Massachusetts, Amherst**
PI: S. Gerasimidis. Honors Undergraduate Fellowship for Student Bryan Ovelheiro (\$1250).
- 2018 **CEE Honors Research Assistant Fellowship, University of Massachusetts, Amherst**
PI: S. Gerasimidis. Honors Undergraduate Fellowship for Student Saleh Aqleh (\$1250).
- 2017 **Research Support Fund, University of Massachusetts, Amherst**
PI: S. Gerasimidis. Awarded for a collaboration with Prof. Hutchinson at Harvard University (\$1000).
- 2017 **Development of Load Rating Procedures for Deteriorated Steel Beam Ends (MassDOT)**
PI: S. Gerasimidis, co-PI: S. Breña. The research work includes computational, experimental and analytical work (\$198,718).

- 2016 **Flex Grant for Teaching/Faculty Development, University of Massachusetts, Amherst**
PI: S. Gerasimidis. Awarded for a collaboration with Prof. Hutchinson at Harvard University on the course Structural Stability (\$500).
- 2016 **Research Support Fund, University of Massachusetts, Amherst**
PI: S. Gerasimidis. Awarded for a collaboration with Prof. Betti at Columbia University (\$1000).
- 2016 **Greek Diaspora Fellowship from the Stavros Niarchos Foundation**
PI: S. Gerasimidis. One of the 20 awards for Greek-born scholars to create collaborative engagements between Greek and North American academics (\$12,000).
- 2016 **CEE Honors Research Assistant Fellowship, University of Massachusetts, Amherst**
PI: S. Gerasimidis. Honors Undergraduate Fellowship for Student Tracy Donoghue (\$500).
- 2015 **Research Support Fund, University of Massachusetts, Amherst**
PI: S. Gerasimidis. Awarded for a collaboration with Prof. Betti at Columbia University (\$1000).
- 2015 **CEE Honors Research Assistant Fellowship, University of Massachusetts, Amherst**
PI: S. Gerasimidis. Honors Undergraduate Fellowship for Student Tracy Donoghue (\$500).

Student Supervision

Ph.D. Degree

- 2017-present G. Tzortzinis, UMass, Amherst, MA (**Primary Supervisor**)
Position: PhD Candidate, UMass, Amherst
- 2017-present F. Derveni, UMass, Amherst, MA (**Co-supervisor** with Prof. Peterman)
Position: PhD Candidate, UMass, Amherst
- 2016-present K. Yadav, UMass, Amherst, MA (**Primary Supervisor**)
Position: PhD Candidate, UMass, Amherst
- 2015-present P. Pantidis, UMass, Amherst, MA (**Primary Supervisor**)
Position: PhD Candidate, UMass, Amherst
- 2012-2016 J. Sideri, Columbia University, New York, NY (**Co-supervised** with Prof. Deodatis)
Position: Research Engineer, Thornton Tomasetti, New York, NY
- 2012-2016 A. Spyridaki, Columbia University, New York, NY (**Co-supervised** with Prof. Deodatis)
Position: Structural Engineer, SOM, New York, NY

M.S Degree

- 2017-present B. Knickle, UMass, Amherst, MA (**Primary Supervisor**)
Position: M.S. Student, UMass, Amherst
- 2017-present T. Hill, UMass, Amherst, MA (**Primary Supervisor**)
Position: M.S. Student, UMass, Amherst
- 2015-2016 I. Centrangolo, UMass, Amherst, MA (**Co-supervised** with Prof. Arwade)
Position: M.S. Student, UMass, Amherst

B.S. Degree

- 2019-present K. Burchard, UMass, Amherst, MA (**Primary Supervisor**)
Position: B.S. Student, UMass, Amherst
- 2019-present C. Hill, UMass, Amherst, MA (**Primary Supervisor**)
Position: B.S. Student, UMass, Amherst
- 2019-present R. Kennedy, UMass, Amherst, MA (**Primary Supervisor**)

Position: B.S. Student, UMass, Amherst

- 2019-present A. Hayden, UMass, Amherst, MA (**Primary Supervisor**)
Position: B.S. Student, UMass, Amherst
- 2018-present B. Murphy, UMass, Amherst, MA (**Primary Supervisor**)
Position: B.S. Student, UMass, Amherst
- 2017-2018 S. Aqleh, UMass, Amherst, MA (**Primary Supervisor**)
Position: M.S. Student, UMass, Amherst
- 2017-2018 B. Ovelheiro, UMass, Amherst, MA (**Primary Supervisor**)
Position: M.S. Student, UMass, Amherst
- 2015-2017 T. Donoghue, UMass, Amherst, MA (**Primary Supervisor**)
Position: PhD Candidate, UC Berkeley
- 2015-2017 B. Knickle, UMass, Amherst, MA (**Primary Supervisor**)
Position: M.S. Student, UMass, Amherst
- 2015-2016 A. Rock, UMass, Amherst, MA (**Co-supervised** with Prof. Arwade)
Position: M.S. Student, Princeton University
- 2015-2016 C. Zinner, UMass, Amherst, MA (**Co-supervised** with Prof. Brena)
Position: M.S. Student, Georgia Tech

