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Material Engineering
Abdelmalek Essaadi University, Faculty of
Sciences, TETOUAN, MOROCCO



ACADEMIC TRAINING

- 2019 - Today:** Doctoral researcher: Ph.D. Student
Abdelmalek Essaadi University, Faculty of Sciences, Department of Physics, Tetouan
- 2015 - 2017:** Master's Degree – Mechanical Manufacturing Technologies
Abdelmalek Essaadi University, Faculty of Sciences, Tetouan, Morocco
- 2011 - 2015:** Bachelor's Degree – Physical Matter Science – Mechanics.
Abdelmalek Essaadi University – Faculty of Sciences, Tetouan, Morocco
- 2010 - 2011:** High School Diploma – Physical Sciences Option.
Hassan II High School, Tetouan, Morocco

RESEARCH TRAINING

10/2021 – 07/2022: Erasmus KA107+ mobility « Research topic: Manufacturing and numerical / experimental testing of composite materials for transport applications », **University of Messina**, Engineering Department, Messina, Italy

- Numerical and experimental testing of composite structures for ballistic applications in naval fields. He has investigated two kinds of panels: dyneema and ceramic (Al₂O₃ and SiC)/kevlar, in accordance with STANAG 4569 I/II and II standard;
- Experimental testing (i.e. flexural, static indentation and drop test) of composite structures made by Intermarine by substituting glass fibers with basalt ones;
- Study of innovative technologies of joining for dissimilar materials in marine applications: i.e. friction stir welding, explosion welding, clinching, self-piercing riveting and orbital riveting.

April 23, 2022: Participation in the **Second International Conference on Non-Destructive Evaluation of Composite Structures (NDECES'2022)**, Tetouan, Morocco

June 19, 2020: Conference attendance : **Nano Symposium 2020 – Nano & Energy: Trends, Challenges and Solutions** – Nano Springer Nature research.

Mai 13, 2020: Participation in the E-conference: « **Technology transfer: the royal road for the valorization of the researcher, of his research results and for the creation of richness** ». Animated by Dr. KOSSIR Abdelaâli from PhoresNet & Mohammed VI Polytechnic University.

January 16, 2020: Attestation of attendance in **LSCD winter Workshop** organized by The System, Control and Decision Laboratory, ENSI Tangier and Abdelmalek Essaadi University.

June 17 to 22, 2019: Certification of **Atomic Force Microscopy** training, 1st International Workshop on Material Analysis and Characterization Techniques organized by the Institute of Research in Electron Microscopy and Materials of the University of Cadiz, Spain and The Laboratory of Chemical Engineering and Resource Development of Faculty of Science and Techniques of Tangier, Morocco.

April 22, 2019: Certificate of appreciation for attending the **Web of Science Seminar** from Clarivate Analytics at the UAE, Tetouan.

Research Academy Certifications:

Certifications of Attendance:

July 08, 2020 : Scientific Research - Theses by **Web of Science & IMIST/CNRST**

May 13, 2020 : Supporting the development of scientific research by **Web of Science & IMIST/CNRST**

December 05, 2019: Enhancing research using Elsevier research solutions – The Modern Knowledge Cycle by **ELSEVIER**

Certifications of Completion:

March 13, 2020: Structuring your article correctly by **ELSEVIER**

December 06, 2019: Guide to reference managers: How to effectively manage your references by **ELSEVIER**

December 06, 2019: How to prepare your manuscript by **ELSEVIER**.

COMMUNICATIONS & PUBLICATIONS

Oral Communication:

- "Evaluating the Flexural Performance of Basalt Composite Sandwich Structures for Marine Applications" in **9th ECCOMAS Thematic Conference on the Mechanical Response of Composites, COMPOSITES 2023, 12-15 September 2023, Trapani, Sicily, 2023.**
- "Preliminary study of lightweight fiber-ceramic composite structures for the ballistic protection on military vessels" in the **16th CIRP conference on Intelligent Computation in Manufacturing Engineering – CIRPICME'22 virtual Conference, 13-15 July 2022, Italy**

Conference Papers:

