Liste de publications de Guillaume Haïat (2019-2023)

Publications dans des revues à comité de lecture

1. Pereira, D., **Haïat, G.**, Fernandes, J. and Belanger, P., "Effect of intracortical bone properties on the phase velocity and cut-off frequency of low-frequency guided waves modes (20-85 kHz)" *J Acoust Soc Am* **145(1) (**2019) pp. 121-130
2. Rittel, D., Dorogoy, A., **Haïat, G.** and Shemtov-Yona, K. "Resonant frequency analysis of dental implants" *Med Eng Phys* **66** (2019) pp. 65-74.
3. Heriveaux Y, Nguyen VH, Brailovski V., Gorny C., **Haiat G**, "Reflection of an ultrasonic wave on the bone-implant interface: effect of the roughness parameters" *J Acoust Soc Am* **145(6)** (2019) pp. 3370-3381
4. Gao, X., Fraulob, M. and **Haiat G**, "Biomechanical Behaviour of Bone-Implant Interface: A Review" *J. R. Soc. Interface,* **16(156)** (2019) pp.20190259.
5. Raffa, M., Nguyen, VH, Tabor, E, Immel, K, Housset, V, Flouzat-Lachaniette, CH and **Haiat G**, "Dependence of the primary stability of cementless acetabular cup implants on the biomechanical environment" *Proc Inst Mech Eng H.* **28** (2019) pp. 954411919879250
6. Heriveaux, Y., Nguyen, VH, Geiger, D and **Haiat G**, "Elastography of the bone-implant interface" *Scientific reports* **9(1)** (2019), pp. 14163
7. Heriveaux, Y., Nguyen, VH, Geiger, D and **Haiat G**, "Ultrasonic propagation in a dental implant" *Ultrasound Med Biol.* **46(6)** (2020), pp. 1464-1473
8. Martin M., Lemaire T., **Haiat G**, Pivonka P and Sansalone V. "Bone orthotropic remodeling as a thermodynamically-driven evolution", *J Mech Med Biol*. **20(4)** (2020), pp. 1950084
9. Immel, K., Duong, TX, Nguyen, VH, **Haiat G** and Sauer, R, "A modified Coulomb's law for the tangential debonding of osseointegrated implants" *Biomech Model Mechanobiol* **19(3)** (2020), pp. 1091-1108
10. Raffa, M., Nguyen, VH and **Haiat G**, "Micromechanical modeling of the contact stiffness of an osseointegrated bone-implant interface" *BioMedical Engineering OnLine* **19(1)** (2019), pp. 114
11. Dubory, A., Rosi, G, Tijou, A., Albini Lomami, H, Hernigou, P., Flouzat-Lachaniette, CH., **Haïat, G.** "A cadaveric validation of a method based on impact analysis to monitor the femoral stem insertion" *J Mech Behav Biomed Mater*. **103** (2020), pp. 103535
12. Dorogoy, A., **Haïat, G.,** Shemtov-Yona, K. and Rittel, D. "Modeling ultrasonic wave propagation in a dental implant-bone system" *J Mech Behav Biomed Mater* **103** (2020), pp. 103547
13. Heriveaux, Y., **Haiat G,** and Nguyen, VH, "Reflection of an ultrasonic wave on the bone-implant interface: comparison of two-dimensional and three-dimensional numerical models" *J Acoust Soc Am* **147(1)** (2020), pp. EL32
14. Hubert, A., Bosc, R. and **Haïat, G.** "Using an impact hammer to estimate elastic modulus and thickness of a sample during an osteotomy" *J Biomech Eng* **142(7)** (2020), pp. 071009
15. Albini Lomami, H, Damour, C, Rosi, G, Dubory, A, Flouzat-Lachaniette, CH, **Haiat, G** "Ex vivo estimation of cementless femoral stem stability using an instrumented hammer" *Clinical Biomech* **76** (2020), pp. 105006
16. Sansalone V., Martin M., **Haiat G**, Pivonka P and Lemaire T. "A new model of bone remodeling and turnover set up in the framework of generalized continuum mechanics", *Mathematics and Mechanics of Solids* **116** (2021), pp. 391-399
17. Le Cann S., Törnquist E, Barreto ES, Fraulob M, Albini Lomami H, Verezhak M, Guizar-Sicairos M, Isaksson H, and **Haiat G**, "Spatio-temporal evolution of hydroxyapatite crystal thickness at the bone-implant interface" *Acta Biomaterialia* **1** (2020), pp. 1-18
18. Fraulob M., Le Cann S., Voumard B, Yasui H., Yano K., Vayron R., Matsukawa M., Zysset P, and **Haïat G.**, " Multimodal Evaluation of the Spatiotemporal Variations of Periprosthetic Bone Properties ", *J Biomech Eng*, **142(12)** (2020), pp. 121014
19. Fraulob, M., Pang, S, Le Cann, S, Vayron, R, Laurent-Brocq, M, Todatry, S, Soares, J, Jasiuk, I, **Haiat, G** "Multimodal characterization of the bone-implant interface using Raman spectroscopy and nanoindentation" *Med Eng Phys* **84** (2020), pp. 60-67
20. Raffa, M., Nguyen, VH, Hernigou, P, Flouzat-Lachaniette, CH and **Haiat G**, "Stress shielding at the bone-implant interface: influence of surface roughness and of the bone-implant contact ratio" *J Orthop Res* **84** (2020), pp. 60-67
21. Heriveaux, Y., Nguyen, VH, Biwa S and **Haiat G**, "Analytical modeling of the interaction of an ultrasonic wave with a rough bone-implant interface" *Ultrasonics* **108** (2020) pp. 106223.

