Arian Ehteshami

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Summary of Career

Three years of experience in various areas of aerospace and bioelectrical engineering. Developed projects such as BCI algorithms, Digital stethoscopes, VLF receivers, IRIG-B timecodes, and more. Experienced in working under NASA procedures and deadlines. Recently a Co-founder of a biotechnology start-up at TMC|X. Currently working as cardiac support for all Mechanical Circulatory Support devices at Texas Heart Institute Baylor St. Luke's Hospital.

Areas of Expertise

- Product Development
- Biomedical Engineering
- Electrical Engineering
- NASA experiment development
- Payload Engineering
- Project Status and Reporting
- Digital Signal Processing
- PCB Design
- Analog Circuit Design
- Digital circuit design
- Prototyping and Integration
- Mechanical Cardiac Devices

Professional Experience

❖ Texas Heart Institute of St. Luke's Health – Baylor St. Luke's Medical Center

Cardiac/Circulatory Support specialist/technologist ***Sept. 2016 – Present***

KEY ACHIEVEMENTS:

- At the time of implant, provide assistance to the surgeon in assembly and implantation of the MCS devices.
- Work with cardiologists in operation and monitoring the circulatory support devices.
- Provide technical support for mechanical circulatory support devices in Cath Lab, OR, ICU, CCU, and ER
- Such devices were: Thoratec Heartmate II, Heartware, Tandem Heart Bump, IABP, Abiomed Impella, Syncardia Total Artificial Heart.
- Preform thorough Hemodynamic profiles

❖ NASA Wallops Flight Facility – Ugrd. Student Instrumentation Project ***Jan. 2014 – Sept. 2016***

Student Researcher

Responsible for designing, constructing, and conducting multiple lightweight spacecraft payloads measuring different characteristics of the Aurora Borealis, ionosphere, and stratosphere. Projects were launched with ultra-light balloons.

KEY ACHIEVEMENTS:

- Team Leader for the Total Electron Content (TEC) project – measuring satellite trajectories and GPS signal biases
- Second member of the astrobiology extraction project, assisting in the electromechanical design
- Current Team leader of Very Low Frequency (VLF) and IRIG-B experiments (patent in progress)
- Selected twice to participate with Dartmouth's BARREL team at the Swedish Space Center on a piggyback mission
- Presented at conferences at NASA and AGU, while at the same time authored a few publications and abstracts
- Crafted project documentation such as Gantt Charts, Preliminary Design Reviews, and Critical Design reviews

❖ OCURHYTHM ***June 2016 - Present***

Co-Founder and lead electronics/hardware engineer

- Startup team that was accepted into the RedLabs and OwlSparks accelerator program at TMC|X.
- Company based on a senior design project that is in the works of producing sleep correction spectacles
- Redesigning the analog and digital systems for optimal PWM driven intelligent lighting controller
- Producing CAD layout of PCB's and bus layouts
- Assisting with app development for the product, including a BCI algorithm for optimal effect of the product

Education & Projects

University of Houston, Cullen College of Engineering, Houston, TX **May, 2016**

- B.S Biomedical Engineering: Bio Electrical Engineering track (ABET) w/ minor in Biology

Relevant Coursework:

- Analog Electronics, Digital Logic Design, Digital Signal Processing, Signals & Systems, Mechanics, Biothermodynamics, Neuroscience, Biochemistry, Genetics, Human Genetics, Quantitative physiology

Projects:

- Digital Stethoscope, Kidney Transplant sleeve, BCI prediction algorithm, modified QRS detection algorithm.

PROFESSIONAL AFFILIATIONS

President, American Institute of Aerospace and Aeronautics UH (AIAA - UH) 2015 – 2016
Student member, IEEE - UH 2016

TECHNOLOGY SKILLS

SOFTWARE

Android Studio, TEQC, Cadence, LTSpice, LogicAid, SimUaid, MS Office

PROGRAMMING/HARDWARE LANGUAGES

MATLAB, Arduino, Beginner in Python and VHDL