- "Static indentation properties of basalt fiber reinforced composites for naval applications" by C. Borsellino, M. Chairi, J. El Bahaoui, F. Favaloro, G. Di Bella. In Italian Manufacturing Association Conference: **XVI AITEM, p 350. Materials Research Forum LLC, 2023.**
- "Preliminary study of lightweight fiber-ceramic composite structures for the ballistic protection on military vessels" by M. Chairi, J. El Bahaoui, T. Alderucci, F. Favaloro, C. Borsellino, G. Di Bella, **Procedia CIRP 118 (2023): 810-815.**
- "Preliminary studies on concept of marine container inspired steel/wood module for housing, emergency or tourism: from design to manufacturing" by G. Di Bella, G. Di Dio, G. Viola, M. Chairi. – **Convegno Internazionale, 2030 D.C. Proiezioni Future Per Una Progettazione Sostenibile – Messina, 17-19 novembre 2022; ISBN 978-88-492-4558-5.**

Book Chapters:

- Accepted Book Chapter, "Chapter 2: Effect of Fiber Orientation and Matrix Type of Machining Behavior and Structural Integrity of Glass and Basalt Fiber Reinforced Polymer Composites", Mohamed Chairi, Jalal El Bahaoui, Issam Hanafi, Francisco Mata Cabrera, Guido Di Bella, Chiara Borsellino, Federica Favaloro. Book title: **Machining Polymer Matrix Composites: Tools, Techniques, and Sustainability. IGI Global 2024.**
- Accepted Book Chapter, "Chapter 3: Accurate Estimation of Mechanical Properties in PMCs milling; Factors, Limitations, and Solutions", Guido Di Bella, Jalal El Bahaoui, Issam Hanafi, Francisco Mata Cabrera, Mohamed Chairi. Book title: **Machining Polymer Matrix Composites: Tools, Techniques, and Sustainability. IGI Global 2024.**
- "Composite materials: A Review of Polymer and Metal Matrix Composites, their Mechanical Characterization and Mechanical Properties", Mohamed Chairi, Jalal El Bahaoui, Francisco Mata Cabrera, Issam Hanafi, Guido Di Bella – Open Access Book "Next Generation Fiber-Reinforced Composites – New Insights" edited by Dr. Longbiao Li – **IntechOpen 2023.**

Research Articles:

- Accepted research article "Finite Element Analysis of Ceramic-Composite Structures for Ballistic Applications: Effect of Ceramic Thickness and Cell Structure". By Guido Di Bella, Mohamed Chairi, Jalal El Bahaoui, Issam Hanafi, Federica Favaloro, Chiara Borsellino. **Advanced Engineering Materials, Wiley.**

PROFESSIONAL EXPERIENCES

January 2018: Certifications " FMEA & Revers FMEA " by [SIFOP Technologies](#), Tangier, MOROCCO.

October 2017 to March 2018: Methods & Process Engineer Training at Eurostyle Systems Tangier, MOROCCO

- Risk analysis of series modifications according to the IATF16949 standard.
- Piloting of the Layout/Flow/Process implementation part of the Ford V408 Project.
- Piloting the industrialization and preparation of pre-production parts for the E6D RSA project.

February 2017 to June 2017: Internship in the Lean Manufacturing department at [Reydel Automotive Morocco](#).

Project: « Company's productive performance improvement through the implementation of Lean Manufacturing sites ».

September 2016: Internship in the Maintenance department at [Reydel Automotive Morocco](#).

Project: « Improvement the availability of the injection machines based on the maintenance indicators (FMD), then established an action plan.»

August 2014: Internship within the Dairy Cooperative of Tetouan "COLINORD".

SKILLS:

Technical skills:

Mechanical Manufacturing, Mechanical Design Mechanical Characterization, Industrial layout, Mechanical modelling and Simulation; Manufacturing Process of Composite & Plastic Materials.

Managerial Skills:

Lean Manufacturing, Project Management, Industrial Maintenance Management

Software:

Catia V5, Abaqus , LS-DYNA, Matlab, ConceptDraw (office PRO, office PROJECT),

Languages:

Arabic: Mother tongue,

English: Intermediate B2,

French: Intermediate B2,

Spanish: Beginning A1

Italian: Beginning A2

31/10/23
Moassel Chouk