22. Lamassoure, L, Giunta, J, Rosi, G, Poudrel, AS, Bosc, R, and **Haiat G** "Use of an instrumented hammer as a decision support system during rhinoplasty: validation on an animal model", *Computer Methods in Biomechanics and Biomedical Engineering* **23(S1)** (2020), pp. S162-S163
23. Fraulob M., Vayron R, Le Cann S, Lecuelle B, Hériveaux Y, Albini Lomami H., Flouzat Lachaniette CH, and **Haiat G** "Quantitative ultrasound assessment of the influence of roughness and healing time on osseointegration phenomena" *Scientific Report* **10(1)** (2020), pp. 21962
24. Guillaume, F, Le Cann, S, Tengattini, A, Törnquist, E, Falentin-Daudre, C, Albini Lomami, H, Petit, Y, Isaksson, H and **Haiat G** "Neutron microtomography to investigate the bone-implant interface – comparison with histological analysis", *Phys Med Biol* **66(10)** (2021), pp. 105006
25. Lamassoure, L, Giunta, J, Rosi, G, Poudrel, AS, Bosc, R, and **Haiat G** "Using an Impact Hammer to Perform Biomechanical Measurements during Osteotomies: Study of an Animal Model", *Proc Inst Mech Eng H* **235(7)** (2021), pp. 838-845.
26. Kwak, Y, Nguyen, VH, Heriveaux, Y, Belanger, P, Park, J, and **Haiat G** "Ultrasonic assessment of osseointegration phenomena at the bone-implant interface using convolutional neural network", *J Acoust Soc Am* **149(6)** (2021), pp. 4337.
27. Gupta, S., **Haïat, G.**, Laporte, C. and Belanger, P. "Effect of acoustic impedance mismatch as a function of frequency in transcranial ultrasound" *IEEE Trans. Ultrason. Ferroelectr. Freq. Control* **68(5)** (2021), pp. 1653-1663.
28. Heriveaux, Y., Vayron, R, Fraulob, M, Albini Lomami, H, Lenormand, C and **Haiat G**, "Assessment of dental implant stability using resonance frequency analysis and quantitative ultrasound methods" *J Prosthodont Res* **65(3)** (2021), pp. 421-427.
29. Poudrel, AS., Nguyen, VH, Rosi, G, and **Haiat G** "Modal Analysis of the Ancillary During Femoral Stem Insertion: A Study on Bone Mimicking Phantoms" *Ann Biomed Eng*, **50(1)** (2022), pp. 16-28.
30. Lamassoure, L, Giunta, J, Rosi, G, Poudrel, AS, Meningaud, JP, Bosc, R, and **Haiat G** "Anatomical subject validation of an instrumented hammer using machine learning for the classification of osteotomy fracture in rhinoplasty", *Med Eng Phys* **95** (2021), pp. 111-116.
31. Giunta, J, Lamassoure, L, Rosi, G, Poudrel, AS, Meningaud, JP, **Haiat G** and Bosc, R, "Validation of an Instrumented Hammer for Rhinoplasty Osteotomies: A Cadaveric Study", *Facial Plast Surg Aesthet Med* **24(5)** (2022), pp. 369-374.
32. Immel, K., Nguyen, VH, Dubory, A, Flouzat-Lachaniette CH, Sauer, R, and **Haiat G** "Determinants of the primary stability of cementless acetabular cup implants: A 3D finite element study" *Computers in Biology and Medicine* **135** (2021), pp. 104607.
33. Immel, K., Nguyen, VH, **Haiat G** and Sauer, R, "Long-term stability and debonding of cementless implants" *Proceedings in Applied Mathematics and Mechanics* **21(1)** (2021), pp. e202100118.
34. Immel, K., Nguyen, VH, **Haiat G** and Sauer, R, "Modeling the debonding process of osseointegrated implants due to coupled adhesion and friction" *Biomech. Model. Mechanobiol.* **22** (2023), pp. 133-158.
35. Heriveaux, Y., Le Cann, S, Immel, K, Vennat, E, Nguyen, VH, Brailovski, V, Karasinski P, Sauer R and **Haiat G** "Mechanical micromodeling of the bone-implant interphase under shear loading" *Medical & Biological Engineering & Computing* **60(11)** (2022), pp. 3281-3293.
36. Poudrel, AS., Nguyen, VH, Rosi, G and **Haiat G** "Influence of the biomechanical environment on the femoral stem insertion and vibrational behavior: a 3-D finite element study" in press to *Biomech. Model. Mechanobiol*
37. Poudrel, AS., Nguyen, VH, **Haiat G** and Rosi, G, "Optimization of a smart beam for monitoring a connected inaccessible mechanical system: application to bone-implant coupling" *Mechanical Systems and Signal Processing* **192(1)** (2023), pp. 110188.
38. Bas dit Nugues, M., Rosi, G, Heriveaux, Y and **Haiat G** "Using an instrumented hammer to predict the rupture of bone samples subject to an osteotomy" *Sensors* **23(4)** (2023), pp. 2304.
39. Heriveaux, Y., Le Cann, S, Immel, K, Vennat, E, Nguyen, VH, Brailovski, V, Karasinski P, Sauer R and **Haiat G** "Tangential debonding of coin-shaped osseointegrated implants using experimental and numerical approaches" in press to *J Mech Behav Biomed Mater*.

