

**CONTACT
INFORMATION**

Arash Soleimani, Ph.D.
Assistant Professor
**Kennesaw State University College of Architecture and
Construction Management** | Department of Architecture
Architecture-N Room 162, 1100 South Marietta Parkway,
Marietta, GA 30060, USA
eml. asoleim1@kennesaw.edu | tel. [470.578.7370](tel:470.578.7370) | web. cacm.kennesaw.edu

KEY WORDS

Key words defining my interests, experiences and ambition:
Creative Design, Research, Human-Computer Interaction, Computational Thinking,
Design Computing, Tangible-Physical Computing, Cyber-Physical Systems,
Architectural Robotics, Environmental Technology, Responsive Environments,
Sustainability, Usability Methods, Human Factors, and Learning Science
(CyberLearning)

EDUCATION

- 2015 **Ph.D., Planning, Design and the Built Environment**
Clemson University, School of Architecture, Clemson SC, USA
Certificate in Digital Ecologies earned in conjunction with the PhD above.
- Advisors: Keith E. Green, Ian D. Walker, Danielle C. Herro, Christina Gardner-McCune
- Dissertation: *CyberPLAYce: A Cyber-Physical-Spatial Learning Environment Promoting Children's Computational Thinking.*
- Abstract: CyberPLAYce is a novel, interactive-computational construction kit comprised of hand-sized, magnetic modules, and construction panels that receive the modules and serve as physical building blocks for constructing cyber-physical environments imagined by children. CyberPLAYce employs four evaluation frameworks through an iterative design process including, usability studies, participatory design, ethnographic observation, and formative assessment.
- 2010 **Master of Architectural Design**
University of Nottingham, Department of Architecture, Nottingham, UK
- Advisor: Jonathan Hale
- Thesis: *Responsive and Interactive Environments in Museums: Managing Responsiveness & Interactivity within Museums & Exhibitions in a New Fashion.*
- Abstract: In this thesis, the importance of interactive environments is leveraged by considering both traditional and modern technologies of interaction. The thesis examines the possibilities and challenges faced in the integration of interactive technologies in museums by considering theories and historical precedents underlying *interaction design* in exhibitions and museums.
- 2008 **Bachelor of Architectural Engineering**
Art University of Isfahan, School of Architecture, Isfahan, Iran
- Advisor: Mohammad Omoumi
- Thesis: *The House of Photography: An Architectural Space of Learning, Experiencing and Viewing Photography.*

AWARDS & CERTIFICATES

- 2017 **CETL Institute for Course (re)Design Award**
Kennesaw State University, Kennesaw GA, USA
- 2017 **Certificate of Online Course Facilitation**
Kennesaw State University, Kennesaw GA, USA
- 2017 **Certificate of Completion in "Process Improvement"**
Kennesaw State University, Kennesaw GA, USA
- 2016 **Certificate of Completion in "Project Management"**
Kennesaw State University, Kennesaw GA, USA
- 2015 **Certificate of Excellence**
Clemson University, Clemson SC, USA
Awarded the Certificate of Excellence in *GRADS Poster Presentation*, College of Architecture, Arts and Humanities.
- 2013-14 **The Honor Society of Phi Kappa Phi**
Clemson University, Clemson SC, USA
- 2012-15 **Clemson University Graduate Assistantship**
Clemson University, Clemson SC, USA
- 2009 **University of Nottingham Masters Scholarship**
University of Nottingham, Nottingham, UK

PUBLICATIONS

Books

- 2013 Soleimani, A., "**Responsive and Interactive Environments in Museums: Managing Responsiveness and Interactivity within Museums and Exhibitions in a New Fashion**", *Lambert Publishing*, Deutschland, Germany.

