

## LISTE DES PUBLICATIONS ET COMMUNICATIONS SCIENTIFIQUES

### ARTICLES DANS DES REVUES INTERNATIONALES À COMITÉ DE LECTURE

- Mahdi, A., Turki, Y., Habak, M., Salem, M., & Bouaziz, Z. (2020). Experimental study of thrust force and surface quality when drilling hybrid stacks. *The International Journal of Advanced Manufacturing Technology*, 1-14. <https://doi.org/10.1007/s00170-020-05252-7>.
- Bensaada, R., Almansba, M., Ferhoum, R., Sidhoum, Z., & Habak, M. (2020). Investigation on the constraint effect on the fracture toughness assessment of stainless steel AISI 304L thin sheets. *Journal of theoretical and applied mechanics*, 58(1), 143-153. doi: 10.15632/jtam-pl/115361.
- Makhfi, S., Haddouche, K., Bourdim, A., & Habak, M. (2018). Modeling of Machining Force in Hard Turning Process. *Mechanics*, 24(3), 367-375. DOI:10.5755/j01.mech.24.3.19146.
- Sidhoum, Z., Ferhoum, R., Almansba, M., Bensaada, R., Habak, M., & Aberkane, M. (2018). Experimental and numerical study of the mechanical behavior and kinetics of the martensitic transformation in 304L TRIP steel: applied to folding. *The International Journal of Advanced Manufacturing Technology*, 97(5-8), 2757-2765. <https://doi.org/10.1007/s00170-018-2154-z>.
- Turki, Y., Habak, M., Velasco, R., & Vantomme, P. (2017). Highlighting cutting mechanisms encountered in carbon/epoxy composite drilling using orthogonal cutting. *The International Journal of Advanced Manufacturing Technology*, 92(1-4), 685-697. <https://doi.org/10.1007/s00170-017-0153-0>.
- Ameur, M. F., Habak, M., Kenane, M., Aouici, H., & Cheikh, M. (2017). Machinability analysis of dry drilling of carbon/epoxy composites: cases of exit delamination and cylindricity error. *The International Journal of Advanced Manufacturing Technology*, 88(9-12), 2557-2571. <https://doi.org/10.1007/s00170-016-8967-8>.
- Turki, Y., Habak, M., Velasco, R., Aboura, Z., Khellil, K., & Vantomme, P. (2014). Experimental investigation of drilling damage and stitching effects on the mechanical behavior of carbon/epoxy composites. *International Journal of Machine Tools and Manufacture*, 87, 61-72. <https://doi.org/10.1016/j.ijmactools.2014.06.004>.
- Ferhoum, R., Hachour, K., Aberkane, M., & Habak, M. (2014). Analysis of annealing effect and macroscopic triaxiality on High-density polyethylene. *UPB Scientific Bulletin, Series B: Chemistry and Materials Science*, 76(2), 167-178. ISSN 1454-2331.
- Turki, Y., Habak, M., Velasco, R., Vantomme, P., & Khellil, K. (2014). Influence of Cutting Parameters and Tool Geometry on Cutting Forces and Damage on 2D and 3D Carbon/Epoxy Composites in Drilling. *Key Engineering Materials*, 611-612, 1217-1225. <https://doi.org/10.4028/www.scientific.net/kem.611-612.1217>.
- Makhfi, S., Velasco, R., Habak, M., Haddouche, K., & Vantomme, P. (2013). An optimized ANN approach for cutting forces prediction in AISI 52100 bearing steel hard turning. *Science and Technology*, 3, 24-32. Doi:10.5923/j.scit.20130301.03.
- Raoelison, R. N., Buiron, N., Rachik, M., Haye, D., Franz, G., & Habak, M. (2013). Study of the elaboration of a practical weldability window in magnetic pulse welding. *Journal of Materials Processing Technology*, 213(8), 1348-1354. <https://doi.org/10.1016/j.jmatprotec.2013.03.004>.
- Turki, Y., Habak, M., Velasco, R., Laurent, J. N., & Vantomme, P. (2013). An Experimental Study of Drilling Parameters Effect on Composite Carbon/Epoxy Damage. *Key Engineering Materials*, 554-557, 2038-2046. <https://doi.org/10.4028/www.scientific.net/kem.554-557.2038>.
- Habak, M., & Lebrun, J. L. (2011). An experimental study of the effect of high-pressure water jet assisted turning (HPWJAT) on the surface integrity. *International Journal of Machine Tools and Manufacture*, 51(9), 661-669. <https://doi.org/10.1016/j.ijmactools.2011.05.001>.

