

# CONNER GEORGE, P.E.

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## Experience

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**DOWNHOLE INNOVATIONS LLC**      Houston, TX      **2017 – Present**

**Senior Mechanical Design Engineer**

*Design composite frac plugs for oil & gas engineering startup.*

- Vetted thermoset composite materials for high tear-out loads in high temp, high pressure environment through collaboration with material suppliers, FEA, baseline calculations, and exhaustive testing.
- Performed stress analysis, thread design, tolerance stack-up, and DFM/DFA to inform part designs.
- Designed, assembled, and tested iterative prototypes on a weekly basis (pressure/temperature/force), and performed failure analysis to drive design improvements.
- Collaborated with ANSYS FEA consultant on anchoring device to identify high stress areas in complex, dynamic geometry and achieve higher load capabilities.
- Qualified shortest composite frac plug on the market to industry standard 10ksi differential pressure at 250°F, with <\$600 per plug high-volume manufacturing target.
- Led overhaul of test facility and procedures to allow increased test capability, reliability, & safety.
- Introduced and championed more efficient workflow techniques (Asana goals, Slack messaging), reducing management workload and improving overall team productivity.
- Mentored less experienced teammates and interns in CAD design philosophy to increase their impact.

**SPACECITYSPY LLC**      [www.spacecityspy.com](http://www.spacecityspy.com)      **2015 – Present**

**Founder**

*Entrepreneurial experiment in consumer design, manufacturing, & supply chain.*

- Found suppliers, overcame technical and language barriers, and built relationships with domestic and Chinese manufacturers to produce aftermarket automotive accessories for the latest Ford Mustang.
- Developed 10+ unique products utilizing multiple materials & manufacturing techniques including:
  - o Materials: aluminum sheet, cast alloys, stainless steel, nylon & textiles, carbon fiber composite
  - o Manufacturing: stamping, die cast, laser engraving, molding, CNC, FDM 3D printing,
  - o Tool Experience: 3D printing, hand and power tools, mill and lathe

**BAKER HUGHES INC.**      Houston, TX      **2011 – 2016**

**Design Engineer II-IV, Intelligent Production Systems**

*Designed and deployed new products as part of multi-disciplinary spotlight team (IPT).*

- Successfully completed multiple projects from concept to production, including hands-on assembly, testing, and data analysis, resulting in successful on schedule (30 months) and on budget (\$60MM) system launch:
  - o Redesigned, tested, and qualified 75-part, hydraulic set, Inconel ball valve for ultra deepwater application (10,000 ft water depths, 300° F, 15 ksi differential pressure).
  - o Designed and tested an all-original design for high force mechanical shift tool (patent pending)
  - o Redesigned, tested, and qualified a remote-set permanent plug for concentric fluid production pathways in ultra deepwater.
- Improved customer confidence through 30+ functional, environmental, electrical and pressure validation / qualification tests
- Grew verbal and written communication skills through regular presentations to executive leadership, subject matter experts, and peers in PLM gate/milestone reviews.
- Proactively minimized cross-functional integration issues by communicating with electrical, software, systems, and reliability groups
- Authored all documentation including installation and ops manuals, assembly procedures, bill of materials (BOM) and drawings, improving knowledge transfer to marketing and operations teams

- Led final, full-team, After Action Review to capture lessons learned for future projects.
- Successfully validated project during 2 multi-day, high-stress, real-world system-level tests at a land well in Bossier City, LA.

#### **Engineering Technical Advisor**, LT Integrated Product Team

*Technical liaison on broad scope, non-engineering projects.*

- Lean Six Sigma “Prototype Manufacturing Escapes” Project:
  - Formed and led team of 6 representatives from all different parts of the product lifecycle to improve prototype part manufacturing errors using the DMAIC process.
- BHI 20K “Future” Team:
  - Surveyed largest 15 customers as part of a 3-man core team for next-generation product needs.
  - Delivered problem definition document with clarified customer requirements, technology gap analysis, and preliminary business case with potential market opportunities.
- BHI 15K Team:
  - Participated in weekly SCRUM standups, communicating status to stakeholders, as well as managing change and prioritizing backlog.
  - Performed risk assessment, risk mitigation, root cause analysis, & process improvement exercises.

#### **PIASECKI AIRCRAFT CORP.**

Philadelphia, PA

**2009 – 2011**

#### **Design Engineer, Technical Writer**

*Green engineer at small aerospace company, doing anything & everything that needed to get done.*

- Developed lightweight, modular gearbox, validating technology for remote Wind Turbine DOE SBIR proposal.
- Developed integrated master schedule and work breakdown structure for Phase I / II contracts of TX Hybrid Flyable / Roadable Vehicle development.
- Authored bearing selection study & aided in power distribution study, winning \$3M DARPA Phase I contract.
- Authored Phase I Small Business Innovation Research (SBIR) proposal, winning \$150k U.S. Air Force grant.

## **Education**

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#### **VANDERBILT UNIVERSITY**

Nashville, TN

**2009**

**Bachelor of Science in Mechanical Engineering**, Materials Science Minor

## **Skills**

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#### **Licensed Professional Engineer (Texas) #128630**

**Software:** SolidWorks, ProE/Creo, MATLAB, LabView, C++, SolidWorks Flow CFD, Simulation FEA, Microsoft Office (Word, Excel, Outlook, PowerPoint, Project, Planner), Slack, Asana, Simplify3D, Cura

**Training:** GD&T, Lean Six Sigma Green Belt, FMEA, Project Management, Toastmasters, Design for Reliability, Leadership Training, Welding, Forklifts, 3D Printing, Raspberry Pi

## **Patents and Awards**

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- Patent: Wellbore Isolation System with Communication Lines - US9828826B2, US9863224B2
- ASME Best Mechanical Engineering Achievement award, OTC Innovation Award, and World Oil Best Deepwater Technology award - Hammerhead™: World’s 1st fully integrated Ultra Deepwater completion and production system

## **Associations & Hobbies**

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ASME, Toastmasters, ΦΚΣ, US Parachute Association, USA Triathlon Member, PADI Open Water Diver certification, Houston S550 Ford Mustang Club, 3D Printing (heavily modified Creality CR-10S)