Papers & Videos

- 2017 Soleimani, A., Alfalih, H., Delgado, M. D., Dowd, M. C., Harkin, M., Ladefoged, C. T., Rateb, C. M. & Samaniego, J. A., "**Programming Skins (Pro-Skin): Cyber-Physical Façade Systems Reactive to Environmental Conditions.**" *Proceedings of ABS'17, the International Conference on Advanced Building Skins*, Bern, Switzerland (in press).
- 2016 Soleimani, A., Green, K. E., Herro, D. C. & Walker, I. D., "**A Tangible, Story-Construction Process Employing Spatial, Computational-Thinking.**" *Proceedings of IDC'16, the ACM Conference on Interaction Design and Children*, Manchester, UK, pp. 157-166.
- 2015 Soleimani, A., Green, K. E., Herro, D. C., Walker, I. D. & Gardner-McCune, C., "**CyberPLAYce, a Cyber-Physical-Spatial Storytelling Tool: Results from an Empirical Study with 8-10-year-old Storytellers.**" *Proceedings of the 17th International Conference on Human-Computer Interaction* (Los Angeles, August 2-7, 2015). *HCI'15, Human-Computer Interaction*, LNCS 9192, Springer International Publishing Switzerland, pp. 438-446.
- 2015 Soleimani, A., Green, K. E. & Herro, D. C., "**CyberPLAYce, a Cyber-Physical-Spatial Storytelling Tool Enhancing Children's Spatial Computational-Thinking.**" *Proceedings of IDC'15, the ACM Conference on Interaction Design and Children*, Boston, MA, United States, (Doctoral Consortium).
- 2014 Soleimani, A., Green, K. E., Walker, I. D., Gardner-McCune, C. & Herro, D. C., "**CyberPLAYce - A Play Space of Creative, Intelligent Tools Promoting Personal and Computational Expression for Early Learners.**" *Proceedings of DIS'14, the ACM Conference on Designing Interactive Systems*, Vancouver, BC, Canada, pp. 191-

PUBLICATIONS

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- 194, (Doctoral Consortium – only nine students were accepted to the DC program amongst the entire participants from around the world, and the conference organizers covered the registration fee and the conference expenses only for the nine participants).
- 2014 Soleimani, A., Smith, K., Zeng, J., Green, K. E., Herro, D. C., Santiago, J., Sharma, S. Tonapi, M., Vijaykumar, A., Walker, I. D., & Garder-McCune, C., **“Learning with CyberPLAYce; a Cyber-Physical Learning Environment for Elementary Students Promoting Computational Expression.”** *Proceedings of CHI’14, the ACM Conference on Human Factors in Computing Systems*, Toronto, Ontario, Canada, pp. 165-166, (Archived Video).
- 2013 Schafer, G., Green, K. E., Walker, I. D., Lewis, E., Fullerton, S., Soleimani, A., Norris, M., Fumagali, K., Zhao, J., Allport, R., Zheng, X., Gift, R. & Padmakumr, A., **“Designing the LIT KIT, an Interactive, Environmental, Cyber-Physical Artifact Enhancing Children's Picture-book Reading.”** *Proceedings of IDC’13, the ACM Conference on Interaction Design and Children*, New York, United States, pp. 281-284.
- 2010 Soleimani, A., **“Wind Towers: design and development of tall buildings in response to unique climatic, cultural and contextual characteristics in Abu Dhabi.”** The ‘Wind Towers’ thesis project was selected to be published at *the Council on Tall Buildings and Urban Habitat Website, CTBUH’10*, Chicago, IL, United States, (Design-thesis Competition).

TEACHING

- 2016-present **Assistant Professor** (tenure-track)
Kennesaw State University Dept. of Architecture, Marietta GA, USA
- UG *ARCH 2003– Architecture Studio III (program: Marta Train Station)*
Architectural analysis and design problems with a focus on ideal tectonic concepts, connections and structures.
- UG *ARCH 2004– Architecture Studio IV (program: Livable Centers Headquarter)*
Architectural analysis and design problems with a focus on material constructions and making.
- UG *ARCH 2311 – Environmental Tech I: Systems Selection, Materials & Methods*
Investigating physical and structural properties of building materials.
- UG *ARCH 3314– Environmental Tech III: Lighting, Electrical & Acoustics*
Exploring environmental design strategies with a focus on natural and artificial lighting, electrical systems, and building acoustical design.
- UG *ARCH 4490 – Computational Methods: Generative-Analytical Tools*
Investigating techniques for integrating environmental performance analysis and design of buildings through a parametric approach.
- 2015-16 **Visiting Lecturer**
UNC-Charlotte School of Architecture, Charlotte NC, USA
- UG *ARCH 2101– Comprehensive Studio III (program: Performing Arts Center)*
Architectural analysis and design problems with a focus on ideal tectonic concepts, ordering systems, and context.
- UG *ARCH 4102 – Topical Studio (program: Museum of Interactive Technology)*
Exploring and learning ways of making buildings more responsive, adaptable, dynamic, and engaging through the use of both traditional and contemporary digital technologies.

