

1. Thèses soutenues pour l'équipe simulation numérique 2012-2018:

N°	Nom	Prénom	Titre	Date de la soutenance	Encadreur
1	Yousfi	Mohamed Abdelbasset	Déformation et relaxation des verres métalliques : Modélisation et simulation numérique par l'approche du volume libre	15/12/2012	Zoubeir Tourki
2	Ghiss	Moncef	Dégénérescence discale et outils de diagnostics : couplage d'un modèle osmotico-mécanique et d'imagerie de Résonance Magnétique Nucléaire	09/09/2014	Zoubeir Tourki & Olivier Boiron
3	Zaghdoudi	Maha	Modélisation, élaboration et prédiction numérique de la loi d'évolution de loi d'endommagement des solides hyperélastiques dans le cas de chargements non radiaux et cycliques.	07/05/2015	Zoubeir Tourki
4	Ben Fradj	Boutheina	Biomechanical study and thermomechanical characterization in compression of the Ni-rich NiTi shape memory alloy-Application on an intervertebral implant.	20/09/2018	Zoubeir Tourki

2. Thèses en cours pour l'équipe simulation numérique :

N°	Nom	Prénom	Titre	Date d'inscription	Encadreur
1	Dandana	Wafa	Modélisation et simulation numérique de la coupe d'un matériau à changement de phase	2013	Zoubeir Tourki Khalil Hajlaoui
2	Arfaoui	Samar	Modélisation et simulation numérique de la coupe d'un matériau à changement de phase	2014	Zoubeir Tourki
3	Dakhli	Mariem	Etude du procédé de formage incrémental à un point SPIF	2015	Zoubeir Tourki
4	Troudi	Hajer	Développement d'une nouvelle approche dimensionnelle et technologique optimisée des colonnes de fractionnement de GPL à travers une étude hydrodynamique par le CFD	2016	Zoubeir Tourki Moncef GHISS
5	Mahjoubi	Hanen	Modélisation du couplage entre les deux mécanismes endommagement et cristallisation et la modélisation d'une loi d'évolution de ce couplage au cas des polymères semi-cristallins sous chargement cyclique	2016	Zoubeir Tourki
7	Letaief	Montassar Bellah	Caractérisation des différences entre modèles CAO en termes sémantiques via les features.	2016	Brohene Louihichi
8	Ammari	Cheima	Etude du comportement mécanique des composites verres métalliques-nanocristaux	2017	Khalil Hajlaoui Mohamed Abdelbasset Yousfi
9	Ltaief	Ameni	Modèle de réconciliation des associations et propagation des modifications au sein d'une maquette numérique	2017	Brohene Louihichi

3. Communications pour l'équipe simulation numérique 2012-2018:

Communications 2012 :

C1.2012- B. J. MAHFOUDH, M. A. YOUSFI, W. MEHRI, K. HAJLAOUI, Z. TOURKI

"Déformation en dents de scie des verres métalliques : analogie avec le phénomène de Portevin-Le Chatelier".
Deuxième Congrès Tunisien de Mécanique COTUME'2012

C2.2012- M. Ghiss, B. Giannesini, Y. Lefur, P. TROPIANO, Z. TOURKI, and O. Boiron

"Évolution de la teneur en eau d'un disque intervertébral sous l'effet d'une compression uniaxiale". COTUME, 2012,
pp. 3–7, Sousse 19-21 Mars 2012.

Communications 2013 :

C1.2013- M. A. YOUSFI^a, K. HAJLAOUI^{a,b}, Z. TOURKI^a

"Modèle de déformation des verres métalliques : approche rhéologique". 5^{ème} Congrès International Conception et Modélisation des Systèmes Mécaniques CMSM'2013.

C2.2013- B. J. MAHFOUDH^a, M. A. YOUSFI^a, K. HAJLAOUI^{a,b}, Z. TOURKI^a

"Modèle macroscopique de la déformation en dents de scie des verres métalliques". 5^{ème} Congrès International Conception et Modélisation des Systèmes Mécaniques CMSM'2013.

C3.2013- M. Ghiss, O. Boiron, B. Giannesini, P. TROPIANO, and Z. TOURKI,

"Intervertebral disc behaviour under axial compression, ExVivo experiments and InSilico modeling," European Society of Biomechanics, Patras 2013.