- Habak, M., Lebrun, J. L., & Badie-Levet, D. (2009). Effect of the microstructure on the tool/chip tribological contact in hard turning of 100Cr6 bearing steel. *International Journal of Machining and Machinability of Materials*, 6(1-2), 120-138. DOI: 10.1504/IJMMM.2009.026932.
- Habak, M., Lebrun, J. L., Waldmann, S., Robert, P., & Fischer, C. (2006). Residual Stress in High-Pressure Water Jet Assisted Turning of Austenitic Stainless Steel. *Materials Science Forum*, 524–525, 581–586. <https://doi.org/10.4028/www.scientific.net/msf.524-525.581>.
- Mkaddem, A., Habak, M., & Lebrun, J-L. (2006). On the measurement and coupled damage-plasticity prediction model of residual stress in sheet forming processes. *Far East Journal Applied of Mathematics* 23(1) 91-112. ISSN: 0972-0960.
- Mahdi, A., Turki, Y., Bouaziz, Z., Habak, M., & El Bouami, S. (2018). Experimental Effect of Cutting Parameters and Tool Geometry in Drilling Woven CFRP. *International Conference on Advanced Materials Mechanics & Manufacturing* (pp. 135-142). Springer, Cham. [https://doi.org/10.1007/978-3-030-19781-0\\_17](https://doi.org/10.1007/978-3-030-19781-0_17)
- El Bouami, S., Habak, M., Velasco, R., Santos, B. D., Franz, G., & Vantomme, P. (2017). Tool geometry optimization for drilling CFRP/Al-Li stacks with a lightning strike protection. In AIP Conference Proceedings (Vol. 1896, No. 1, p. 090009). AIP Publishing LLC. DOI:10.1063/1.5008116.
- El Bouami, S., Habak, M., Franz, G., Velasco, R., & Vantomme, P. (2016). Effect of tool geometry and cutting parameters on delamination and thrust forces in drilling CFRP/Al-Li. In AIP Conference Proceedings (Vol. 1769, No. 1, p. 080012). AIP Publishing LLC. DOI:10.1063/1.4963487.
- Makhfi, S., Haddouche, K., Habak, M., Velasco, R., & Bourdim, A. (2014). Cutting Forces Prediction in Turning by Technique of ANNs. ISSN: 2286-5845, *International Journal of Mechanics and Energy*. 2(4) 222-227. <http://www.ijme.aicme.net>
- Turki, Y., Habak, M., Velasco, R., Vantomme, P., & Khellil, K. (2011). An experimental study of the routing of a unidirectional carbon/epoxy composite. In AIP conference Proceedings (Vol. 1353, No. 1, pp. 1013-1018). American Institute of Physics. <https://doi.org/10.1063/1.3589649>.
- Makhfi, S., Habak, M., Velasco, R., Haddouche, K., & Vantomme, P. (2011). Prediction of Cutting Forces Using ANNs Approach in Hard Turning of AISI 52100 steel. In AIP Conference Proceedings (Vol. 1353, No. 1, pp. 669-674). American Institute of Physics. <https://doi.org/10.1063/1.3589592>.
- Habak, M., Lebrun, J. L., & Morel, A. (2007). A study of the influence of the metallurgical state on shear band and white layer generation in 100Cr6 steel: application to machining. In AIP Conference Proceedings (Vol. 907, No. 1, pp. 691-696). American Institute of Physics. 691. DOI:10.1063/1.2729593.