TEACHING

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UG + G	<p><i>ARCH 4604 5604 – Computational Methods</i> Understanding and learning the potential of computation and computational design through explorations with generative scripting and parametric tools, and focusing on the role of computation as part of one’s design process; not as a collection of tools, but as a way of thinking about design.</p> <ul style="list-style-type: none"> • Rhino Grasshopper, Kangaroo, Karamba, Firefly, Archsim + DIVA, Ladybug + Honeybee, LunchBox • Nurbs Modeling Mesh Modeling Surface Modeling • Advanced Digital Fabrication Techniques CNC milling, 3D printing, Laser cutting • Material study and exploring design thinking through fabrication
G	<p><i>ARCH 6603 – Architectural Representation II</i> Learning and practicing different methods and media to prioritize elements, sequence operations, and focus attention to shape design solutions and communicate ideas through the development of physical & digital elements.</p>
2012-15	<p>Lecturer (teaching assistantship) Clemson University School of Architecture, Clemson SC, USA</p>
UG	<p><i>ARCH 101– Introduction to Architecture</i> Introducing principles of architectural design including formal composition, visual communication, oral presentation, and computer literacy.</p>
UG	<p><i>ARCH 151 – Architecture Communication I</i> Focusing on the ability of understanding and applying the standard conventions of various graphic techniques ranging from analogue to digital.</p>
UG	<p><i>ARCH 252 – Architecture Communication II (program: Marketplace + Branch Library)</i> Architectural analysis and design problems with a focus on understanding site and the context of architecture.</p>
UG + G	<p><i>ARCH 401 – Architecture Portfolio</i> Cultivating graphic communication skills and development of a cohesive design identity through a suite of portfolios.</p>
UG	<p><i>ARCH 452 – Synthesis Studio (program: Theater Campus)</i> Exploring through research, precedent studies, site mapping/analysis, programming and conceptual development.</p>
G	<p><i>ARCH 868 – Architectural Robotics (co-taught with Keith Green & Ian Walker)</i> Understanding, developing and testing robotic systems for the built environment. Collaborative teams of Ph.D., M.S. and M.Arch. students from <i>Architecture</i> and <i>Electrical and Computer Engineering</i> developed working robotic prototypes responsive to challenges and opportunities of living in the built and natural environments.</p>
2013-14	<p>Student Instructor Clemson University School of Architecture, Clemson SC, USA</p> <p><i>EUREKA Program</i> Supervised three <i>EUREKA</i> students who were accepted into the <i>Calhoun Honors College</i> for a five-week design-research project during summer. Students were supervised to design interactive learning tools and environments enhancing elementary students’ learning experience.</p>

TEACHING

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2010-12 **Mentor/Instructor**
University of Nottingham Department of Architecture and Built Environment,
 Nottingham, UK
 Supervised several undergraduate architecture students with learning disabilities to pursue research and complete their studies. Furthermore, facilitated workshops on *Digital Communication Skills*, teaching various analytical and modeling programs such as AutoCAD, 3DsMax, Rhino, ArchiCAD and Adobe Suite.

