

JASON SHUPE

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EDUCATION

- May 2003 **Bachelor of Arts in Theatre - Honors & Departmental Honors Citations, 3.41 GPA**
Lehigh University, Bethlehem, PA
- Emphasis in Lighting Design & Technical Production
- June 2002 **Bachelor of Science in Mechanical Engineering - Honors Citation, 3.41 GPA**
Lehigh University, Bethlehem, PA
- Emphasis in Control Systems & Mechanism Design

EMPLOYMENT

- 2006 to Present **Freelance Entertainment Automation Engineer & Show Programmer**
Various Productions & Clients
- Designed, programmed & operated entertainment automation systems for Broadway, concerts, films, commercials & night clubs, including motion control camera systems, high speed automated acrobatic flying, automated scenery systems & integration with other production departments
 - Concerts: Taylor Swift (Reputation World Tour 2018), Pink (Beautiful Trauma World Tour 2018), Lady Gaga (Joanne World Tour 2017), Mariah Carey (Caesar's Palace residency), Metallica, Bon Jovi, Ultra Music Festival, Beyoncé, Gwen Stefani, Justin Timberlake, Chris Brown, Marco Borsato, Eros Ramazzotti
 - National commercials: Call of Duty, Sony (Cybershot), Rite Aid, NASCAR
 - Corporate Events: Sony (E3), Pfizer, Home Depot, Chrysler, Ski-Doo BRP
 - Other clients: Walt Disney Imagineering, Omnia Night Club (Caesar's Palace Las Vegas), Wynn Cotai Casino (Macau), Hale Center Theatre
 - Automation Systems Used / Trained On: Navigator, Cyberhoist, eChameleon, Flair
 - Automation Vendors: Tait, Fisher Technical Services Inc., Show Rig/SGPS, PRG/Scenic Tech
- 2008 - 2012 **Lead Automated Flying Programmer & Automation Engineer**
Spider-Man: Turn Off The Dark (Broadway)
- Programmed all performer flying sequences for the most complex automated acrobatic rigging system ever installed on Broadway
 - Created "Path Motion Profiles," a revolutionary new software tool for programming complex 3D motion of automated acrobatic rigging systems
 - Oversaw the technical design & execution of all aspects of the automated rigging system, including the rigging, mechanical, electrical, control systems & software
 - Created the custom 3D models required to execute all performer flying
 - Executed the mechanical design on certain mechanical systems key to the system's 7 axis performer flying "Bushing Rig" (used to fly Spider-Man over the audience)
 - Designed and supervised the installation & programming of a scenery positional monitoring safety system, to track the status & location of critical scenic elements not controlled natively by the performer flying system & integrate data into the performer flying system's safety interlocks

2006 - 2010 **Special Agent & Navigator System Specialist**

Fisher Technical Services, Inc.

- Fabrication, installation and troubleshooting of entertainment automation control equipment, including mechanical, high voltage, and low voltage electrical equipment
- Programed custom automation systems, including pioneering use of 3D automated flying systems
- Established techniques that have become industry-wide best practices for automation operators using the Navigator automation software
- Instructor / Trainer for Fisher Technical Service's Navigator automation software
- Selected projects include: Peter Pan's Neverland (Universal Studios Japan), Phantom of the Opera (The Venetian Hotel), LA Opera, Dragon's Treasure Show (City of Dreams-Macau), Cirque du Soleil's Zed (Tokyo Disney), The Dancing Orbs (Wynn Las Vegas Resort & Casino), Audi Showroom (NYC), Sea World, QVC & Hanz Klok

2004 - 2005 **Automation Technician**

Le Rêve - The Dream (Wynn Las Vegas Resort & Casino)

- Automation show programming, including high speed Flying Man acts
- Installation, maintenance and troubleshooting of 70+ automated acrobatic rigging effects
- SCUBA diving for the maintenance and repair of submerged automation equipment

2003 - 2004 **Mechanical Engineer, Mechanical Designer, Draftsman & Technical Writer**

Fisher Technical Services, Inc.