List of Publications

Manuscripts in preparation

1. Tzortzinis G., Knickle B., **Gerasimidis S.**, Bardow A., Brena S., Beam end corrosion of steel girder bridges: Part I: Experiments, (*in preparation*).
2. Tzortzinis G., Knickle B., **Gerasimidis S.**, Bardow A., Brena S., Beam end corrosion of steel girder bridges: Part II: Computations, (*in preparation*).
3. Lonzano E., **Gerasimidis S.**, Influence of localization and dynamics in the onset of global buckling, (*in preparation*).
4. Derveni F., **Gerasimidis S.**, Peterman K., Cold-formed shear wall response under lateral loading, (*in preparation*).
5. Rivera J., Brena S., Clouston P., **Gerasimidis S.**, Progressive collapse of RC buildings, (*in preparation*).
6. Yadav K.K., **Gerasimidis S.**, Imperfection insensitive cylindrical shells, (*in preparation*).

Manuscripts under review

Published Journal Articles

1. Yadav K.K., **Gerasimidis S.**, (2019). Instability of thin steel cylindrical shells under bending, *Thin-Walled Structures*, 137, pp. 151-166.
2. Pantidis P., Gross A., Bertoldi K., **Gerasimidis S.**, (2019). Correlation between topology and elastic properties of imperfect truss-lattice materials, *Journal of the Mechanics and Physics of Solids*, 124, pp. 577-598.
3. Psyrras N., Kwon O.S., Gerasimidis S., Sextos A., (2019). Can a buried natural gas pipeline buckle locally during earthquake ground shaking? *Soil Dynamics and Earthquake Engineering*, 116, 511-529.
4. Song J., Sun Q., Luo S., Arwade S.R., **Gerasimidis S.**, Guo Y., Zhang G., (2018). Compression behavior of individual thin-walled metallic hollow spheres with patterned distributions of microporosity, *Material Science and Engineering A*, 734, pp. 453-475.
5. Pantidis P., **Gerasimidis S.**, (2018). Progressive collapse of 3D steel composite buildings under interior gravity column loss, *Journal of Constructional Steel Research.*, 150, pp. 60-75.
6. **Gerasimidis S.**, Virot EE, Hutchinson JW, Rubinstein SM., (2018). On Establishing Buckling Knockdowns for Imperfection-Sensitive Shell Structures. *ASME. J. Appl. Mech.*; 85(9): 091010.
7. **Gerasimidis S.**, Khorasani N.E., Garlock M., Pantidis P., Glassman, J., (2017). Resilience of tall steel moment resisting frame buildings with multi-hazard post-event fire, *Journal of Constructional Steel Research*, 139, pp. 202-219.
8. Sideri J., Mullen C.L., **Gerasimidis S.**, Deodatis G., (2017). Distributed Column damage effect on progressive collapse vulnerability in steel buildings exposed to an external blast event, *ASCE Journal of Performance of Constructed Facilities*, 31(5): 04017077.
9. Pantidis P., **Gerasimidis S.**, (2017). New Euler-type progressive collapse curves for 2D steel frames: an analytical method, *ASCE Structural Engineering*, 143 (9): 04017113.

