

Ambrosio Valencia-Romero

Systems Engineer | Design Researcher | Educator
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Professional Experience

- 07/24 -- NOW **Assistant Professor of Mission Engineering**
Old Dominion University, EMSE Department
- Obtention of research grant funding
 - Supervision of doctoral students
 - Teaching of graduate-level engineering courses
- 09/22 -- 07/24 **Postdoc @ Engineering Research**
The Roux Institute at Northeastern University
- Prepare research proposals and white papers
 - Systems thinking analysis of supply chain systems
 - Assess opportunities for Industry 4.0 in manufacturing
- 10/21 -- 08/22 **Postdoc @ The Design Research Collective**
Carnegie Mellon University, MechEng Department
- Interview construction industry stakeholders
 - Design thinking and user story mapping activities
 - Advise construction Owners, EPCs, and Suppliers teams
- 06/13 -- 07/14 **Research Engineer, Machinery and Propulsion**
COTECMAR: Sci. Tech. Corp. for the Naval, Maritime & Riverine Industries
- Design of naval piping systems for patrol vessels
 - Outfitting layout of engine and machinery rooms
 - Development of shipbuilding piping practices
- 08/12 -- 02/13 **Planning Intern, CAT[®] Certified Rebuild**
Relianz CAT (formerly GECOLSA Mining Div.)
- Prepare technical reports of rebuilds and major repairs
 - Support to planning and tracking of work orders
 - Support to tracking and inventory of spare parts

Education

- 2021 **Ph.D. in Systems Engineering**
Strategy Dynamics in Collective Systems [VIDEO]
Stevens Institute of Technology
- 2016 **M.Sc. in Mechanical Engineering**
Quantified Gestalt Principles for 3D Product Aesthetics
Universidad de Puerto Rico en Mayagüez
- 2012 **B.Sc. in Mechanical Engineering**
Structural Design of Solar Tracking System
Universidad del Atlántico

Awards

- 05/21 Stevens SSE Award for Distinguished Leadership by a Ph.D. Student, *Stevens Institute of Technology*
- 05/17 Scholarship for NSF 2017 ESD Research Summer School, *National Science Foundation; Clemson University.*
- 03/15 Best Graduate Research at the 8th NEA Science Day, *Northeast Alliance for Grad. Education & the Professoriate*

Patents

- 04/2017 Safe Solar Tracking Software
Colombian Ministry of Interior, Registry #13-59-313.

Skills

Analytical Skills

Agent-based modeling and game theory
 Numerical analysis and optimization
 Nonlinear mixed-effects models
 Reinforcement learning

Software Skills

Coding: Python, NetLogo, MATLAB, R Lang
 CAD/CAE: SolidWorks, AutoCAD, Aveva
 Graphics: Inkscape, PGF/TikZ, GIMP
 Markup: \LaTeX , Markdown, HTML

Soft Skills

Collaboration and teamwork
 Flexibility and adaptability
 Work ethic and integrity
 Critical thinking

Service

Peer Reviewer

Intl. Conf. Design Theory & Methodology (DTM)
 Computers & Information in Engineering (CIE)
 Design Computing and Cognition (DCC)
 Design Automation Conference (DAC)
 Intl. Conf. on Design Education (DEC)

Participation in Committees

- 05/18 -- NOW Broadening Participation of Underrepresented Groups
ASME Design Engineering Division
- 04/18 -- 05/21 Graduate Student Academic Integrity Board
Stevens Institute of Technology

Mentoring Activities

- 01/22 -- 06/22 Diversity, Equity, and Inclusion Mentor
Carnegie Mellon University, College of Engineering
- 08/20 -- 05/21 Doctoral Student Peer Mentor
Stevens Institute of Technology, Graduate Education

Additional Information

Affiliations

- 02/16 -- NOW The Design Society
- 02/16 -- NOW American Society of Mechanical Engineers
- 01/22 -- NOW Encyclopedia of Integer Sequences (Contributor)

Certifications and Training

- 02/23 -- 03/23 NSF I-Corps Spark Program
New England Regional Innovation Node at MIT
- 08/22 -- 11/22 Cybersecurity 1.0
Correlation One
- 04/15 -- 10/25 **Responsible Conduct, Social & Behavioral Research**
Collaborative Institutional Training Initiative
- 04/19 -- 05/19 Science Communication Training, NYC Cohort
Science Riot/The Symposium: Academic Stand-up

Languages

English (fluent), Spanish (native).