Communications 2014 :

C1.2014- W. MEHRI BELKHIRIA, K. HAJLAOUI, Z. TOURKI

"Modélisation et simulation du comportement des verres métalliques massifs". Troisième Congrès Tunisien de Mécanique Cotume 2014.

Communications 2015 :

C1.2015- Rihab GRISSA^a, Farhat ZEMZMI^b, Raouf FATHALLAH^c

"Numerical simulation of orthogonal cutting with ALE formulation for predicting residual stress and plastic deformation". The 6th International Congress Design and Modelling of Mechanical Systems CMSM'2015 Hammamet, 23-25 March 2015, Tunisia

C2.2015- E. Attouri, M. Ghiss, A. Helali, and Z. Tourki

2D numerical computation of a combined Darrieus Savonius VAWT," IXth International Congress on Renewable Energy and the Environment, 2015, no. March, pp. 1–11, 18-20 March 2015, Tunisia.

C3.2015- Samar ARFAOUI^a, Farhat ZEMZEMI^b, Zoubeir TOURKI^c

"Phase transformations during machining of AISI52100 hardened steel". The 6th International Congress Design and Modelling of Mechanical Systems CMSM'2015.

Communications 2016:

C1.2016- Boutheina Ben Fraj, Zoubeir Tourki

"Influence of cooling and heating rates on the thermal properties of Ni-Ti shape memory alloy" International Federation of Heat Treatment and Surface Engineering 2016

C2.2016- "Arfaoui Samar"¹, Zemzemi Farhat, Tourki Zoubeir

" Numerical simulation of micro -structural changes formed in hard machining of AISI52100" IXèmes Journées d'Etudes Techniques – JET'2016

Communications 2017 :

<p>C1. Moncef GHISS, Zoubeir TOURKI, Olivier BOIRON « Caractérisation des propriétés mécanique du Disque Intervertébral lors d'un essai de relaxation en compression non confinée ». 7ème Congrès International Conception et Modélisation des Systèmes Mécanique CMSM'2017</p>
<p>C2. Mariem DAKHLI, A. BOULILA, Z. TOURKI "Etude expérimentale du formage incrémental des cones tronqués en acier doux" 7ème Congrès International Conception et Modélisation des Systèmes Mécanique CMSM'2017</p>
<p>C3. Samar ARFAOUI, Farhat ZEMZEMI, Zoubeir TOURKI "Modeling of phase transformations and residual stresses distribution in hard orthogonal cutting" 7ème Congrès International Conception et Modélisation des Systèmes Mécanique CMSM'2017</p>
<p>C4. Wafa DANDANA, M.A YOUSFI, K. HAJLAOUI, A.R.YAVARI "Hydrogen-induced softening of Zr-based amorphous alloys". 7th International Congress Design and Modelling of Mechanical Systems CMSM'2017</p>
<p>C5. W. Dandana, K. Hajlaoui "Hydrogen-enhanced plasticity in Zr-based metallic glass". 24th International Symposium on Metastable, Amorphous and Nanostructured Materials (ISMANAM 2017)</p>
<p>C6. Wafa DANDANA, M. A YOUSFI, K. HAJLAOUI, A.R.YAVARI "Hydrogen-induced softening of Zr-based amorphous alloys". 7th International Congress Design and Modelling of Mechanical Systems CMSM'2017</p>
<p>C7. Wissal MEHRI, K. HAJLAOUI, Z. TOURKI "Vers une modélisation extensible à un méta modèle du comportement des verres métalliques". 7ème Congrès International Conception et Modélisation des Systèmes Mécanique CMSM'2017</p>
<p>C8. H. TROUDI, M. GHISS, Z.TOURKI, M. ELLEJMI "Hydrodynamic simulation of co-Current and Counter current of Column Distillation Using Euler Lagrange Approach" International Journal of Mechanical, Aerospace, Mechatronic and Manufacturing Engineering Vol:11, No:1,2017</p>
<p>C10. Montasser Billah Letaief, Mehdi Tlija, Raoudha Gaha, Borhen Louhichi " CAD Model Comparison Approach Based On Unified Feature" RoMeCAD'2017</p>
<p>C11. A.Eltaief, B. Louhichi, S. Remy « A CAD Assembly Management Model : Mates Reconciliation and Change Propagation » RoMeCAD'2017</p>
<p>C12. Ameni EL TAIEF, Borhen Louhichi "ACAD Assembly Management Model: Mates Reconciliation and change propagation" CMSM2017</p>
<p>C13. A. Fradi, B. Louhichi, M. A. Mahjoub, 3D object retrieval based on similarity calculation in 3D Computer Aided Design systems, 14th ACS/IEEE International Conference on Computer Systems and Applications AICCSA 2017</p>
<p>C14. A. BenMakhlouf, B. Louhichi, M. A. Mahjoub, Approach for CAD model Reconstruction from a deformed mesh, 14th ACS/IEEE International Conference on Computer Systems and Applications AICCSA 2017.</p>
<p>C15. Arfaoui Samar, Zemzemi Farhat, Tourki Zoubeir "INFLUENCE OF CUTTING CONDITIONS ON WHITE LAYERS THICKNESS USING RESPONSE SURFACE METHOD". Journal of Thermal Engineering. CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING ISTANBUL 2017– ICAME2017.</p>
<p>C16. Wafa Dandana, Mohamed Abdelbasset Youssfi, Khalil Hajlaoui " Effect of Hydrogen on the structural and mechanical properties of a ternary metallic glass" International Conference on Mechanics and Energy. ICME'2017</p>
<p>C17. Hanen Mahjoubi, Zoubeir Tourki, Fahmi Zairi " Drawing-induced structural transformation in Poly (lactic acid)" International Conference on Mechanics and Energy ICME'2017</p>
<p>C18. Hajer Troudi, Moncef Ghiss, Zoubeir Tourki, Mohamed Ellejmi "Liquid-liquid binary mixture countercurrent flow in a structured packed-bed" International Conference on Mechanics and Energy. ICME'2017</p>
<p>C19. Cheima Ammari, Mohamed Abdelbasset Youssfi, Khalil Hajlaoui, Zoubeir Tourki "Novel electromechanical switch using wavy elastic response of metallic glass ribbons" 7th International Congress on Design and Modelling of Mechanical Systems CMSM'2017.</p>

