CURRICULUM VITAE

1. IDENTIFICATION

- Family Name: MEDJAHER
- First name: Kamal
- Position: Full Professor at Tarbes National School of Engineering (Ecole Nationale d'Ingénieurs de Tarbes – INPT/ENIT), www.enit.fr
- Research laboratory: Production Engineering Laboratory (LGP)

2. EDUCATION & DEGREES

- 2014: Habilitation.
- 2002 – 2005: PhD in automation and industrial informatics from University of Sciences and Technologies of Lille, France.
- 2001 – 2002: Master degree in automation and industrial informatics from Ecole Centrale of Lille and University of Sciences and Technologies of Lille, France.
- 1992 – 1998: Engineer degree in electronics from University of Tizi-Ouzou, Algeria.
- 1992: Baccalaureate degree.

3. RESEARCH TOPICS

- Prognostics and Health Management.
- Fault detection: detection of abrupt and incipient faults.
- Fault diagnostics: isolation of the faults causes.
- Fault identification: assessment of faults severity.
- Fault prognostics: prediction of remaining useful life of critical components in industrial systems.
- Feature extraction, reduction and selection.
- Health indicators construction.
- Degradation modeling.

4. TEACHING TOPICS

- Fault detection, fault diagnostics and fault prognostics of industrial systems.
- Prognostics and Health Management.
- Dependability, Performance assessment of industrial systems.
- Modeling and analysis of mechatronic systems.
- Combinatory and sequential logic.
- Control of linear time invariant systems: modeling, time response, frequency response, stability analysis, precision and PID controllers.
- State space representation, linear observers and state feedback control.
- Digital control.
- Microcontrollers.