COMMUNICATIONS AVEC ACTES PUBLIÉS DANS DES CONGRÈS INTERNATIONAUX À COMITÉ DE LECTURE :

- Cherfi, T., Almansba, Habak, M., Ferhoum, R. & Bessalah, S. (2019). Experimental and numerical study of the deformation behavior of 304L TRIP steel during a cold drawing process. *Fifth international conference on energy, materials, applied energetics and pollution (ICEMAEP)*, Constantine, Algérie.
- Mahdi, A., Turki, Y., Habak, M., & Bouaziz, Z. (2019, December). Experimental effect of CFRP thickness plate on delamination phenomenon. *The 7<sup>th</sup> International Conference on Advances in Mechanical Engineering and Mechanics (ICAMEM)*, Hammamet, Tunisia.
- Mahdi, A., Turki, Y., Habak, M., El Bouami, S., Bouaziz, Z. (2019). Experimental analysis of the influence of twist drill point angle on the drilling of woven CFRP. *The 8<sup>th</sup> International Congress Design and Modeling of Mechanical Systems (CMSM)*, Hammamet, Tunisia.

- Mahdi, A., Turki, Y., S., Bouaziz, Z., Habak, M., & El Bouami, S. (2018, December). Experimental analysis of the defects of drilling woven CFRP. The 4<sup>th</sup> International Conference on Mechanics and Energy (ICME), Hammamet-Tunisie.
- Kilardj, M., Ikhenazen, G., & Habak, M. (2018, October). Analyse numérique et expérimentale des plaques partiellement tendues. 2<sup>ème</sup> Conférence internationale de CONstruction Métallique et Mixte (CICOMM), Algérie.
- Makhfi, S., Haddouche, K., Bourdim, A-G., Habak, M., R. Velasco, R. & Vantomme, P. (2016, December). Improving Learning of Artificial Neural Networks: Application to Predict Residual Stress in Hard Turning. *The 2<sup>nd</sup> International Conference on Mechanics and Energy (ICME)*. Hammamet, Tunisia.
- El Bouami, S., Habak, M., Franz, G., Velasco, R. & Vantomme, P. (2016, July). Experimental Study on Effect of Tool Geometry on Hole Quality in Drilling of CFRP/ Ti6Al4V Stacks. *The 1<sup>st</sup> International Conference on Materials Design and Applications (MDA16\_80)*, Porto.
- Ameur, M.F., Habak, M., Kenane, M., Aouici, H. & Cheikh. M. (2016, June). Analysis of parametric influence on machining in dry drilling carbone fiber reinforced epoxy composites. *17<sup>th</sup> European conference on composites materials*. Munich, Germany.
- El Bouami, S., Habak, M., Franz, G., Velasco, R. & P. Vantomme. (2016, April). Effect of tool geometry and cutting parameters on delamination and thrust forces in drilling CFRP/Al-Li. *The 19<sup>th</sup> International Conference on Materiel Forming, ESAFORM*. Nantes, France.
- Ameur, M.F., Ben Messaoud, F., Cheikh, M., Habak, M., & Kenane, M. (2015, December). Modeling of thrust force  $F_z$  during the drilling of composite Material Carbon/Epoxy. *The 1<sup>st</sup> Conference on Mechanical, Energy and Material Engineering (CMEME)*. Biskra, Algeria.
- Turki, Y., Habak, M., Velasco, R., Vantomme, P. & Khellil, K. (2014, May). Influence of cutting parameters and tool geometry on cutting forces and damage on 2D and 3D carbon/epoxy composites in drilling. *The 17<sup>th</sup> International Esaform conference*. Espoo, Finland.
- Makhfi, S., Haddouche, K., Habak, M., Velasco, R. & Bourdim, A-E-G. (2014, March). Cutting Forces Prediction in Turning by Technique of ANNs. *International Conference on Mechanics and Energy (ICME)*. Monastir, Tunisia.
- Turki, Y., Habak, M., Velasco, R., Laurent, J-N., & Vantomme, P. (2013, April). An experimental study of drilling parameters effect on composite carbon/epoxy damage. *The 16<sup>th</sup> International Conference on Materiel Forming, ESAFORM*. Aveiro, Portugal.
- Raoelison, R. N., Buiron, N., Habak, M., Haye, D., & Rachik, M. (2011). Elastoplastic and Damage Behaviour of Magnetic Pulse Weld Interfaces. *The 10th International Conference on Technology of Plasticity, Aachen*, Germany (pp. 1160-1163).
- Makhfi, S., Habak, M., Velasco, R., Haddouche, K. & Vantomme, P. (2011, April). Prediction of Cutting Forces Using ANNs Approach in Hard Turning of AISI 52100 Steel. *The 14<sup>th</sup> International Conference on Materiel Forming (ESAFORM)*, Belfast, Irlande du Nord.
- Turki, Y., Habak, M., Velasco, R., Vantomme, P. & Khelil, K. (2011, April). An Experimental Study of the Routing of a Unidirectional Carbon/Epoxy Composite. *The 14<sup>th</sup> International Conference on Materiel Forming (ESAFORM)*, Belfast, Irlande du Nord.
- Habak, M., Lebrun, J-L., Badie-Levet, D., & Morel, A. (2007, August). Effect of the microstructure on the tool/chip tribological contact in hard turning of 100Cr6 bearing steel. The 10th CIRP International Workshop on Modeling of Machining Operations. University of Calabria,
- Habak, M., Lebrun, J-L., & Morel, A. (2007, April) A study of the influence of the metallurgical state on shear band and white layer generation in 100Cr6 steel: application to machining. The 10<sup>th</sup> International Conference on Material Forming. Zaragoza, Spain.
- Habak, M., Lebrun, J-L., Braham Bouchenak, T., & Morel, A. (2007, September). Influence of the microstructure on white layer generation in 100Cr6 hardened steel. *International symposium on shear behavior and mechanisms in materials plasticity*. Nancy, France.
- Habak, M., Lebrun, J. L., Huneau, B., Germain, G., & Robert, P. (2006, May). Effect of carbides and cutting parameters on chip morphology and cutting temperature during orthogonal hard

