

Elena Helvajian, P.E.

ENTERTAINMENT ENGINEER

EXPERIENCE

	McLaren Engineering Group	
Project Engineer		2024-Present
Staff Engineer		2022-2024
Engineer I		2019-2022
Mechanical Engineering Intern		Summer 2018
Performs mechanical and structural analysis for a variety of entertainment-related elements for the Theater, Film, Television, Theme Park, Concert, Museum and Arts industries domestically and internationally. Efforts range from on-location consultation for installation feasibility, evaluating structures for code compliance, and engineering custom design solutions based on project needs.		
Teaching Assistant	Bechtel Innovation Design Center (formerly AFL)	2014-2019
Paid machinist, instructing graduate and undergraduate students in the use of advanced manufacturing equipment. Provided support from concept design, through CAD/CAM, to final manufacture.		
Technical Director	Purdue Theatre	2018
Responsible for coordination of all technical elements for university mainstage show. This included producing budgets, project management and scheduling, generating construction drawings, overseeing scenery construction, load-in and strike, as well as organizing and leading the technical direction team.		
Assistant Technical Director	Purdue Theatre	2015-2017
Facilitated production meetings, organized budget information, generated construction drawings, developed load-in and strike plans, attended technical rehearsals, and led strike.		
Mechanical Engineering Extern	ETC (Electronic Theatre Controls)	Summer 2016
Designed and prototyped parts for products in R&D Architecture & Dimming department.		
Technical Intern	FiveCurrents	Summer 2015
Special Olympics World Games Los Angeles 2015. Assisted Technical Director and Technical Producer to coordinate technical movements. Made engineering decisions, read and interpreted draftings.		

INDUSTRY AFFILIATIONS & CERTIFICATIONS

Board of Directors	Themed Entertainment Association – Western North America Division
Registered Professional Engineer	State of California

AWARDS

2023 Client Hero Award, McLaren Engineering Group
2023 Spirit of McLaren Award, McLaren Engineering Group
2019 Louis Sudler Prize in the Arts
2019 Outstanding Senior, Patti and Rusty Rueff School of Design, Art, and Performance
2019 Outstanding Senior in IDES/MDE
2017 Dorothy Runk Mennen Scholarship in Theatre
2014-2019 Purdue University Dean's List & Semester Honors

EDUCATION

BSE, Multidisciplinary Engineering	Program of Study: Theatre Engineering	Purdue University, 2019
BA, Theatre - Design and Production	Program of Study: Technical Direction	
Minor in Mechanical Engineering		

SKILLS

Analysis: RISA 3D, Ansys *Fabrication:* CNC Mill, CNC Lathe, CNC Gantry, Water Jet Cutter
Drafting: AutoCAD, Solidworks, Inventor, Vectorworks *Modeling/Machining:* CATIA, Siemens NX, Fusion 360