5. PUBLICATIONS

5.1. JOURNAL PAPERS

- Ferhat Tamssaouet, Khanh T. P. Nguyen, Kamal Medjaher, Marcos E. Orchard. Degradation Modeling and Uncertainty Quantification for System-Level Prognostics. IEEE Systems Journal, Published online 20 April 2020, https://doi.org/10.1109/JSYST.2020.2983376.
- Moncef Soualhi, Khanh T.P. Nguyen, Kamal Medjaher. Pattern recognition method of fault diagnostics based on a new health indicator for smart manufacturing. Mechanical Systems and Signal Processing, Volume 142, August 2020, 106680, https://doi.org/10.1016/j.ymssp.2020.106680.
- Khanh T.P. Nguyen, Kamal Medjaher. An automated health indicator construction methodology for prognostics based on multi-criteria optimization. ISA Transactions, Available online 17 March 2020, https://doi.org/10.1016/j.isatra.2020.03.017.
- Ferhat Tamssaouet, Khanh T.P. Nguyen, Kamal Medjaher, Marcos E. Orchard. Online joint estimation and prediction for system-level prognostics under component interactions and mission profile effects. ISA Transactions, Available online 11 May 2020, https://doi.org/10.1016/j.isatra.2020.05.002.
- Moncef Soualhi, Mohamed El Koujok, Khanh T.P. Nguyen, Kamal Medjaher, Ahmed Ragabb, Hakim Ghezzaz, Mouloud Amazouz, Mohamed-SalahOuali. Adaptive prognostics in a controlled energy conversion process based on long- and short-term predictors. Applied Energy, Volume 283, 1 Feb. 2021, 116049, https://doi.org/10.1016/j.apenergy.2020.116049.
- Raymond Houé Ngouna, Romy Ratolojanahary, Kamal Medjaher, Fabien Dauriac, Mathieu Sebilo, Jean Junca-Bourié. A data-driven method for detecting and diagnosing causes of water quality contamination in a dataset with a high rate of missing values. Engineering Applications of Artificial Intelligence, Volume 95, October 2020, 103822, https://doi.org/10.1016/j.engappai.2020.103822.
- Abdenour Soualhi, Kamal Medjaher, Guy Clerc; Hubert Razik. Prediction of bearing failures by the analysis of the time series. Mechanical Systems and Signal Processing. Volume 139, May 2020, 106607, https://doi.org/10.1016/j.ymssp.2019.106607.
- Bilal El Yousfi, Abdenour Soualhi, Kamal Medjaher, François Guillet. New approach for gear mesh stiffness evaluation of spur gears with surface defects. Engineering Failure Analysis, Vol. 116, Oct. 2020, 104740, https://doi.org/10.1016/j.engfailanal.2020.104740.
- Matteo Barbieri, Khan T. P. Nguyen, Roberto Diversi, Kamal Medjaher, Andrea Tilli. RUL prediction for automatic machines: a mixed edge-cloud solution based on model-of-signals and particle filtering techniques. Journal of Intelligent Manufacturing, Published online 04 November 2020, https://doi.org/10.1007/s10845-020-01696-6.
- Heraldo Rozas, Francisco Jaramillo, Aramis Perez, Diego Jimenez, Marcos E. Orchard, Kamal Medjaher. A method for the reduction of the computational cost associated with the implementation of particle-filter-based failure prognostic algorithms. Mechanical Systems and Signal Processing, Volume 135, 1 January 2020, 106421, https://doi.org/10.1016/j.ymssp.2019.106421,
- Vepa Atamuradov, Kamal Medjaher, Fatih Camci, Noureddine Zerhouni, Pierre Dersin, Benjamin Lamoureux. Machine Health Indicator Construction Framework for Failure Diagnostics and Prognostics. Journal of Signal Processing Systems, Vol. 92, pages 591–609, 2020, https://doi.org/10.1007/s11265-019-01491-4.
- Gerardo Emanuel Granados, Loic Lacroix, Kamal Medjaher. Condition monitoring and prediction of solution quality during a copper electroplating process. Journal of Intelligent Manufacturing. Vol. 31, pages 285–300, 2020.
- Edwin Paccha-Herrera, Williams R. Calderón-Muñoz, Marcos Orchard, Francisco Jaramillo, Kamal Medjaher. Thermal Modeling Approaches for a LiCoO2 Lithium-ion Battery - A Comparative Study with Experimental Validation. Batteries 2020, 6(3), 40, https://doi.org/10.3390/batteries6030040. Scopus, Web of Science (Emerging Sources Citation Index).
- Ferhat Tamssaouet, Khanh T. P. Nguyen, and Kamal Medjaher. System-Level Prognostics Under Mission Profile Effects Using Inoperability Input–Output Model. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2019, https://doi.org/10.1109/TSMC.2019.2944834.