- Designed custom entertainment automation equipment and produced solid models & drawings using Autodesk Mechanical Desktop solid modeling software
- Lead draftsman on The Lake of Dreams project (Wynn Resort) using Autodesk AutoCAD
- Design, drafting and project coordination for The Lake of Dreams & Le Reve projects (Wynn)
- Authored portions of the Navigator® Automation Software system manual

2003 - 2004 **Assistant Technical Director (Operations)**

Cirque du Soleil's Zumanity (New York New York Resort & Casino)

- Provided technical support for this new production's creation process
- Supervised technical elements and staff in the absence of the Operations Production Manager
- Designed and managed execution of technical projects for the Zumanity showroom
- Developed cost effective solutions for purchasing of consumables & other material needs
- Purchasing & project budgeting responsibilities
- Hired & supervised the production's Runner / Technical Assistant
- Developed Standard Operating Procedures for Technical Operations

2000 - 2002 **Technical Design Intern**

Live Entertainment Studio, PRG Scenic Technologies

- Designed stage machinery and automated scenic effects for live theatre in NYC and Las Vegas, theme parks, and live television
- Assisted the studio manager with project management, bidding and client support
- Provided on-site support as the Scenic Technologies shop rep at the installation of scenery and automation equipment for "The Boys From Syracuse" and "Dance of the Vampires" (Broadway)
- Invented new "dog track" equipment to solve a classic scenic automation problem
- Researched and developed innovative solutions to traditional stage machinery challenges
- Additional Selected Projects: 2003 Winter Olympics (SLC), "Aladdin" & "Steps in Time" (Disney's Hyperion Theatre at California Adventure Theme Park), & "The Producers" (First National Tour)

1998 - 2003 **Work Study Technician**

Scenery Shop & Electrics Shop, Department of Theatre at Lehigh University

- Shop Carpenter, Welder, Scenic Artist, and Lighting Technician
- 10+ hours per week on average, in addition to production assignments done for academic credit
- Various Design & Technical Productions positions held for 14+ productions in 3 venues

1998 - 1999 **Engineering Intern & Machinist's Apprentice**

*Imaging Hardware Team, High Energy Solar Spectroscopic Imager (HESSI) Satellite
NASA's Goddard Space Flight Center / Catholic Univ. of America*

- Mentored by Mr. David Clark
- Assembled flight components of HESSI satellite at Goddard Space Flight Center Metrology Lab
- Traveled to the Paul Scherrer Institute in Switzerland to conduct critical alignment/flight qualification tests on the HESSI Satellite
- Drafted plans in AutoCAD and machined hardware to support the HESSI Mission
- Certified to handle radioactive materials for testing purposes

1997 **Engineering Intern**

*Optical Design & Analysis Group, Space Technology Division
NASA's Goddard Space Flight Center / National Space Club & Foundation*

- Mentored by Dr. Eugene Waluschka and Mr. David Clark
- Designed & conducted experiments to characterize the performance of a heliostat for the calibration of sun-sensing instruments on HESSI Satellite
- Received the Olin E. Teague Memorial Award for the paper I wrote with my research findings

1996 **Engineering Intern**

*Sensor Characterization & Development Branch, Laboratory for Terrestrial Physics
NASA's Goddard Space Flight Center / National Space Club & Foundation*

- Mentored by Dr. James Kalshoven & Dr. John Holt
- Wrote software using LabVIEW to collect and format data from a Digital Oscilloscope for bench top testing of a LIDAR system