Communication 2018 :

C1. Ameni Eltaief, Borhen Louhichi, Sébastien Remy, Guillaume Ducellier, Benoit Eynard, "Engineering Changes within A CAD Model: Analysis and Impact Prediction " Proceedings of CAD'18, 2018,
C2. Ahmed Fradi, Borhen Louhichi, Mohamed Ali Mahjoub, Benoit Eynard "3D OBJECT RETRIEVAL IN HUGE CAD DATABASES: NEW SHAPE-BASED" Proceedings of TMCE2018
C3. Amani Eltaief, Borhen Louhichi, Sébastien Remy, Guillaume Ducellier, Benoit Eymard "A CAD Model relationship matrix generation and influence coefficient determination" Proceedings of TMCE 2018, 7-11 May, 2018, Las Palmas de Gran Canaria, Spain Edited by: I. Horváth, J.P. Suárez Rivero and P.M. Hernández Castellano Organizing Committee of TMCE 2018, ISBN 978-94-6186-910-4
C4. Mehdi Tlija, Montasser Billah Letaief, Borhen Louhichi "CAD Comparison Model for Data Reuse And Manufacturing Cost Estimation" 28th CIRP Design Conference, May 2018, Nantes, France, Science Direct Procedia CIRP 70 (2018) 59-65
C5. Bouthaina Ben Fraj, Slim Zghal, Amen Gahbiche, Zoubeir Tourki " The relation between R phase presence level and stress-temperature diagram of an aged NiTi shape Memory alloy" 4ème Congrès Tunisien de Mécanique COTUME'2018
C6. C.Ammari, M.A.Yousfi, K. Hajlaoui, Z. Tourki " Modeling of the wavy elastic response of metallic glass ribbon" 4ème Congrès Tunisien de Mécanique COTUME'2018
C7. Hajer Troudi, Moncef Ghiss, Mohamed Ellejmi, Zoubeir Tourki "Pressure drop in one stage and two stages of packed columns" The 9th International Renewable Energy-IREC 2018
C8. Hajer Troudi, Moncef Ghiss, Mohamed Ellejmi, Zoubeir Tourki "Effect of porosity on the liquid flow distribution within two-stages of packed bed column" 4ème Congrès Tunisien de Mécanique COTUME'2018
C9. Samar Arfaoui, Farhat Zenzemi, Zoubeir Tourki "Effect of cutting conditions on both dark and while layers thickness" The second International Conference on Acoustics an Vibration, ICAV2018 Hammamet, 19-21 March 2018, Tunisia
C10. AnisKorbia & MehdiTlijaa & BorhenLouhichib & AbdelmajidBenAmaraa A CAD Model for Tolerance Analysis of non-rigid Planar parts assemblies. Procedia CIRP 2018