- turning of 100Cr6 bearing steel with a cBN cutting tool. *The 9th CIRP International Workshop on Modeling of Machining Operations*. BLED, Slovenia pp. 517-524
- Habak, M., Lebrun, J. L., Bellett, D., & Fischer, C. (2006, April) The effect of carbides, material hardness and cutting parameters on residual stresses generated by the hard turning of 100Cr6 (AISI 52100). *The 9th International Conference on Material Forming (Keynote paper)*, ESAFORM, Glasgow, United Kingdom. pp. 615 - 618.

#### COMMUNICATIONS AVEC ACTES PUBLIES DANS DES CONGRES NATIONAUX :

- Cherfi, T., Almansba, M., Habak, M., & Ferhoum, R. (2019). Influence of dynamic and static ageing on the phase transformation process on 304L TRIP steel. *6<sup>ème</sup> journées scientifiques Franco-Maghrébines – caractérisation des matériaux complexes*. Annaba - Algérie
- Makhfi, S., Haddouche, K., Habak, M., & Makhfi, H. (2019). Modélisation et Simulation de l'Usinage Dur. *7<sup>ème</sup> congrès Algérien de Mécanique (CAM)*, Ghardaïa- Algérie.
- Mahdi, A., Turki, Y., Bouaziz, Z., Habak, M., & El Bouami, S. (2018). Experimental Effect of Cutting Parameters and Tool Geometry in Drilling Woven CFRP. *4<sup>th</sup> Tunisian Congress on Mechanic : COTUME*, Hammamet-Tunisie. (8 pages).
- Khellaf, A., Yaltese, M., Boutabba, S., Habak, M., Aouici, H., & Smaiah, S. (2017). Mathematical modeling and multi-objective optimization of technological parameters in Hard Turning operation using RSM and Genetic Algorithmic Approach. *23<sup>ème</sup> Congrès Français de Mécanique*, Lille.
- EL Bouami, S., Habak, M., Gerald, F., Velasco, R., & Vantomme, P. (2015). Influence de l'angle de pointe du foret sur le perçage d'un multi-matériaux composite-Al-Li. *USINAGE DES MATERIAUX BOIS & COMPOSITES, Journées Scientifiques et Techniques*, Cluny
- Ameur, M.F., Aouici, H., Habak, M., Kenane, M., & Ben Messaoud, F. (2015). Study of dry drilling Parameters of aeronautical aluminum alloys 7175 T 5173. *The 1<sup>st</sup> Conference on Mechanical, Energy and Material Engineering (CMEME)*. Biskra, Algeria.
- Makhfi, S., Haddouche, K., Habak, M., Velasco, R., & Bourdim, A-E-G. (2014). Influence des Paramètres d'Usinage sur la Modélisation Prédicative de l'État de Contraintes Résiduelles lors du Tournage Dur par les Réseaux de Neurones Artificiels. *3<sup>ème</sup> Journées Nationales de la Physique*. Université Ibn Khaldoun, Tiaret, Algérie.
- Ameur, M. F., Habak, M., Kenane, M., & Aouici, H. (2014). Analyse des conditions de coupe du perçage à sec d'un alliage d'aluminium (Al 7175-T5173) par la Méthode des surfaces de réponse (RMS). *MATERIAUX*. Montpellier, France.
- Almansba, M., Ferhoum, R., Hachour, K., & Habak, M. (2013). Mechanics behavior and microstructural Characterization in tension of TRIP steel. *Journées Annuelles de la SF2M*. École Centrale de Lille, France.
- Makhfi, S., Haddouche, K., Habak, M., Velasco, R., & Bourdim, A-E-G. (2012). Modélisation Prédicative de l'État de Contraintes Résiduelles en Tournage Dur par Réseaux de Neurones Artificiels. *La 2<sup>ème</sup> Conférence Nationale de Mécanique et de l'Industrie*. Université Abdelhamid Ibn Badis. Mostaganem, Algérie
- Makhfi, S., Habak, M., Velasco, R., Haddouche, K., & Vantomme P. (2012). Cutting Forces Prediction using BR/LM Technique of ANNs in Hard Turning of AISI 52100 Bearing Steel. *8<sup>ème</sup> Journées de Mécanique*. École Militaire Polytechnique. Algérie
- Turki, Y., Habak, M., Velasco, R., Vantomme, P., & Aboura, Z. (2012). Étude expérimentale du détournage d'un composite carbone/époxy. *18<sup>ème</sup> Colloque National de la Recherche en IUT*, Volume 3, (pp. 29-39).
- Makhfi, S., Habak, M., Velasco, R., Haddouche, K., & Vantomme, P. (2011). Prédiction des contraintes résiduelles en tournage dur de l'acier 100Cr6 par la méthode des réseaux de neurones. *20<sup>ème</sup> Congrès Français de Mécanique*. Besançon, France