THESIS**SUPERVISION**

2016-17 KSU Department of Architecture | B.Arch.
Zimbulus Nixon • *Compelling Interactions: Architecture that drives communication*
Wenyang Wu • *Between the old and the new Chinese Architecture*
Chelsey Frith • *Breaking the Horizon: A new architectural frontier*

2015-16 UNCC School of Architecture | Dual M.Arch. III / M.S. in Computer Science
Jingoog Kim • *Parametric Design through Tangible Interactive Tools*
Ganquan Weng • *Gamification to Raise Awareness of Energy-related Tasks*

2015-16 UNCC School of Architecture | M.Arch. II
Philip Broszkiewicz • *Reimagining the Eastern Bloc[k]: Modernizing mass housing through parametrics*
Jason Hudson • *An Adaptable Algorithm: designing means for computationally-driven adaptability in high density, mixed used development*
Jacqueline Stewart • *Facelifting: Redefining federal buildings through a façade overhaul*

LECTURES & WORKSHOPS

2014 **Evaluating Children's Interactive Products**
 CHI'14: the *ACM Conference on Human Factors in Computing Systems*
 Toronto, Ontario, Canada
 Attended lecture on design methodology, input techniques, games, context awareness, & end user programming guiding design of interactive products for children.

2007 **Form Study and Construction of Free-style Forms**
 Tehran University School of Architecture, Tehran, Iran
 Completed specialized training workshop of *Form Study and Construction of Free-style Forms with Space Structures*.

INDUSTRY EXPERIENCE

2010-12 **Rushcliffe Solar**
 West Bridgford, Nottingham, UK
 Position: Researcher

- Provided householders with the advice of costs and payback to fit photovoltaic roofs.
- Worked with Rushcliffe Borough Council and Energy Saving Trust providing appraisal and estimation service for public buildings.

2010 **Rushcliffe Play Forum and Resource Center**
 Keyworth, Nottingham, UK
 Position: Internship

- Designed an Art Center for making and exhibiting art crafts made by recycled and scrap materials for children.

2009-11 **New Art Exchange (NAE)**
 Nottingham, UK
 Position: Interior Designer

- Iranian Contemporary Art and Culture Exhibition

- 2006-09 **Shahr-o-Khaneh Consulting Planners, Architects & Engineers**
Mirza Koochek Khan Blvd., Isfahan, Iran
- Position: Architectural Assistant
- Extension of Zayanderoud Recreational & Cultural Village, Isfahan, Iran
 - Sheikh Bahaie University, Basic Science Department, Isfahan, Iran
 - Rehabilitation and reconstruction of Doolab District, Tehran, Iran

PROFESSIONAL MEMBERSHIPS

- Since 2017 **Member** of Council for Quality Growth, Atlanta GA, USA
- Since 2015 **Associate Member** of American Institute of Architects (AIA #38477246)
- Since 2014 **Member** of Association for Computing and Machinery (ACM)
- Since 2008 **Licensed Architect**, Isfahan, Iran #1010006789

SERVICE

- Since 2017 **Peer Reviewer**, Architectural Science Review (ASR), the international peer-reviewed journal of architectural science, technology and the built environment, Taylor and Francis, UK.
- Since 2017 **Committee Member**, Atlanta Advisory Committee: Council for Quality Growth, Atlanta GA, USA.
- 2016-2018 **Co-chair**, Lecture, Exhibition and Symposium Committee, Department of Architecture, Kennesaw State University, Marietta GA, USA.
- 2016-2018 **Steering Committee Member**, Future City Competition, a cross-curricular educational program that gives middle school students the opportunity to learn engineering design process and build *21st century skills*, Georgia, USA.
- 2016-2018 **Associate Member**, Graduate Faculty of the University of North Carolina at Charlotte NC, USA.
- 2016 **Peer Reviewer**, IDC'16 Papers and Notes, the *ACM Conference on Interaction Design and Children*, Manchester, UK.
- 2014 **Peer Reviewer**, DIS'14 Doctoral Consortium, the *ACM Conference on Designing Interactive Systems*, Vancouver BC, Canada.
- 2010-12 **Lead Examination Invigilator**, University of Nottingham, Nottingham, UK.
- 2006 **Research Facilitator**, research-applied project of Article 102 of Act on the third State Development Plan entitled "*Consideration of Emotional Utterance Patterns of Iranian Primary-school Students*", Isfahan, Iran.