40. Poudrel, AS., Rosi, G, Nguyen, VH, Housset V, Flouzat-Lachaniette CH and **Haiat G** "Detection of periprosthetic fractures around the femoral stem by resonance frequency analysis: an in vitro study" submitted to *Part H: Journal of Engineering in Medicine*
41. Yano, K, Maekawa, Y, Haneda, Y, Shirai, K, Ikegawa, M, Nakamura, M, **Haiat G** and Matsukawa, M, "Decrease of elasticity in bones of streptozotocin-induced young diabetic rats" submitted to *Ultrasound Med Biol.*

Demandes de Brevets

- **Haïat, G.**, Rosi, G., Poudrel, AS «Dispositif pour évaluer les propriétés mécaniques d'un tissu mou». Demande n°2210600 déposée à l'INPI le 14/10/2022.

Chapitres dans des ouvrages

1. Hériveaux, Y, Nguyen, VH, Vayron, R and **Haiat, G** "Ultrasonic evaluation of dental implant stability" in *Dental Ultrasound in periodontology and Implantology*. Ed. Albert Chan and Oliver Kripfgans, Springer. 2020.
2. Martin, M, Pivnoka, P, **Haiat, G,** Lemaire, T, Sansalone, V "Algorithmic formulation of bone fabric evolution based on the dissipation principle: a 2D finite-element study" in *Developments and Novel Approaches in Biomechanics and Metamaterials*. Springer. 2020
3. Hériveaux, Y, Nguyen, VH and **Haiat, G** "Ultrasonic evaluation of the bone-implant interface" in *Bone QUS: new Horizons*. Eds. Pascal Laugier and Quentin Grimal, Springer. 2022.

