

## **SEAN BRADY**

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## **MECHANICAL DESIGN ENGINEER AND OPERATIONS LEADER**

### *Value to business*

Self-motivated and results-oriented engineer with eight years of experience in automotive engineering design and the manufacturing industry, proven to provide results in a wide variety of roles. Capable of leading team to develop, prototype, test, and implement new automotive designs and technologies with advanced materials and processes. Able to work with diverse teams to develop, implement, and maintain programs to increase productivity, improve quality, and reduce downtime. Team-oriented professional able to apply learnings to a multitude of roles and inject new ideas on any cross-functional team.

### *Areas of Expertise*

Six Sigma & 5S Methodologies | Root Cause Analysis | Results Oriented | Program Development  
Process Implementation | Project Management | Cross-Functional Team Leadership | Technical Design  
Cost Efficiency

## **PROFESSIONAL EXPERIENCE**

FORD MOTOR COMPANY, Dearborn, MI

10/2016 – Current

*A global leader in mobility, providing automotive technology through innovative solutions and advanced manufacturing in a diverse portfolio of vehicles.*

\*Contract Employee through Bartech Staffing between October 2016 and August 2019.

### **Battery Structures Design and Release Engineer**, Dearborn, MI (3/2018 - Current)

Designed, implemented, and released first-in-class structure within Ford, working with multifunctional, multi-company, and multinational team.

\*Spearheaded proposals and facilitated discussion on implementation, including evaluating CAE and physical results for battery structure on battery electric vehicle.

\*Developed CAD models using CATIA for stamped and extruded assemblies.

\*Launched multiple suppliers for first-time assembly of complex structure using new process technologies from initial prototypes through final production deliveries

\*Coordinated process validation of various specifications to suppliers and managed deviations as needed.

\*Supported issue resolution process as both project lead and support member utilizing Root Cause Analysis and other methodologies to prevent reoccurrence

\*Provided guidance and best practice strategies to other battery structure engineers to apply lessons learned for future designs and programs.

### **Body Structures Core Engineer**, Dearborn, MI (10/2016-3/2019)

Responsible for investigation and implementation of new materials and manufacturing processes to reduce weight and cost for automotive body structures.

\*Led teams of engineers, researchers, suppliers, and manufacturing to incorporate innovative technologies on auto programs, both for future production and for current models.

\*Benchmarked and investigated new technologies from suppliers and various OEMs, including stampings, extrusions, castings, injection-molded plastics, and various joining and fastening technologies.

\*Documented project status and milestones using program management systems.

\*Designed and facilitated trials to introduce new materials into Body-in White, including stamping, joining, and packaging.

\*Executed testing for design verification in order to support proposed designs for future programs.

AIRBOSS DEFENSE, Newmarket, ON, CA

7/2016 – 10/2016

*A global leader in the design, development, and manufacture of Chemical, Biological, Radiological and Nuclear (CBRN) personal protective equipment, contaminated patient transportation systems, fully-integrated and scalable decontamination shelter systems, command-and-control/living/medical shelters and world-class extreme cold-weather footwear.*

**Production/Continuous Improvement Engineer**, Landover, MD

Coordinated with manufacturing, quality, and engineering teams to ensure safe, efficient, and accurate work was completed

\*Developed and documented procedures in both Spanish and English for future manufacturing production end items.

\*Corresponded with quality and engineering departments to ensure multilingual line workers achieved documented proficiencies at individual tasks and were up to date on process changes.

\*Led a team of engineers and supervisors to evaluate feasibility of new designs and how best to manufacture and document successful job completion.

W.R. GRACE, Columbia, MD

7/2013 – 3/2016

*A leading global supplier of catalysts, engineered and packaging materials, and specialty construction chemicals and building materials.*

**Maintenance / Reliability Engineer**, Baltimore, MD (8/2015 – 3/2016)

Responsible for maintenance and long-term projects completed in three specialty chemical plants to ensure Operations team could produce required materials.

\*Performed and documented Root Cause Analysis of major, repeated, or unexpected failures of equipment.

\*Completed evaluation of maintenance procedures to ensure full lifetime of assets across three specialty catalyst plants.

\*Led team of engineers and supervisors to complete Criticality Analysis to ensure proper condition monitoring on vital plant equipment.

**Chemical Process Engineer – Manufacturing Leadership Program**, Lake Charles, LA (2/2015 – 8/2015)

Ensured rates and quality of intermediary products needed for final product production.

\*Implemented procedures to re-purpose on-site equipment for processing of intermediary and increase production rate.

\*Minimized variance in cost estimating so Managerial and Finance team could more accurately understand implications of daily processing costs.

\*Coordinated trials with Research team to alter production variables to decrease cost of production.

**Maintenance/Project Engineer – Manufacturing Leadership Program**, Albany, OR (4/2014 – 1/2015)

Worked with Maintenance and Operations teams to understand maintenance needs and plan projects to minimize future downtime.

\*Designed and implemented schematics and operating procedures to save >\$250k savings annually for unplanned downtime caused by vacuum pumps site-wide.

\*Designed and implemented data collection system for equipment operational use to better allocate production, maintenance, and planning for future work to be completed.

\*Documented procedures to assist in transitioning lockout procedures to operational personnel to ensure more cost-efficient allocation of resources.

\*Designed and implemented procedures to ensure operators and Maintenance staff eliminated near-miss and other safety related incidents.

\*Mentored and provided monthly review of project pipeline for 10 production facilities

**Productivity Engineer – Manufacturing Leadership Program**, Baltimore, MD (7/2013 – 3/2014)

Coordinated with Operations and Site teams to implement cost-savings projects on production and essential site activities.