- Khanh T. P. Nguyen, Kamal Medjaher. A new dynamic predictive maintenance framework using deep learning for failure prognostics. Reliability Engineering & System Safety, Vol. 188, pages 251-262, 2019.
- Vepa Atamuradov, Kamal Medjaher, Fatih Camci, Pierre Dersin, Noureddine Zerhouni. Railway Point Machine Prognostics Based on Feature Fusion and Health State Assessment. IEEE Transactions on Instrumentation and Measurement, Vol. 68 , No. 8, pages 2691 – 2704, 2019.
- Vepa Atamuradov, Kamal Medjaher, Fatih Camci, Noureddine Zerhouni, Pierre Dersin, Benjamin Lamoureux. Feature selection and fault-severity classification–based machine health assessment methodology for point machine sliding-chair degradation. Quality and Reliability Engineering International, Vol. 35, No. 4, pages 1081-1099, 2019.
- Fatih Camci, Kamal Medjaher, Vepa Atamuradov and Ashyrmuhammet Berdinyazov. Integrated maintenance and mission planning using remaining useful life information. Engineering Optimization, Vol. 51, No. 10, pages 1794–1809, 2019.
- Romy Ratolojanahary, Raymond Houé Ngouna, Kamal Medjaher, Jean Junca-Bourié, Fabien Dauriac Mathieu Sebilo. Model selection to improve multiple imputation for handling high rate missingness in a water quality dataset. Expert Systems with Applications, vol. 131, pages 299-307, 2019.
- Moncef Soualhi, Khanh T. P. Nguyen, Abdenour Soualhi, Kamal Medjaher, Kamel Eddine Hemsas. Health monitoring of bearing and gear faults by using a new health indicator extracted from current signals. Measurement, vol. 141, pages 37-51, 2019.
- H. Skima, C. Varnier, E. Dedu, K. Medjaher, J. Bourgeois. Post-prognostics decision making in distributed MEMS-based systems. Journal of Intelligent Manufacturing, Vol. 30, pages 1125-1136, 2019.
- Jacques Bahi, Wiem Elghazel, Christophe Guyeux, Mourad Hakem, Kamal Medjaher, Noureddine Zerhouni. Reliable diagnostics using wireless sensor networks. Computers in Industry Volume 104, January 2019, Pages 103-115.
- Abdenour Soualhi, Hawwari Yasmine, Kamal Medjaher, Guy Clerc, Hubert Razik, François Guillet. PHM Survey: Implementation of Signal Processing Methods for Monitoring Bearings and Gearboxes. International Journal of Prognostics and Health Management: Vol 9 (2) 028, pages: 14, 2018.
- Bérenger Ossété Gombé, Gwenhael Goavec Mérou, Karla Breschi, Hervé Guyennet, Jean-Michel Friedt, Violeta Felea, Kamal Medjaher. A SAW wireless sensor network platform for industrial predictive maintenance. J Intell Manuf, DOI 10.1007/s10845-017-1344-0, published online 10 July 2017.
- Vepa Atamuradov, Kamal Medjaher, Pierre Dersin, Benjamin Lamoureux and Noureddine Zerhouni. Prognostics and Health Management for Maintenance Practitioners - Review, Implementation and Tools Evaluation. International Journal of Prognostics and Health Management, 2017, ISSN 2153-2648, 2017 060
- Mehdi Brahimi, Kamal Medjaher, Mohammed Leouatni, and Noureddine Zerhouni. Prognostics and Health Management for an Overhead Contact Line System - A Review. International Journal of Prognostics and Health Management, 2017, ISSN2153-2648, 2017 058
- H. Skima, K. Medjaher, C. Varnier, E. Dedu, J. Bourgeois. A Hybrid Prognostics Approach for MEMS: from Real Measurements to Remaining Useful Life Estimation. Microelectronics Reliability, Volume 65, Pages: 79 – 88, 2016.
- Jacques M. Bahi, Wiem Elghazel, Christophe Guyeux, Mohammed Haddad, Mourad Hakem, Kamal Medjaher, Noureddine Zerhouni. Resiliency in Distributed Sensor Networks for Prognostics and Health Management of the Monitoring Targets. The Computer Journal, 59(2), pages: 275-284, 2016.
- S. Dembélé, O. Lehmann, K. Medjaher, N. Marturi, N. Piat. Combining gradient ascent search and support vector machines for effective autofocus of a field emission–scanning electron microscope. Journal of microscopy, 264 (1), pages: 79-87, 2016.
- W. Elghazel, J. Bahi, C. Guyeux, M. Hakem, K. Medjaher, N. Zerhouni. Dependability of wireless sensor networks for industrial prognostics and health management. Computers in industry, volume 68, pages: 1 - 15, 2015, DOI: 10.1016/j.compind.2014.10.004.
- A. Soualhi, K. Medjaher, N. Zerhouni. Bearing Health monitoring based on Hilbert-Huang Transform, Support Vector Machine and Regression. IEEE Transactions on Instrumentation and Measurement, vol.64, no.1, pp.52-62, Jan. 2015 doi: 10.1109/TIM.2014.2330494.