- Turki, Y., Habak, M., Velasco, R., Vantomme, P., & Aboura, Z. (2011). Évaluation expérimentale du comportement d'un composite carbone/époxy en usinage. *20<sup>ème</sup> Congrès Français de Mécanique*, Besançon, France.
- Turki, Y., Habak, M., Velasco, R., Vantomme, P., & Aboura, Z. (2011). Étude expérimentale du détournage d'un composite carbone/époxy. *17<sup>ème</sup> Colloque National de la Recherche dans les IUT*, CNRIUT, Cherbourg-Octeville, France.
- Turki, Y., Habak, M., Velasco, R., Vantomme, P., & Tortajada, H. (2010). Influence des paramètres de coupe sur la résistance à la traction des composites carbone/époxy lors du perçage. *16<sup>ème</sup> Colloque National de la Recherche dans les IUT*. Angers, France.
- Habak, M., Germain, G., Lebrun, J. -L., Braham-Bouchnak, T., & Robert, P. (2007). Aspects thermiques et rhéologiques de la coupe en tournage, *Intercut*, Cluses, France.
- Bellett, D., Morel, A., Habak, M., Fruchaud, G., & Morel, F. (2006). Influence des hétérogénéités microstructurales liées au procédé de fabrication sur la résistance en fatigue de pièces moulées. Poster, *Journée SF2M Ouest : Endommagement des matériaux*. Polytech'Nantes, France.
- HABAK, M., FISCHER, C., & LEBRUN, J. L. (2004). Rôle de l'assistance jet d'eau haute pression sur les contraintes résiduelles de pièces en acier inoxydable austénitique usiné. *Journées du Groupement Français d'Analyses des Contraintes*. ENSAM Aix en Provence, France
- Habak, M., Lebrun, J. L., Braud, A., & Huneau, B. (2006). Tournage cBN du 100Cr6 durci à 55HRc. *5<sup>ème</sup> Journées de Mécanique, JM'05*. École Militaire Polytechnique, Alger, Algérie.
- Morel, F., Tonneau-Morel, A., Habak, M., & Potiron, S. (2004). Étude de la fiabilité de composants obtenus par fonderie. *23e Journées de Printemps de la SF2M, Méthodes fiabilistes en fatigue pour conception et essais*. FIAP Jean Monnet, Paris.