\*Completed all background research and implemented action plan to purchase new equipment to decrease contractor spending on wastewater treatment plant on-site.

\*Monitored and designed protocols to decrease variation in chemical processing of various final product specifications.

\*Worked with Operations teams to determine causes of variation in identical equipment and increase production rates.

NORTHROP GRUMMAN; Baltimore, MD

Summer 2012

*Northrop Grumman is a leading global security company providing innovative systems, products and solutions in unmanned systems, cyber, C4ISR, and logistics and modernization to government and commercial customers worldwide.*

**College Technical Intern – Manufacturing**

\*Developed system for documenting circuit boards used in space to assist in identification during potential system failures.

\*Designed and trialed techniques to use existing pick-and-place equipment for potential new production uses.

\*Assisted Project and Process Manufacturing Engineers to complete vital tasks for designated projects.

\*Completed further Six Sigma, Statistical Process Control, and Root Cause Analysis training.

IMPERIAL SUGAR COMPANY, Savannah, GA

Summer 2011

*Imperial Sugar Company is a wholly owned subsidiary of Louis Dreyfus Commodities, LLC and a manufacturer and marketer of pure cane sugar, specialty sweeteners and other products.*

**Maintenance Engineering Intern - Parts Kitting Development**

\*Worked with all levels within the refinery to plan and implement a sustainable parts kitting process in order to decrease downtime of machines.

\*Used Lean Six Sigma and 5S methodologies to create optimum plan for parts kitting.

UNIVERSITY OF MARYLAND, BALTIMORE COUNTY, Baltimore, MD

Fall 2009 – Present

**Resident Assistant**

\*Maintained order and helped residents within both college dormitory and apartment environments.

\*Created and facilitated community activities for floor and building residents that ranged in age, background, nationality, and major of study.

SELF EMPLOYMENT, Baltimore, MD

2008 – 2010

**Tutor**

\*Tutored several high school and college students in Mathematics, Physics, and Spanish.

\*Volunteered to tutor for special-needs middle school students.

**RELEVANT TECHNICAL EXPERIENCE**

UNIVERSITY OF MARYLAND, BALTIMORE COUNTY, Baltimore, MD

Fall 2008 – Spring 2012

**Intelligent Convoy System (ICS) Project** (Spring 2012)

\*Worked with multiple groups of engineering students to design and produce prototype for a convoy system.

\*Interfaced with team of Computer Engineering students to make sure requirements for both teams were communicated effectively.

### **NASA Conceptual Design Project (Spring 2012)**

\*Led group of engineering students to design groundbreaking idea to harvest solar energy on lunar surface and transmit energy to Earth-based collection stations.

\*Designed Lunar Rover to work as autonomous vehicle that could use regolith to produce solar panels.

\*Also conceptualized descent vehicle to work as energy transmission station and developed safety protocol for transmissions.

\*Used technical writing skills to submit multiple reports over semester and presented ideas to multiple panels of experts from aviation industry.

### **Lighter than Air (LTA) Vehicle Project (Fall 2011)**

\*Worked in a group of engineering students to design, build, test, and evaluate a LTA vehicle designed for surveillance.

\*Piloted only design to make successful first run of course during final evaluations.

### **Light-Operated Volume Controller Project (Fall 2011)**

\*Led group of engineering students to analyze current market, design, fabricate, and propose new product that would control volume of a system according to ambient light available.

\*Completed multiple reviews with “management” to roll product from concept to production, including using presentations and necessary reports.

### **Machine Design - Drill Powered Water Transport (Spring 2011)**

\*Worked in a team of engineering students to design, construct, and test a water transport system powered by a cordless drill. Water displacement was to be over 400 feet from beginning point.

\*Used technical writing skills to create proposal/reports and other necessary documents for fabrication.

### **Introduction to Engineering Design with CAD Design Project, Push Toy (Spring 2010)**

\*Designed, fabricated, and marketed a toy for consumers.

\*Led a team of engineering students for market research, design specifications, and product development.

\*Using Pro/E, created 3D models of each component of design and fabricated them using multiple 3D printing techniques.

### **Introductory Engineering Science - Design Project, Hot Air Balloon (Fall 2008)**

\*Led a team of peers to design, construct, and test a hot air balloon.

\*Managed the team’s finances and devised the most economical solution.

\*Used proven mathematical and engineering principles to predict outcomes and potential challenges for our designs.

## **EDUCATION**

### **B.S. Mechanical Engineering and B.A. Mathematics**

University of Maryland, Baltimore County, Baltimore, MD.

\*Graduated – May 2013.

\*Minor in Modern Language and Linguistics (Spanish); GPA: 3.13

### ***Awards and Achievements***

President’s List (Fall 2008), Dean’s List (Fall 2008), Semester Academic Honors (Fall 2008)

## **SKILLS / ABILITIES**

**Computer:** MS Word, MS Excel, MS PowerPoint, Java, MatLab, AutoCAD, Pro/E, Siemens Unigraphics, CATIA, MiniTab, SAP.

**Language:** Fluent in English and Spanish.

**Interpersonal:** Strong communication skills, experienced in overcoming social and cultural barriers between groups and individuals, trained and experienced in Lean Six Sigma and 5S methodologies.

**Extra-Curricular:** UMBC Rugby (Fall 2008-Spring 2013): Treasurer (Fall 2010-Spring 2012), President (Spring 2012-Spring 2013).