- T. Benkedjouh, K. Medjaher, N. Zerhouni, S. Rechak. Health assessment and life prediction of cutting tools based on support vector regression. Journal of Intelligent Manufacturing, Vol. 26, Issue: 2, pages: 213-223, 2015.
- A. Mosallam, K. Medjaher, N. Zerhouni. Data-driven prognostic method based on Bayesian approaches for direct remaining useful life prediction. Journal of Intelligent Manufacturing, article published online 13 June 2014, DOI: 10.1007/s10845-014-0933-4.
- K. Medjaher, H. Skima, N. Zerhouni. Condition Assessment and Fault Prognostics of Microelectromechanical Systems. Microelectronics Reliability, volume 54, issue 1, pages: 143-151, 2014, DOI: 10.1016/j.microrel.2013.09.013.
- A. Mosallam, K. Medjaher, N. Zerhouni. Time Series Trending for Condition Assessment and Prognostics. Journal of Manufacturing Technology Management, Vol. 25, Issue: 4, pages: 550-567, 2014.
- A. Mosallam, K. Medjaher, N. Zerhouni. Nonparametric time series modelling for industrial prognostics and health management. The International Journal of Advanced Manufacturing Technology, volume 6, pages: 1685-1699, 2013, DOI 10.1007/s00170-013-5065-z.
- K. Medjaher, N. Zerhouni. Hybrid prognostic method applied to mechatronic systems. The International Journal of Advanced Manufacturing Technology, volume 69, pages: 823-834, 2013, DOI 10.1007/s00170-013-5064-0.
- T. Benkedjouh, K. Medjaher, N. Zerhouni, S. Rechak. Remaining useful life estimation based on nonlinear feature reduction and support vector regression. Engineering Applications of Artificial Intelligence, vol. 26, no. 7, pp. 1751-1760, 2013.
- F. Camci, K. Medjaher, N. Zerhouni, P. Nectoux. Feature Evaluation for Effective Bearing Prognostics. Quality and Reliability Engineering International, vol. 29, pp. 477-486, 2013.
- K. Medjaher, D.A. Tobon-Mejia, N. Zerhouni. Remaining useful life estimation of critical components with application to bearings. IEEE Transactions on Reliability, vol. 61, no. 2, pp. 292-302, 2012.
- D.A. Tobon-Mejia and K. Medjaher and N. Zerhouni. CNC machine tool's wear diagnostic and prognostic by using dynamic Bayesian networks. Mechanical Systems and Signal Processing, vol. 28, pages: 167 - 182, DOI: 10.1016/j.ymssp.2011.10.018, ISSN: 0888-3270, 2012.
- Diego A. Tobon-Mejia, Kamal Medjaher, Noureddine Zerhouni and Gerard Tripot. A Data-Driven Failure Prognostic Method based on Mixture of Gaussians Hidden Markov Models. IEEE Transactions on Reliability, vol. 61, no. 2, pp. 491-503, 2012.
- R. Merzouki, K. Medjaher, M.A. Djeziri, B. Ould Bouamama. Backlash fault detection in mechatronic system. Mechatronics, vol. 17, pp. 299-310, 2007.
- B. Ould Bouamama, K. Medjaher, A.K. Samantaray and M. Staroswiecki. Supervision of an industrial steam generator. Part I: Bond graph modelling. Control Eng. Practice, vol. 14, no. 1, Pages 71-83, 2006.
- K. Medjaher, A.K. Samantaray, B. Ould Bouamama and M. Staroswiecki. Supervision of an industrial steam generator. Part II: Online implementation. Control Eng. Practice, vol. 14, no. 1, Pages 71-83, 2006.
- A.K. Samantaray, K. Medjaher, B. Ould Bouamama, M. Staroswiecki and G. Dauphin-Tanguy. Diagnostic bond graphs for online fault detection and isolation. Simulation Modelling Practice and Theory, vol. 14, no. 3, Pages 237-262, 2006.
- B. Ould Bouamama, K. Medjaher, M. Bayart, A. K. Samantaray and B. Conrard. Fault detection and isolation of smart actuators using bond graphs and external models. Control Eng. Practice, vol. 13, no. 2, Pages 159-175, 2005.
- B. Ould Bouamama, A.K. Samantaray, K. Medjaher, M. Staroswiecki and G. Dauphin-Tanguy. Model builder using functional and bond graph tools for FDI design. Control Eng. Practice, vol. 13, no. 7, Pages 875-891, 2005.
- K. Samantaray, K. Medjaher, B. Ould Bouamama, M. Staroswiecki, G. Dauphin-Tanguy. Component Based Modelling of Thermofluid Systems for Sensor Placement and Fault Detection. SIMULATION: Transactions of SCS, vol. 80, no. 7-8, Pages 381-398, 2004.

