

Dr. Mohamed Mokhtar Bouziane

Associate Professor

Department of Mechanical Engineering

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Mascara, 29000, Algeria**Mobile :** +213.772.016.341**Email :** agk_bouziane@yahoo.fr

Academic Degrees

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| 2003 | BSc- in Mechanical Engineering/ Mechanical Construction
Mechanical Departement , Djillali Lyabes University, Algeria
Influence of the interface proprieties on the load transfer in the hip total arthroplasty
(BioMechanis) |
| 2006 | MSc- in Mechanical Engineering /Materials Sciences
(BioMechanis)
Mechanical Departement , Djillali Lyabes University, Algeria
Effect of the microvoid in the cement mantle on the mechanical behavior of total hip prosthesis |
| 2010 | PhD- in Mechanical Engineering /Materials Sciences
(BioMechanics)
Mechanical Departement , Djillali Lyabes University, Algeria
Effect of the micro-defects in the cement mantle on the mechanical behavior of total hip prosthesis. |

Publications

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| 2010 | <ul style="list-style-type: none">• Analysis of the polypropylene mechanical behaviour response: Experiments and numerical modeling. H.M. Meddah, N. Selini, M. Benguediab, M. Bouziane Mohamed, M. Belhamiani. <i>33Materials & Design. Volume 35, Issue 5, September 2010, Page. 2010.</i>• Finite element analysis of the behaviour of microvoids in the cement mantle of cemented hip stem: Static and dynamic analysis. M.M. Bouziane, B. Bachir Bouiadjra, S. Benbarek, M.S.H. Tabeti, T. Achour. <i>Materials & Design. Volume 31, Issue 1, January 2010, Pages 545-550.</i>• Finite element analysis of interfacial crack behaviour in cemented total hip arthroplasty. T. Achour, M.S.H. Tabeti, M.M. Bouziane, S. Benbarek, B. Bachir Bouiadjra, A. Mankour. <i>Computational Materials Science. Volume 47, Issue 3, January 2010, Pages 672-677.</i>• Influence de la présence des microcavités dans le ciment de la partie fémorale sur le comportement mécanique de la prothèse totale de hanche. M. BOUZIANE MOHAMED, M. SADEK TABETI, B. BACHIR BOUIADJRA, S. BENBAREK. <i>Sciences et Technologies pour le Handicap. ARTICLE VOL 4/2 – 2010 - pp.189-202.</i> |
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2013

- Numerical analysis of the crack growth path in the cement mantle of the reconstructed acetabulum. Smaïl Benbarek, Bel Abbes Bachir Bouiadjra, Bouziane Mohamed Mokhtar, Tarik Achour, Boualem Serier. Materials Science and Engineering: C. 2013

Skills

Softwares :

- ABAQUS
- Matlab
- SolidWorks
- Origins
- FRANC 2D

Languages :

- **English** : Average.
- **French** : Fluent.
- **Arabic** : Fluent.

Competence Fields :

- Computational Mechanics
- Mastering the CAD tool(computer aided design) ABAQUS
- Fracture mechanics simulation
- Damage mechanics simulation
- Mastering the "abaqus scripting interface " tool to realize parametric studies
- Welding

Research Field

My primary area of interest is the study of the stability of the hip prosthesis, fracture and damage of the orthopedic cement and the dynamic and static analysis. Currently, my working is based on the numerical and experimental implementation of the bone fracture.

Communications

International :

- Congrès français de mécanique(CFM 2007). Grenoble-France (communication acceptée).
- Influence de la présence des microcavités dans le ciment de la partie fémorale de la prothèses totale de hanche. M.M. Bouziane, B.Bachir bouiadjra, S.M.H. Tabeti, B. Ould Chikh. Workshop, Mécanique et Matériaux de la Structure. Mascara 13 et 14 juin 2010, Algerie.
- L'effet de la fissure émanant d'une microcavité dans le ciment sur le comportement mécanique de la prothèses totale de hanche. M.M. Bouziane, B.Bachir bouiadjra, S. M. Fekih, B.Serier, S.Benbarek. VII^{ème} Journées d'Etudes Techniques, JET'2012, Marrakech, Maroc, 02-04 Mai 2012.
- The effect of crack emanating from microvoid and bone inclusion in cemented total hip replacement. M.M. Bouziane. B.Bachir bouiadjra, N.Benseddiq, S.M.H. Tabeti, B.Serier, S.Benbarek. 6th International Conference on Advanced Computational Engineering and Experimenting, ACE-X 2012, Istumbul, Turkey, 01-04 July 2012.

National :

- Etude de comportement de fissure interfaciale dans la prothèses totale de hanche. M.M. Bouziane. B.Bachir bouiadjra, M. Derras, S.Benbarek, B.Serier. Congrès national de mécanique et industrie, CNMI-2012, Mostaganem, Algérie, 06 et 07 Novembre 2012.
- Effet des défauts volumiques sur la répartition des contraintes dans le ciment orthopédique des prothèses totales de hanche. S.BENBAREK, B.BACHI BOUIAJRA, B.SERIER, T.ACHOUR, M.M.BOUZIANE. Congrès national de mécanique et industrie, CNMI-2012, Mostaganem, Algérie, 06 et 07 Novembre 2012.