

# Katie Swann

Email: [REDACTED]

Phone: [REDACTED]

Peachtree City, GA

## EDUCATION

**Louisiana State University**, Dept. of Civil & Environmental Engineering, Baton Rouge, LA

*Master of Science in Coastal & Ecological Engineering*

*Minor: Wetland Science & Management, College of the Coast & Environment*

- Coursework: Hydrology, Soil Mechanics, Sediment Dynamics, Structural Analysis, Environmental Engineering, Coastal Zone Management, Wetland Biogeochemistry, Coastal Plant Ecology
- Research in wetland biogeochemistry, engineering design, hydrology, and sediment dynamics in created coastal marshes
- Thesis: Swann, Katie, "Effects of Hydrological Connectivity on Created Marsh Sustainability" (2025). LSU Master's Theses. 6245. [https://repository.lsu.edu/gradschool\\_theses/6245](https://repository.lsu.edu/gradschool_theses/6245)
  - collected data from state-funded modeling and forecasting work (CPRA) studied sediment dynamics in created marsh environments
  - identified potential feedback loops and potential for positive synergy between capital projects
  - forecast sustainability and efficiency in existing created marsh projects using NUMAR program

**The University of Alabama**, Dept. of Metallurgical Engineering, Tuscaloosa, AL

*Bachelor of Science in Metallurgical Engineering*

## PROFESSIONAL EXPERIENCE

### Certifications & Professional Development

- EI Certification - Louisiana Professional Engineering & Land Surveying Board (**EI.0036205**)

### Key Skills

- **Engineering Software & Tools:** NUMAR, Matlab, Spectrometry, Light Optical Microscopy, Intro GIS,
- **Technical Proficiency:** Structural Analysis, Cost Analysis Techniques, Materials Selection and Analysis
- **Laboratory Techniques:** Metallographic Sample Prep, Rockwell Hardness Testing, Leco Carbon-Sulfur Analysis, Corrosion Science, Soil Phosphate Comp, Water Chlorophyll Concentration, LOI Procedures
- **Project Management:** Budgeting, Forecasting, Competitive Pricing Analysis, Data Collection & Analysis, Promotional Material, Website Design
- **Communication:** Presentation Skills, Team Collaboration, Report Writing, Brochure & Printed Material Design, Intra-Office Communication Projects, Policy Handbook Article Research & Writing

### **Black Hart Handcrafted Soaps & Luxuries, LLC**

*Small Business Owner – Small Batch Manufacturing* | Oct 2016 – Present

- Managed all aspects of production, inventory, and supply chain management.
- Developed processes adhering to Good Manufacturing Practices and FDA-compliant standards.
- Applied engineering principles to streamline operations, evaluate equipment, and design chemical production processes involving corrosive chemicals and refined oils.
- Created all product photography, marketing materials, website design, and social media for products.
- Completed all aspects and tasks for management of order packing and shipping.
- Interacted with the public and customers at numerous arts and vendor markets to not only sell products but also to educate on the process and chemistry of soap making.

### **Louisiana State University – Wetland Biogeochemistry Analytical Services Laboratory**

*Student Laboratory Worker* | May 2020 – Aug 2020 and July 2023 – Oct 2023

- Assisted in laboratory procedures related to soil and water quality analysis.
- Operated advanced laboratory equipment (auto analyzer, ICP, autoclave) for soil and water specimen preparation.
- Applied biogeochemical methods to study nutrient cycling and soil conservation practices.
- Collaborated with senior researchers on design calculations and data collection for ongoing wetland restoration projects.

### **Louisiana State University – College of the Coast & Environment**

*Graduate Student Assistantship – Communications Specialist* | Aug 2020 – Dec 2021

- Assisted in research and writing of departmental programs and goals for circulated literature, website copy, alumni communication, and presentations for members of the college staff.
- Took and edited photos for college's website, promotional literature, and communications mediums.
- Took and edited video footage for videos for the college's YouTube channel.

### **Film & Television Industry**

*Georgia & Louisiana* | 2009 – 2020

- Worked on over 4 dozen projects of varying budgets from very low-to-no budget SCAD student films to \$400 million studio projects such as Green Lantern and Battleship.
- Worked crew positions: cast asst. (anticipated needs, communicated with agents/managers), background casting asst. (booked extras, coordinated large (10-400) groups, assisted in filling out tax documents and employment paperwork, organized communication between production and extras for wardrobe needs, call times, etc.), art department PA (purchased items for set dressing, built structures for scenery), set decorator (helped production designer dress sets, tasked with tracking placement of furniture and items on sets for continuity purposes between takes and camera movements), script supervisor (tracked scene timing, tracked actor dialogue, tracked placement and movement of props and actor movement for continuity between takes and camera set ups, tracked shooting day progress through script page count, communicated with editor for director-selected takes and reels for director approval, met with prod. team to plan the next day's shooting schedule and contingency plans).

### **The University of Alabama**

*Undergraduate Student Researcher - Magnesium Alloy Research* | May 2008 – Aug 2008

- Conducted metallographic sample preparation and analysis to assist with a graduate student's grain refinement research; assisted in the calculation of sample grain size data.
- Created weekly progress reports and power point presentations for the committee chair professor.
- Contributed to the study presented at The Minerals, Metals & Materials Society 2010 conference, addressing how grain-refining alloys alter material properties and the effects on engineering design.
- Dean's List & Undergraduate Research: assisted graduate student with published research project - Saha, P., K. Lohies, S. Viswanathan, R. G. Batson, A. M. Gokhale. "A Systematic Study of the Grain Refinement of Magnesium by Zirconium." Conference: *The Minerals, Metals, and Materials Society - Magnesium Technology* (2010). DOI: 10.13140/2.1.2039.7123

### **Nucor Steel - Birmingham, AL**

*Engineering Summer Intern* | May 2007 – Aug 2007

- Performed steel analysis and used lab equipment to measure material composition and quality.
- Conducted a cost-performance analysis project to improve process efficiency.
- Gained experience in corrosion science, metallographic techniques, and structural analysis relevant to engineering design projects.

**Community Involvement & Leadership:** The Order of the Engineer; Coasts, Oceans, Ports & Rivers Institute - ASCE (LSU Chapter); Chi Epsilon Civil Eng. Honor Society; The Minerals, Metals, and Materials Society; Theta Tau Professional Eng. Fraternity; Schrader Chair, Rush Chair, Paraphernalia Chair, Southern Regional Conference Delegate, Pledge class committee chair, Pledge class vice president; American Foundrymen Society; Vice President-Engineering Executive Council; Founding Member, C.O.E. Does ART theater group for UA engineering majors; Delta Zeta Sorority; Red Stick Roller Derby