SELECTED FEATURE FILM CREDITS

- 2017 **Avatar 2 & 3** - Automated Performer Flying Programmer
- Conducted R&D into various means for 6 Degree of Freedom prop flying, with integration into Visual Effects/Motion Capture systems
 - Wrote specification for next-generation Stunt/Acrobatic Performer Flying Winches
- 2017 **Avengers: Infinity War** - Automated Flying Camera Programmer
- 2016 **Alita: Battle Angel** - Automated Performer Flying Programmer
- 2015 **Passengers** - Automated Performer Flying Programmer
- 2015 **Allegiant** - Automated Performer Flying Programmer
- 2013 **Birdman** - Crew Chief & Automated Flying Camera Programmer
- 2012 **Metallica Through the Never** - Automated Flying Camera Coordinator
- 2012 **Star Trek: Into Darkness** - Crew Chief & Motion Control / Automation Programmer
- Created a custom interface between Autodesk Maya and the Navigator Automation System, allowing six degree of freedom motion to be animated in Maya and then immediately performed on the actual flying rig on set.
- 2012 **The Campaign** - Automated Performer Flying Programmer
- 2011 **Oz the Great and Powerful** - Automated Performer Flying Programmer
- 2009 **Resident Evil: Afterlife** - Automated Flying Camera Programmer
- 2009 **Red Dawn** - Automated Performer Flying Programmer
- 2009 **Priest** - Automated Performer Flying Programmer
- 2008 **Drag Me To Hell** - Automated Performer Flying Programmer
- 2008 **Race to Witch Mountain** - Motion Control Camera & Flying Lighting Rig Programmer
- 2008 **Paul Blart: Mall Cop** - Automated Performer Flying
- 2007 **Hancock** - Automated Performer Flying & Motion Control Camera Programmer
- 2006 **Where the Wild Things Are** - Automated Performer Flying Programmer
- 2006 **Spider-Man 3** - Motion Control Camera Programmer
- 2006 **Vacancy** - Automated Stunt Rigging & Motion Control Camera Technician

SELECTED BROADCAST TELEVISION CREDITS

- 2017 **Premio Lo Nuestro a La Música Latina** - Automated Performer Flying Programmer
- 2016 **MTV Video Music Awards** - Automated Rigging Programmer
- 2011 **American Idol** - Automated Performer Flying Programmer
- 2010 **The 82nd Annual Academy Awards Ceremony** - Automated Rigging Technician
- 2007 **Los 5 Magníficos** - Automated Rigging Technician
- 2006 **Scream Awards 2006** - Automated Rigging Technician

SELECTED ACADEMIC THEATRE CREDITS

- 2003 **Joe Turner's Come and Gone** - Lighting Designer
- 2003 **Fire in the Basement** - Assistant Sound Designer
- 2002 **The Cripple of Inishmaan** - Technical Director
- 2002 **Macbeth** - Assistant Technical Director & Stage Machinery Designer
- 2002 **The Vagina Monologues** - Lighting Designer
- 2001 **Fools** - Lighting Designer
- 2001 **Runaways** - Assistant Scenic Designer & Production Welder
- 2001 **A Streetcar Named Desire** - Assistant Lighting Designer
- 2001 **Extremities** - Lighting Designer
- 2001 **A Yet to be Titled Cabaret Review** - Lighting Designer
- 2001 **Waiting for Godot** - Set & Lighting Design Collaborator
- 1999 **Hunting Cockroaches** - Master Electrician
- 1999 **Curse of the Starving Class** - Master Electrician

SELECTED AWARDS & HONORS

- 2017 **Best Stunt Rigging - Allegiant (Nominated)**
Taurus World Stunt Awards
 - Team Award - I served as the stunt winch programmer
- 2012 **Outstanding Crew Member of the Day Award**
AD Department, Star Trek: Into Darkness
 - "In recognition of all the work done to make the show a success"
- 2010 **Award for Outstanding Achievement - Dragon's Treasure Show, City of Dreams, Macau**
Themed Entertainment Association Thea Awards
 - Team Award - I served as the show control system designer, as well as the programmer for automation, show control and atmospheric effects
 - "Dragon's Treasure exemplifies the merger of storytelling and technology at the highest standard... The Thea Awards Committee praised the fact that amid all this impressive technology, the systems and effects are executed so smoothly as to be transparent and always in service to the storytelling and guest experience"
- 2008 **Best Product Presentation - Fisher Technical Services, Inc.**
Live Design International Trade Show
 - Team Award - I conceived, engineered & programmed the award-winning trade show booth
 - "For a truly elegant way of presenting rigging technology"
- 2008 **Award for Outstanding Achievement - Peter Pan's Neverland, Universal Studios Japan**
Themed Entertainment Association Thea Awards
 - Team Award - I served as the programmer for automated performer flying
- 2003 **Phi Beta Kappa National Liberal Arts and Sciences Honor Society - Member**
Lehigh University
- 2003 **Williams Senior Prize in Theatre**
Lehigh University
 - For excellence in artistic & technical design

