

Issa CHALGHOUM

PERSONAL INFORMATION

Birth Place and Date: Tunisia, 09/11/1987

Gender: Male

Nationality: Tunisian

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EDUCATION

- **July 2017: Doctor of Philosophy in Mechanical Engineering:** Laboratory of Applied Fluid Mechanics, Environment and Process Engineering, Mechanical Department, National Engineering School of Sfax (ENIS), University of Sfax-Tunisia,

PhD Thesis Title: Study and modeling of the transient flow through centrifugal pumps.

- **June 2011: Engineer degree in Electromechanical Engineering:** National Engineering School of Sfax (ENIS), Mechanical Department, University of Sfax-Tunisia.

Title of project: Influence of the fluid-structure interaction on the water hammer phenomenon.

TEACHING EXPERIENCE

- **2015-2016: Teaching Assistant:** Department, Higher Institute of Transport and Logistics of Sousse-Tunisia.
 - Computer-Aided Design (SolidWork)
- **2016-2019: Teaching Assistant,** Mechanical Engineering Department, National Engineering School of Sfax-Tunisia.
 - Fluid Mechanics
 - Turbomachinery
 - Facilitated a fluid mechanics laboratory including the setup and supervision of hydraulic experiments.

INDUSTRIAL EXPERIENCE

- **From August 2017:** Maintenance Engineer at Tunisian Indian Fertilizers Company (TIFERT), **Current Occupation.**
 - Creative problem-solving skills and decisiveness to develop effective repair solutions autonomously, reducing man-hours and improving efficiency.
 - Control and monitoring of equipment operating parameters such as boilers, cooling systems, Turbo generator, Turbo Blower, and other machines and making sure they are operational at safety conditions.
 - Install new equipment according to the manufacturer requirements, and perform initial testing and optimization procedures to ensure correct and efficient operation.

CERTIFICATIONS

- Certificate of Reviewing from **Journal of Thermal Science**
- Certificate in ANSYS CFD: **CADFEM simulation course**
- Certificate of Attendance in **ANSYS Fluent Training**
- Certificate Training Course in **GSFC University, India**

JOURNAL PAPERS

- **Issa Chalghoum**, Sami Elaoud, Mohsen Akrou, Ezzeddine Hadj Taieb. “Transient behavior of a centrifugal pump during starting period”. **Journal of Applied Acoustics** 109 (2016) 82–89. DOI: 10.1016/j.apacoust.2016.02.007.
- **Issa Chalghoum**, Hatem Kanfoudi, Sami Elaoud, Mohsen Akrou, Ridha Zgolli “Numerical Modeling of the Flow Inside a Centrifugal Pump: Influence of Impeller–Volute Interaction on Velocity and Pressure Fields” **Arabian Journal for Science and Engineering**, pp 1–14, DOI: 10.1007/s13369-016-2157-8.
- **Issa Chalghoum**, Hatem Kanfoudi, Sami Elaoud, Mohsen Akrou “The effects of the rotor-stator interaction on unsteady pressure pulsation and radial force in a centrifugal pump” **Journal of Hydrodynamics** pp 672–681, DOI.org/10.1007/s42241-018-0073-y.
- **Issa Chalghoum**, Sami Elaoud “Transient analysis of the dynamic flow characteristics of the centrifugal pump at different operating points” **Naval Engineers Journal**, NEJ-2018-09-OA-0978.
- Noura Bettaieb, **Issa Chalghoum**, Elaoud Sami, Ezzeddine Hadj Taieb “Modeling and simulation of PE100 pipe response under transient events caused by pump failure” **Journal of Therotical and Applied Mechanics**, 57, 4, pp. 1039-1054, Warsaw 2019 DOI: 10.15632/jtam-pl/112460.

BOOK CHAPTERS

- **Issa Chalghoum**, Sami Elaoud, Mohsen Akrou, Ezzeddine Hadj-Taieb. (2015) Transient Flow Analysis through Centrifugal Pumps. In: Haddar M. et al. (eds) Multiphysics Modelling and Simulation for Systems Design and Monitoring. MMSSD 2014. **Applied Condition Monitoring, vol 2. Springer, Cham**
- **Issa Chalghoum**, Noura Bettaieb, Sami Elaoud. (2018) Effect of the Volute Diffuser Shape on Pressure Pulsations and Radial Force in Centrifugal Pumps. In: Haddar M., Chaari F., Benamara A., Chouchane M., Karra C., Aifaoui N. (eds) Design and Modeling of Mechanical Systems—III. CMSM 2017. **Lecture Notes in Mechanical Engineering. Springer, Cham**

COMMUNICATIONS AT INTERNATIONAL CONFERENCES

- **Issa CHALGHOUM**, Sami ELAOU, Mohsen AKROUT, Ezzeddine. HADJ TAIEB, Three-dimensional numerical flow Simulation in a centrifugal pump, Sixth International Congress on Design and Modeling of Mechanical Systems, (CMSM’2015), March 23-25, 2015, Hammamet, TUNISIA.
- **Issa CHALGHOUM**, Sami ELAOU, Mohsen AKROUT, Ezzeddine. HADJ TAIEB, “*Numerical analysis of the flow inside a centrifugal pump*”, Sixth International Conference on Advances in Mechanical Engineering and Mechanics, (ICAMEM’2015), December 20-22, 2015, Hammamet, TUNISIA.

SKILL HIGHLIGHTS

- Engineering Design (SolidWorks, CFturbo).
- Mechanical Engineering.
- Fluid Mechanics
- FORTRAN, Matlab
- Computational Fluid Dynamics (ANSYS CFX, Fluent, Pointwise, Tecplot).
- Structural Mechanics.
- Impeller Blade design

LANGUAGES

- ✓ Arabic: Mother language
- ✓ English: Good (Reading, Writing and Speaking)
- ✓ French: Good (Reading, Writing and Speaking)
- ✓ German: Beginner (A1)