Keynote lecture

- **Haiat G.**, "Acoustical behavior of the bone-implant interface: from multiscale modeling to the patient's bed". 26th International Congress on Sound and Vibration (ICSV26) Montreal, Canada, 7-11 Juillet 2019.
- **Haiat G.**, "The bone-implant interface: multiscale modeling and applications". The International Conference on Modern Mechanics and Applications (ICOMMA 2020) Saigon, Vietnam, 2-4 Décembre 2020.

Conférences invitées

1. **Haiat G** and Bosc, R. Biomechanical behavior of the bone-implant interface: from multiscale modeling to the patient's bed. 45ème congrès de la société de Biomécanique. 26-28 octobre 2020, Metz, France. Perspective Talk.
2. Nguyen, VH, Heriveaux, Y. and **Haiat G.**, "Characterization of bone-implant interfaces: some computational aspects" 6th International Conference on the Development of Biomedical Engineering in Vietnam, December 27-29 June 2022, Ho Chi Minh, Vietnam.

Actes de congrès nationaux et internationaux

1. Martin, M., Pivonka, P., **Haïat, G,** Sansalone, V., Lemaire, T. « Un modèle multi-échelles de remodelage osseux reliant les influences biochimiques et mécaniques », 24ème Congrés Français de Mécanique, Brest, 26-30 aout 2019.
2. Nguyen, VH., Raffa, ML and **Haïat, G** « Primary stability of cementless acetabular cup implants: a numerical study», 6th International Conference on Computational and Mathematical Biomedical Engineering- CMBE2019, 10-12 June 2019, Kobe, Japan
3. Heriveaux Y, Nguyen VH, **Haiat G**, "Numerical study on the reflection of an ultrasonic wave from a rough bone-implant interface" 26th International Congress on Sound and Vibration (ICSV26) Montreal, Canada, 7-11 Juillet 2019.
4. Vayron R, Nguyen VH, **Haiat G**, "Comparing quantitative ultrasound and resonance frequency analysis to evaluate dental implant stability" 44ème congrès de la société de Biomécanique, Poitiers, 28-30 Octobre 2019.
5. Immel, K., Duong, TX, Nguyen, VH, Sauer, R, and **Haïat, G "**A Frictional and Adhesive Contact Model for Debonding of the Bone-Implant Interface Based on State Variable Friction Laws", 8th GACM Colloquium on Computational Mechanics (GACM 2019), 28-30 Aout 2019, Kassel, Germany.
6. Yasui H, Yano K, Fraulob M, **Haïat, G**, Matsukawa M "Measurement of Longitudinal Wave Velocity in Newly Formed and Mature Bone in the GHz Range", The 40th Symposium on UltraSonic Electronics (USE2019), 25-27 Novembre 2019, Tokyo, Japan.
7. Lamassoure L, Rosi G, Giunta J, Bosc R, and, **Haïat G** "An impact hammer as a decision support system for surgeons during an osteotomy", XXV ICTAM, 23-28 August 2020, Milano, Italy
8. Lamassoure, L., Giunta J., Rosi G., Poudrel A.S., Bosc R., **Haiat G** Use of an Instrumented Hammer as a decision support system during Rhinoplasty: validation on an Animal Model. 45ème congrès de la société de Biomécanique. 26-28 octobre 2020, Metz, France.
9. Heriveaux, Y., Audoin, B, Biateau, C, Nguyen, VH, **Haïat, G** "Measurement of the propagation of a guided wave in a dental implant", Forum Acousticum, 20-24 Avril 2020, Lyon.

10. Albini Lomami, H, Damour, C, Rosi, G, Dubory, A, Flouzat-Lachaniette, CH, **Haiat, G** "Estimation of cementless femoral stem stability using an impact hammer", Forum Acousticum, 20-24 Avril 2020, Lyon.
11. Lamassoure L, Rosi G, Poudrel AS, Bosc R, **Haïat, G** "Validation of an impact hammer to assess the mechanical properties of a tissue during osteotomy", Forum Acousticum, 20-24 Avril 2020, Lyon.