4. Articles pour l'équipe simulation numérique 2012-2018 :

Articles 2013 :

A1.2013- M.A. Yousfi¹, K. Hajlaoui, Z. Tourki¹) and A.R. Yavari
"Serrated Flow Model for Metallic Glasses under Compressive Loading". Acta Metall. Sin. (Engl. Lett.) Vol.26 No. 5 pp. 503—508 October 2013 (IF: 0.467)

Articles 2014 :

A1.2014- M. Ghisse, Glannesini, P. Tropiano, Z. Tourki, O. Boiron
"NMR imaging investigation of the incompressible poroelastic behavior of porcine intervertebral disc under external mechanical stress": Review Matériaux & Techniques, February 2014. (Indexé scopus & Thomson reuters)

Articles 2015 :

A1.2015- F. Elwasli, F.Zenzemi, A.Mkaddem, S.Mzali, S.Mezzini
"A3D multi-scratch test model for characterizing material removal regimes in 5083-Al alloy" Materials and Design Vol.87 (2015) 352-362 (IF: 4.)

A.2. 2015- M. Ghiss, B. Giannesini, P. Tropiano, Z. Tourki, and O. Boiron,

Quantitative MRI water content mapping of porcine intervertebral disc during uniaxial compression. Computer Methods in Biomechanics and Biomedical Engineering. September 2015. (IF: 1.974)

Articles 2016 :

A1.2016- W.Dandana, M.A. Yousfi, K.Hajlaoui, F. Gamaoun et A.R. Yavari

"Thermal stability in hydrogen-induced softening in Zr57-Al10-Cu15.4-Ni12.6-Nb5" Journal of Non-Crystalline Solids, 2016, (IF : 1,825)

A2. 2016- K Hajlaoui, NH Alrasheedi, AR Yavari,

Direct observation of shear-induced nanocrystal attachment and coalescence in CuZr-based metallic glasses: TEM investigation, Journal of Alloys and Compounds 665, 339-344 (IF = 3.7)

A3. 2016- NH Alrasheedi, MA Yousfi, K Hajlaoui, BJ Mahfoudh, Z Tourki,

AR Yavari, On the Modelling of the Transient Flow Behavior of Metallic Glasses: Analogy with Portevin-Le Chatelier Effect, Metals 6 (3), 48 (IF = 1.7)

Articles 2017:

A1.2017. Mariem Dakhli & Atef Boulila & Zoubeir Tourki

"Effect of generatrix profile on single-point incremental forming parameters" The International Journal of Advanced Manufacturing Technology 2017 (IF: 2.168)

A2.2017. Mohamed Abdelbasset Yousfi, Cheima Ammari, Khalil Hajlaoui, Nikolaos T. Panagiotopoulos, Konstantinos Georgarakis, Zoubeir Tourki

" On a new electromechanical switch using the reversible wavy elastic response of metallic glass ribbons ". Comptes Rendus Mécanique, (IF= 1.029)

A3-2017. M.A. Yousfi, N.T. Panagiotopoulos , A.M. Jorge Junior, K. Georgarakis, A.R. Yavari

"Novel micro-flat springs using the superior elastic properties of metallic glass foils" Scripta Materialia 131 (2017) 84-88

A4.2017. S. Arfaoui, F. Zemzemi & Z. Tourki

"Relationship between cutting process parameters and white layer thickness in orthogonal cutting". Materials and Manufacturing Processes. 2017. (IF=2.669)

A05.2017. Hajloui, K., Alsaleh, N., Alrasheedi, N.H., Yavari, A.R.