- 2003 **Baker Gifted Arts Scholar**
Department of Theatre, Lehigh University
 • For contributions to the Department of Theatre.
- 2003 **Outstanding Theatre Student Award**
Department of Theatre, Lehigh University
- 2003 **Mustard & Cheese Award**
Mustard & Cheese Drama Society, Lehigh University
- 2002 **Williams Senior Prize in Theatre**
Department of Theatre, Lehigh University
 • For excellence in artistic & technical design
- 2002 **Presidential Scholar**
Lehigh University
 • For academic excellence as an undergraduate student
- 2002 **Pi Tau Sigma National Mechanical Engineering Honor Society - Member**
Lehigh University
- 2002 **The Cornelius Prize**
Department of Mechanical Engineering, Lehigh University
 • "For the senior mechanical engineering student who profited most by their opportunities at Lehigh"
- 2001 **Dean's List**
Lehigh University
- 2000 **Group Achievement Award -
 High Energy Solar Spectroscopic Imager (HESSI) Imaging Hardware Team**
 NASA
 • Team Award - I served as an intern on the HESSI Satellite Imaging Hardware Team
 • "In recognition of your contributions in the fabrication, testing, and aligning of all HESSI flight grids to allow arc second-class X-ray imaging of solar flares"
- 2000 **Group Achievement Award for Outstanding Teamwork -
 High Energy Solar Spectroscopic Imager (HESSI) Imaging Hardware Team**
NASA's Goddard Space Flight Center
 • Team Award - I served as an intern on the HESSI Satellite Imaging Hardware Team
 • "In recognition of your contributions in the fabrication, testing, and aligning of all HESSI flight grids to allow arc second-class X-ray imaging of solar flares"
- 1999 & 2000 **Dean's List**
Lehigh University
- 1998 **Eagle Scout**
Boy Scouts of America, Troop 361, Columbia, MD
- 1998 **Olin E. Teague Memorial Award**
National Space Club & Foundation
 • For Optics research conducted as an intern at NASA's Goddard Space Flight Center
- 1997 **Certificate of Merit - NASA's Goddard Space Flight Center Internship Program**
National Space Club & Foundation
- 1996 **Certificate of Merit - NASA's Goddard Space Flight Center Internship Program**
National Space Club & Foundation

TRAINING & CERTIFICATIONS

Beginners, Intermediate & Advanced Flair Training Course

Mark Roberts Motion Control

E-Chameleon Operator Training

Stage Technologies International

Open Water Diver

Professional Association of Diving Instructors (PADI)

Enriched Air Diver

Professional Association of Diving Instructors (PADI)

Advanced Open Water Diver

Professional Association of Diving Instructors (PADI)

Certificate of Excellence: Brummel Eye Splice

New England Ropes

PROFESSIONAL UNION MEMBERSHIPS

Screen Actors Guild (SAG-AFTRA)

Nevada Local

International Alliance of Theatrical Stage Employees (IATSE)

Local 80 - Motion Picture Studio Grips, Los Angeles, CA

International Alliance of Theatrical Stage Employees (IATSE)

Associated Crafts Technicians Local

PROFESSIONAL SKILLS & EXPERTISE

Design, fabrication, installation of entertainment automation machinery

- Proficient with electromechanical, pneumatic & hydraulic systems

Entertainment rigging

- Expert in acrobatic rigging, performer flying & high speed automation systems
- Proficient in theatrical and arena rigging

Industrial power & control systems for the entertainment industry

- Proficient in systems from 480VAC to 3.3VDC and everything in between

Drafting

- Proficient with 2D CAD (AutoCAD) & 3D solid modeling (AutoCAD Mechanical Desktop & Autodesk Inventor)

- Previous experience with hand drafting

Theatrical scenery construction

- Carpentry and steel fabrication, with basic scenic art skills
- Fabrication of organic scenery using foams & thermoplastic materials

Computer programming

- Previous experience with Ladder Logic for PLCs, Fortran, MATLAB, Pascal, C, C++ & LabVIEW

CNC machining

- Previous experience with 3D printer, CNC mill, CNC wire electron discharge machining, CNC router, CNC laser cutting & injection molding

Conventional machining

- Previous experience with mill, lathe & drill press operations

Welding

- Previous experience with Arc, MIG, & oxy-acetylene cutting