Communications orales sans actes

1. Immel, K., Duong, TX, Nguyen, VH, Sauer, R, and **Haïat, G "**NURBS-enriched finite element formulation for frictional contact between bone and implant", 90th GAMM Annual Meeting, Wien, February 18-22, 2019
2. Martin, M., Pivonka, P., **Haïat, G,** Sansalone, V., Lemaire, T. « A multiscale model of remodeling bridging bone mechanics and biochemistry », 25th Congress of the European Society of Biomechanics, Vienne, Autriche, 7-10 juillet 2019.
3. Fraulob, M., Pang, S., Le Cann, S., Vayron, R., Laurent-Brocq, M., Jasiuk, I., **Haïat, G**. "Biomechanical characterization of the bone-implant interface with nanoindentation and Raman spectroscopy", 25th Congress of the European Society of Biomechanics, Vienne, Autriche, 7-10 juillet 2019.
4. Heriveau, Y., Nguyen, VH, **Haïat, G** « Effect of roughness parameters on the reflection of an ultrasonic wave from the bone-implant interface», 25th Congress of the European Society of Biomechanics, Vienne, Autriche, 7-10 juillet 2019.
5. Housset V, Dubory A, Tijou A, Vayron R, Flouzat-Lachaniette CH, **Haïat, G** « Arthroplasties totales de hanches impactées : validation d'un marteau instrumenté permettant d'analyser la stabilité primaire des implants fémoraux et le risque de fractures lors de l'impaction des tiges fémorales » 94ème congrès de la Société Françasie de Chirurgie Orthopédique et Traumatologique, 11-13 nov 2019, Paris.
6. Heriveaux, Y., Nguyen, VH, **Haïat, G** « Numerical study on the reflection of an ultrasonic wave on a rough bone-implant interface», 8th International Symposium on Ultrasonic Characterization of Bone 24-26 June, 2019 Fréjus.
7. Martin, M., Pivonka, P., **Haïat, G,** Sansalone, V., Lemaire, T. « An enriched continuum mechanics description of bone tissue to describe mineralization and mechanobiology in bone remodeling », 44ème Congrès de la Société Française de Biomécanique, Poitiers, 28-30 octobre 2019.
8. Immel, K., Duong, TX, Nguyen, VH, **Haïat, G** and Sauer, R "A Computational Contact Model for Debonding Implants", The fifth European Community on Computational Methods in Applied Sciences (ECCOMAS) Young Investigators Conference (YIC 2019), 1 - 6 September 2019, Krakow, Poland.
9. Heriveaux, Y., Nguyen, VH, **Haïat, G** "Influence of compressive stresses on the ultrasonic response of the bone-implant interface", 176th meeting of the Acoustical Society of America, 2-6 Decembre 2019, San Diego, CA, USA.
10. Heriveaux, Y., Audoin, B, Biateau, C, Nguyen, VH, **Haïat, G** "Ultrasonic guided wave propagation in a dental implant", 176th meeting of the Acoustical Society of America, 2-6 Decembre 2019, San Diego, CA, USA.
11. Immel, Nguyen, VH, **Haïat, G** and Sauer, R "Modeling initial and long term stability of cementless hip implants", 14th World Congress in Computational Mechanics (WCCM) ECCOMAS Congress 2020, 19 – 24 July 2020, Paris, France
12. Heriveaux, Y., Nguyen, VH, Biwa, S and **Haïat, G** "Interaction between an ultrasonic wave and a rough bone-implant interface: development of an analytical model", The 27th International congress of sound and vibration (ICSV27), Prague, République Tchèque.
13. Immel, Duong, TX, **Haïat, G,** Mandadapu, KK and Sauer, R "A chemo-thermo-mechanical contact theory with application to biomechanics", Contact Mechanics International Symposium, 13 – 15 May 2020, Lausanne, Suisse
14. Fraulob, Vayron, R., Le Cann, S., Lecuelle, B, Hériveaux, Y, Albini Lomami, H, Flouzat-Lachaniette, CH, **Haïat, G**. « Effect of roughness and healing time on the bone-implant interface assessed by quantitative ultrasound », 26th Congress of the European Society of Biomechanics, Milan, Italy, 12-15 juillet 2020.
15. Fraulob, M, Le Cann, S., Voumard, B, Yasui, H, Yano, K, Vayron, R., Matsukawa M, Zysset, P, **Haïat, G**. « Spatiotemporal variations of the bone elastic properties around an implant: a bimodal study », 26th Congress of the European Society of Biomechanics, Milan, Italy, 12-15 juillet 2020.
16. Le Cann, Törnquist, E, Barreto, IS, Fraulob, M, Verezhak, M, Guizar-Sicairos, M, Albini Lomani, H, Isaksson, H, **Haïat, G**. « Spatiotemporal variations of the bone elastic properties around an implant: a bimodal study », 26th Congress of the European Society of Biomechanics, Milan, Italy, 12-15 juillet 2020.
17. Martin, M, Pivonka, P, **Haïat, G,** Lemaire, T, Sansalone, V « A generalized continuum framework of bone mechanobiology and mineralization », 26th Congress of the European Society of Biomechanics, Milan, Italy, 12-15 juillet 2020.