10. **Gerasimidis S.**, Knickle B., Moon K., Pantidis P., (2016). Diagrid Structural System for High-Rise Buildings: Applications of a simple stiffness-based optimized design, *International Journal of High-Rise Buildings*, 5(4), pp. 319-326.
11. **Gerasimidis S.**, Deodatis G., Yan Y., Ettouney M., (2016). Global instability induced failure of tall steel moment frame buildings, *ASCE Journal of Performance of Constructed Facilities*, 31(2): 04016082.
12. **Gerasimidis S.**, Sideri T., (2016). A new partial distributed damage method for progressive collapse analysis of buildings, *Journal of Constructional Steel Research*, Volume 119, pp. 233-245.
13. Stavridou N., Efthymiou E., **Gerasimidis S.**, Baniotopoulos C.C., (2015). Investigation of stiffening schemes effectiveness towards buckling stability enhancement in tubular steel wind turbine towers, *Steel and Composite Structures*, Volume 19 (5), pp. 324-331.
14. **Gerasimidis S.**, Baniotopoulos C.C., (2015). Progressive collapse mitigation of 2D steel moment frames - Assessment of the effect of different strengthening schemes, *Stahlbau*, Volume 84 (5), pp. 324-331.
15. **Gerasimidis S.**, Kontoroupi T., Deodatis G., Ettouney M., (2015). Loss-of-stability induced progressive collapse modes in 3D steel moment frames, *Structure and Infrastructure Engineering*, Volume 11 (3), pp. 334-344.
16. **Gerasimidis S.**, (2014). Analytical assessment of steel frames progressive collapse vulnerability to corner column loss, *Journal of Constructional Steel Research*, Volume 95, pp. 1-9.
17. **Gerasimidis S.**, Bisbos C.D., Baniotopoulos C.C., (2013). A computational model for full or partial damage of single or multiple adjacent columns in disproportionate collapse analysis via linear programming, *Structure and Infrastructure Engineering*, 10 (5), pp. 670-683.
18. **Gerasimidis S.**, Bisbos C.D., Baniotopoulos C.C., (2012). Vertical geometric irregularity assessment of steel frames on robustness and disproportionate collapse, *Journal of Constructional Steel Research*, Volume 74, pp. 76-89.
19. **Gerasimidis S.**, Ampatzis A., Bisbos C.D., (2012). A mathematical programming computational model for disproportionate collapse analysis of steel building frames, *Optimization Letters*, Volume 6, Number 3, pp. 525-535.
20. **Gerasimidis S.**, Baniotopoulos C.C., (2011). Evaluation of wind load integration in disproportionate collapse analysis of steel moment frames for column loss, *Journal of Wind Engineering and Industrial Aerodynamics*, Volume 99, Issue 11, pp. 1162-1173.
21. **Gerasimidis S.**, Baniotopoulos C.C., (2011). Steel moment frames column loss analysis: the influence of time step size, *Journal of Constructional Steel Research*, Volume 67, Issue 4, pp. 557-564.
22. **Gerasimidis S.**, Baniotopoulos C.C., (2011). Disproportionate collapse analysis of cable-stayed steel roofs for cable loss, *International Journal of Steel Structures*, Volume 11, Number 1, pp. 91-98.
23. **Gerasimidis S.**, Efthymiou E, Baniotopoulos C.C., (2009). On the application of robustness criteria to steel lattice masts, *POLLACK Periodica*, Volume 4, Number 1, pp. 17-28.

Conference publications-presentations

1. Tzortzinis G., **Gerasimidis S.**, Bardow A., (2019), Strength evaluation of corroded beam ends, MassDOT Transportation Innovation Conference, Worcester, MA, USA.
2. Pantidis P., **Gerasimidis S.**, Schafer B., Arwade S., Overlheiro B., (2019), Architected materials in structural engineering applications: novel slab design and performance, Structures Congress, Orlando, FL, USA.

3. Yadav K., **Gerasimidis S.**, (2019), Wavy thin steel cylindrical shells: An alternative to circular thin cylinders for tall and super-tall wind turbine towers, Structures Congress, Orlando, FL, USA.
4. Yadav K., **Gerasimidis S.**, (2019), Imperfection insensitive thin steel tubular shells under bending, SSRC Stability Conference, St. Louis, MO, USA.
5. Tzortzinis G., Knickle B., **Gerasimidis S.**, Brena S., (2019), Experiments and Computations on Steel Bridge Corroded Beam Ends, SSRC Stability Conference, St. Louis, MO, USA.
6. Derveni F., **Gerasimidis S.**, Peterman K., (2019), Capturing cold-formed steel shear wall behavior through nonlinear fastener-based modeling, SSRC Stability Conference, St. Louis, MO, USA.
7. Tzortzinis G., Knickle B., **Gerasimidis S.**, Bardow A., Brena S., (2019), Identification of most common shapes and locations for beam end corrosion of steel girder bridges, TRB, Washington DC, USA.
8. **Gerasimidis S.**, Virot E., Hutchinson J.W., Rubinstein S.M., (2018), On establishing knockdowns for imperfection-sensitive shell structures, *NewMech 2018*, Brown University, Providence RI, USA.
9. Pantidis P., Gross A., Bertoldi K., **Gerasimidis S.**, (2018), On the correlation between topology and elastic properties of imperfect architected materials, *NewMech 2018*, Brown University, Providence RI, USA.
10. Pantidis P., Gross A., Bertoldi K., **Gerasimidis S.**, (2018), Flaw tolerance in architected metamaterials, *13th World Congress on Computational Mechanics (WCCM XIII)*, *2nd Pan American Congress on Computational Mechanics (PANACM II)*, 22-27 July 2018, New York, NY, USA.
11. Pantidis P., Gross A., Bertoldi K., **Gerasimidis S.**, (2018), Flaw tolerance in architected metamaterials, *15th International Conference on Nanosciences and Nanotechnologies (NN18)*, 3-6 July 2018, Thessaloniki, Greece.
12. Yadav, K.K., **Gerasimidis S.**, (2018), Imperfection insensitivity of wavy cross-sectional thin cylindrical shells under bending, *Proceedings of the IASS Symposium 2018*, MIT, Cambridge MA.
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