Faycel B. Beji

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EDUCATION **Virginia Polytechnic Institute & State University (Virginia Tech)**

M.S., Aerospace Engineering, Structure & Structural Dynamics, December 2017 (GPA 3.62)
Thesis "Buckling Analysis of Composites Panels and Shells in Aerospace Structure"

B.S., Aerospace Engineering, Minor: Advanced Mathematics, May 2013, Dean's Honor List 2013

EXPERIENCE **General Engineer, Laser and Sensor Advanced Technology Office** August/2016- Recent

Missile defense Agency MDA

- Level I Engineering Certificate
- Participated in design reviews for the Low Power Laser Demonstrator for three major aerospace companies
- Technical Monitor on several SIBR/STTR contracts with close to ten million dollars portfolio
- Conducted technical evaluation on multimillion dollars government programs
- Wrote request for proposals for advanced technology that MDA is interested in

Data Reductionist July/2015- July2016

Virginia Tech transportation institute VTTI

- Reduced data used for analysis on unmanned vehicles
- Participated in data collection for various projects

Mentor, SAE Aero Design Project, Advanced Class, 2015 September/2015- December/2015

Objective: Manufacture and fly an RC aircraft capable of completing mission designed by competition rules
Helped mentor team in the design and building process:

- Structural analysis and composite material selection
- Testing and manufacturing (fuselage, wings and control surfaces)

Mechanical Design Engineer July/2013-July/2014

AQSA Engineering Consultants

- Designed and prepared mechanical drawings
- Made heat load verification
- Worked on heating, water cooling systems, firefighting systems and water supply

Structures Team Lead, SAE Aero Senior Design Project, Advanced class August/2012 -May/ 2013

Manufactured and flew an RC aircraft capable of completing mission designed by competition rules

- Responsible for structural design of the aircraft
  - Helped developing Multi-disciplinary optimization code (MDO) for the computation and analysis of the aircraft structure
  - Performed mechanical tests on the structure to verify MDO calculations
  - Selected appropriate structural components
- Built wing, fuselage, tail, control surfaces
- Conducted static thrust testing with propulsion team
- Achieved 2nd place overall in the competition

Manager May/2009- June/2012

Alpha Pizzeria, Blacksburg VA

PROJECTS **Developed Software for Satellite Tracking** August/2012-December/2012

- Determined and analyzed the orbits of satellites at different times
- Analyzed Orbits using Gibb's method.
- Gained deep understanding of Gibb's method and satellite tracking

Low Flow Separation and Low Cavitation Rood Submarine Sail Project August/2011-December/2011

- Enhanced the nose shape of the submarine sail using :
  - Determined the effect of the bow region shape and bluntness on the surrounding flow
  - Used Vortex Panel method to calculate the flow for three different nose shapes

SKILLS AND EXPERTISE

Matlab/ Simulink	Finite Element Methods	Wind Tunnel Testing
Mathematica	C++Visual Studio	Laser Doppler (LDA)
MS Office Suite	SolidWorks	Hot-Wire Anemometry
LabVIEW	ABAQUS	Open Jet Wind Tunnel testing