18. Immel, K, Nguyen, VH, Sauer, R, **Haïat, G** « Numerical Modeling of Primary and Secondary stability of cementless acetabular cup implants», 26th Congress of the European Society of Biomechanics, Milan, Italy, 12-15 juillet 2020.
19. Housset, V, Rosi, G, Flouzat-Lachaniette, CH, **Haïat, G** « Arthroplasties totales de hanches impactées : validation d'un marteau instrumenté permettant d'analyser la stabilité primaire des implants fémoraux et le risque de fractures lors de l'impaction des tiges fémorales. », Journées de printemps de la société Française de Chirurgie de la Hanche et du Genou, Rennes, 12-15 Mars 2020.
20. Immel, K, Nguyen, VH, **Haïat G** and Sauer, R, « Finite element models for primary and secondary stability of cementless hip implants », GAMM FACHAUSSCHUSS 2020, COMPUTATIONAL BIOMECHANIC**S,** 21-22 september 2020, KLOSTER BANZ, Allemagne
21. Gouet, E, Vayron, R and **Haïat G** « Estimation of dental implant stability using quantitative ultrasound measurements », European Association of Osseointegration Digital days, 5-11 octobre 2020.
22. Guillaume, F, Le Cann, S, Tengattini, A, Törnquist, E, Falentin-Daudre, C, Albini Lomami, H, Petit, Y, Isaksson, H and Haiat G "Neutron tomography to investigate the bone-implant interface", the Canadian Society of Biomechanics Congress 2020. May 25-28th 2021.
23. Immel, K., Nguyen, VH, **Haïat, G and** Sauer, R, **"**Long-Term Stability and Debonding of Cementless Implants", 90th GAMM Annual Meeting, Wien, February 18-22, 2019
24. Immel, K., Nguyen, VH, and Sauer, R, and **Haïat, G "**Secondary stability and debonding of osseointegrated Acetabular Cup implants", 27th Congress of the European Society of Biomechanics, Milan, Italy, 11-14 juillet 2021.
25. Poudrel, AS, Nguyen, VH, Rosi, G and **Haïat, G** "Influence of the biomechanical environment on frequency behavior of the femoral stem: a 3D Finite Element study", 27th Congress of the European Society of Biomechanics, Milan, Italy, 11-14 juillet 2021.
26. Poudrel, AS, Nguyen, VH, Rosi, G and **Haïat, G** "3D finite element modal analysis of a femoral stem under various bone-implant contact conditions", 17th International Symposium on Computer Methods on Biomechanics and Biomedical Engineering, Bonn, Allemagne, 7-9 septembre 2021.
27. Le Cann, S, Törnquist, E, Guillaume, F, Tengattini, A, Ando, E, Hall, SA, Isaksson, H and **Haiat G** "Neutron tomography **to investigate** the bone-implant interface -Combination with histology and x-ray tomography", PSB Symposium Frontiers in bioimaging. Grenoble, France, July 1-2 2021.
28. Zarate, JC, Messineo, G, Colabella, L, Cisilino, A, and **Haiat G** "Estimacion de la fraccion solida de hueso trabecular mediante el analisis inverso de ensayos de ultrasosonido", MECOM 2021 XXXVII Congreso Argentino de Mecánica Computacional. Resistencia, Argentina, November 3-5 2021.
29. Colabella L, **Haiat G**, Naili S, and Cisilino A, "Multiscale design of porous implants with a biomimetic cellular material", 15th World Congress on Computational Mechanics (WCCM-XV). Yokohama, Japan, July 31- August 5, 2021.
