# Khaled Boulbrachene

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**Personal Information**

**Nationality:** Algerian
**Date of birth:** 24/02/1994
**Gender:** Male
**Marital Status:** Single

**Contact Information**


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**Languages**

**Arabic:** Native proficiency
**English:** Professional working proficiency
**German:** Intermediate proficiency (B1 Level)

**Research Interests**

Computational Fluid Dynamics, Fluid Structure Interaction, Finite Elements, Numerical analysis

**Education**

**Technical University of Munich**, Munich, Germany
M.Sc., Computational Mechanics, January 2020
Master thesis: *"Implementation of an Immersed Boundary Method for a fourth-order Finite Volume Scheme"*.
Graduating GPA: 1.6/1.0

**Sultan Qaboos University**, Muscat, Oman
B.Eng., Mechanical Engineering, June 2016
Bachelor thesis: *"Design and Fabrication of an Experimental Setup to Investigate Fatigue Failure in Drilling Pipes"*.
Graduating GPA: 3.7/4.0

**Work Experience**

**Work Student**, Munich, Germany 06.2019 – Present
Quality assurance team, Mecuris GmbH
Quality assurance of 3-D printed prosthetic feet by means of Finite Element simulations, Meta-models of Optimal Prognosis (MOP) and optimization.

**Student Assistant**, Munich, Germany 11.2018 – 04.2019
Chair of Structural Mechanics – Technical University of Munich
Development of a Wavelet Transform online interactive application.

**Research Assistant**, Duha, Qatar 03.2017 – 05.2017
Qatar University
Mathematical modelling to numerically analyze the impact of lateral and torsional vibrations on horizontal drill pipes.

**Research Assistant**, Muscat, Oman 10.2016 – 12.2016
Sultan Qaboos University
Numerical analysis to evaluate the effective properties of smart composite materials.

## Training and Workshops

**Ferienakademie**, Sarntal, South Tyrol, Italy 09.2018
**Summer School**
Topic presented: Space-time Discretization Technique as a Methodology for Multiscale Mechanical Simulations.

**TU Bergakademie Freiberg**, Freiberg, Germany 07.2015 – 08.2015
**Summer Training**
Modeling of accommodation coefficient measurement device (ACM) using SolidWorks software.

## Projects

Please refer to this website for more details on the projects.

**Immersed Boundary pisoFoam Solver** 07.2019

**CFD Analysis of the JPMorgan Chase Tower.** 03.2019

**Implementation of Finite Cell Method in Commercial Finite Element Software (ABAQUS).** 11.2018

**Implementation of Trimmed Isogeometric Analysis for Membrane Structures.** 08.2018

## Computer Skills

**Operating Systems:** Windows, Linux
**Softwares:** Ansys, Abaqus, OpenFOAM, SolidWorks
**Programming languages:** C++, Python, Matlab, LaTeX

## Publications

1. Jamil Abdo, Edris Hassan, **Khaled Boulbrachene** and Jan Kwak "Drillstring failure-Identifications, Modelling and Experimental Characterization" *ASME Journal of Risk and Uncertainty in Engineering Part B. Accepted for publication, Sep. 2018*

## References

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