" Coalescence and subsequent twinning of nanocrystals during deformation of CuZr-based metallic glasses: The grain size effects, Journal of Non-Crystalline Solids Vol. 464, pp.39-43 2017. (IF=2.488)

A06.2017. Jbira, M. Tlija, B. Louhichi, A. Tahan,

"CAD/Tolerancing Integration: Mechanical Assembly with form defects, Advances in Engineering Software 2017. (IF= 3,19)

A07.2017. B. BEN FRAJ, A. GAHBICHE, S. ZGHAL and Z. TOURKI

" On the influence of the heat treatment temperature on the superelastic compressive behavior of the Ni rchi Niti shape memory alloy", Journal of Materials Engineering and Performance. 2017. (IF= 1,34)

Articles 2018:

A1.2018. A. Eltaief, B. Louhichi, S. Remy

"Associations Management and Change Propagation in the CAD Assembly, accepté à Computers in Industry 2018. (IF: 2.85)

A2.2018- S. Arfaoui & F. Zenzemi & Z. Tourki

"A numerical-analytical approach to predict white and dark layer thickness of hard machining" The International Journal of Advanced Manufacturing Technology (IF: 2.168)

A3.2018- W.Dandana, K.Hajlaoui

"Effect of hydrogen addition on the mechanical properties of Zr-based metallic glass" Journal of Alloys and Compounds" Volume 742, 2018. (IF= 3,315)

A4.2018- A. Korbi & M. Tlija & B. Louhichi & A. BenAmara

"CAD/tolerancing integration: a new approach for tolerance analysis of non-rigid parts assemblies" The International Journal of Advanced Manufacturing Technology 2018. (IF: 2.168)

A5.2018- Grissa, R., Zenzemi, F., Fathallah, R.

"Efficient constitutive material model for predicting residual stresses induced by orthogonal cutting" Journal of Mechanical Science and Technology 32(6), pp. 2765-2771 2018. (IF: 1.194)

A7.2018- Sbayti, M., Bahloul, R., BelHadjSalah, H., Zenzemi, F.

"Optimization techniques applied to single point incremental forming process for biomedical application" International Journal of Advanced Manufacturing Technology. Vol.95(5-8), pp. 1789-1804 2018 (IF: 2.168)

A08.2018- Elwasli, F., Mzali, S., Zenzemi, F., Mkaddem, A., Mezlini, S.

"Effects of initial surface topography and contact regimes on tribological behavior of AISI-52100/AA5083 materials' pair when reciprocating sliding". International Journal of Mechanical Sciences Vol. 137, pp. 271-283 2018. (IF 3.57)

A09.2018- Elwasli, F., Mzali, S., Zenzemi, F., Mkaddem, A., Mezlini, S.

"Effects of pretextured surface topography on friction and wear of AA5083/AISI52100 materials' pair" Lecture Notes in Mechanical Engineering, pp. 771-779 2018 (SJR 0.129)

A10.2018- K. Souaissa, M. Ghiss, M. Chrigui, H. Bentaher, and A. Maalej

"A comprehensive analysis of aerodynamic flow around H-Darrieus rotor with camber-bladed profile" Wind Engineering, 2018. <https://doi.org/10.1177/0309524X18791390> (SJR 0.296)

A11.2018- M. A. Chetoui, O. Boiron, M. Ghiss, A. Dogui, and V. Deplano

Assessment of intervertebral disc degeneration-related properties using finite element models based on pH-weighted MRI data" Biomech Model Mechanobiol. 2018 . (IF: 3.212)

A12.2018- Mariem Dakhli & Atef Boulila & Pierre-Yves Manach & Zoubeir Tourki

"Optimization of processing parameters and surface roughness of metallic sheets plastically deformed by incremental forming process" The International Journal of Advanced Manufacturing Technology. (IF: 2.168)

A13.2018 Grissa, R., Zemzemi, F., Fathallah, R.

“A numerical–analytical approach to predict high cycle fatigue performance of finish machined AISI 316L steel” Int J Adv Manuf Technol (2018) 94: 2003. (IF: 2.601)

A14.2018 Grissa, R., Zemzemi, F., Fathallah, R.

“Three approaches for modeling residual stresses induced by orthogonal cutting of AISI316L” International Journal of Mechanical Sciences Volume 135, (2018), Pages 253-260 (IF: 3.57)

A15.2018 2018- Elwasli, F., Mzali, S., Zemzemi, F., Mezlini, S.

Correlation between roughness anisotropy and tribological behavior of AA5083: Experimental and numerical analysis” The Journal of Materials: Design and Applications (2018) (IF: 1.281)