30. Immel, K., **Haïat, G,** Sauer, R, and Nguyen, VH, "Evaluation of primary stability of hip implants: a numerical study", 11th European solid mechanics conference, Galway, Ireland, 4-8 July 2022.
31. Poudrel, AS, Albini Lomami, H, Rosi, G and **Haïat, G** "Optimisation de l'insertion d'implants orthopédiques non cimentés par une méthode acoustique basée sur l'analyse de la force d'impact : application à la tige fémorale", 16e Congrès Français d'Acoustique (CFA 2022), Marseille, 11-15 Avril 2022.
32. Poudrel, AS, Rosi, G, Nguyen, VH and **Haïat, G** " Développement d'une méthode vibro-acoustique pour le suivi de l'insertion d'un implant orthopédique dans l'os ", 16e Congrès Français d'Acoustique (CFA 2022), Marseille, 11-15 Avril 2022.
33. Colabella L, **Haiat G**, Naili S, and Cisilino A, "Multiscale optimization of porous implants with a Voronoi based microstructure", The 8th European Congress on Computational Methods in Applied Sciences and Engineering ECCOMAS Congress 2022, 5-9 June 2022, Oslo, Norway
34. Törnquist, E, **Haiat G**, Heriveaux, Y, Albini-Lomami, H, Vennat, E, Le Cann, S "The osteocyte lacuna-canalicular network at the bone-implant interphase imaged with focused-ion beam – scanning electron microscopy", 27th Congress of the European Society of Biomechanics, June 26-29, 2022, Porto, Portugal
35. Hériveaux, Y; Le Cann, S; Fraulob, M; Vennat, E; Nguyen, VH; **Haiat G** "Numerical simulation of stress-shielding at the bone-implant interface under shear loading", 27th Congress of the European Society of Biomechanics, June 26-29, 2022, Porto, Portugal
36. Le Cann, S; Törnquist, E, Barreto, IS; Fraulob, M; Verezhak, M; Guizar-Sicairos, M; Albini Lomami, H, Isaksson, H, M; **Haiat G** "HYDROXYAPATITE CRYSTAL THICKNESS AND ORIENTATION AT THE BONE IMPLANT INTERFACE: SPATIAL AND TEMPORAL EVOLUTIONS", 27th Congress of the European Society of Biomechanics, June 26-29, 2022, Porto, Portugal

37. Hériveaux, Y; Le Cann, S; Immel, K; Vennat, E; Nguyen, VH; Sauer, R; **Haiat G** "Combining numerical and experimental approaches to assess the tangential debonding of coin-shaped implants", 27th Congress of the European Society of Biomechanics, June 26-29, 2022, Porto, Portugal
38. Chaboty, A, Nguyen, VH, Naili, S, **Haiat G.**, Belanger, P. "Effect of bone degradation on axially transmitted low frequency (<500 kHz) ultrasonic guided waves", 183th Meeting of the Acoustical Society of America, 5-9 December 2022, Nashville, TN, USA.
39. Poudrel, AS, Bouffandeau, A, Rosi, G, Nguyen, VH, **Haiat G.**, "Soft tissue characterization by dynamic impact analysis: results on agar-based phantoms", 184th Meeting of the Acoustical Society of America, 8-12 May 2023, Chicago, IL, USA.
40. Poudrel, AS, Rosi, G, Nguyen, VH, **Haiat G.**, "Vibro-acoustic characterization of the bone-implant system during insertion", 184th Meeting of the Acoustical Society of America, 8-12 May 2023, Chicago, IL, USA.
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