5.2. BOOKS AND BOOK CHAPTERS

- R. Gouriveau, K. Medjaher, N. Zerhouni. From Prognostics and Health Management to Predictive Maintenance. ISTE - Wiley, 2016.
- Medjaher K. Chapter 6: Fault Diagnostics. Part: A bond graph model-based fault detection and isolation. In Maintenance Modelling and Applications. Pages 503-512, 2011, ISBN: 978-82-515-0316-7.
- Gouriveau R., Medjaher K. Chapter 2: Prognostics. Part: Industrial Prognostic - An Overview. In Maintenance Modelling and Applications. Pages 10-30, 2011, ISBN: 978-82-515-0316-7.

5.3. CONFERENCE PAPERS

- Jorge Fabry, Ignacio Carvajal, Heraldo Rozas, Marcos Orchard, Ferhat Tamssaouet, Khanh TP Nguyen, Kamal Medjaher. An Integrated Risk-Based Strategy for Real-Time Decision Making and Mission Reconfiguration in Unmanned Aerial Vehicles. PHM Society European Conference, July 27-31, 2020, Virtual Edition.
- Bilal El Yousfi, Abdenour Soualhi, Kamal Medjaher, François Guillet. A Model-Based Analysis of Crack Fault in a Two-Stage Spur Gear System. IEEE Prognostics and Health Management Conference, 4 – 7 May 2020, Virtual Edition.
- Heraldo Rozas, Ferhat Tamssaouet, Francisco Jaramillo, Khanh T.P. Nguyen, Kamal Medjaher, Marcos Orchard. Comparison of different models of future operating condition in Particle-Filter-based Prognostic Algorithms. IFAC World Congress, 11 – 17 July 2020, Virtual Edition.
- M. Soualhi, K. Nguyen, K. Medjaher, D. Lebel, D. Cazaban. Data-driven diagnostics of positioning deviations in multi-axis robots for smart manufacturing. IFAC World Congress, 11 – 17 July 2020, Virtual Edition.
- Ferhat Tamssaouet, Khanh T.P. Nguyen, Kamal Medjaher. System Remaining Useful Life Maximization through Mission Profile Optimization. PHM Asia Pacific (PHMAP 2019) Conference, July 22-24 2019, Beijing, China.
- Houda SARIH, Ayeley TCHANGANI, Kamal MEDJAHER and Eric PERE. Data reduction of a distributed broadcast system subject to different operating contexts and conditions. PHM Asia Pacific (PHMAP 2019) Conference, July 22-24 2019, Beijing, China.
- Ratolojanahary Romy, Houé Raymond, Medjaher Kamal, Dauriac Fabien, Sebilo Mathieu. Groundwater Quality Assessment Combining Supervised and Unsupervised Methods. 13th IFAC Workshop on Intelligent Manufacturing Systems (IMS 2019), August 11-14, 2019, Oshawa, Ontario, Canada.
- A. Khlaief, K. Nguyen, K. Medjaher, A. Picot, P. Maussion, D. Tobon, B. Chauchat, R. Cheron. Feature Engineering for Ball Bearing Combined-Fault Detection and Diagnostic. IEEE SDEMPED'19, August 27-30, 2019, Toulouse, France.
- F. Tamssaouet, K. TP. Nguyen, K. Medjaher, Marcos E. Orchard. Uncertainty Quantification in System-level prognostics: Application to Tennessee Eastman Process. 6th International Conference on Control, Decision and Information Technologies, Paris, France, April 23 – 26, 2019.
- H. Sarih, K. Medjaher, A. Tchangani, E. Péré. Data preparation and preprocessing for broadcast systems monitoring in PHM framework. 6th International Conference on Control, Decision and Information Technologies, Paris, France, April 23 – 26, 2019.
- M. Soualhi, K. Nguyen, K. Medjaher, D. Lebel, D. Cazaban. Health Indicator Construction for System Health Assessment in Smart Manufacturing. 2019 Prognostics and System Health Management Conference (PHM-Paris), 45-50
- Rozas, Heraldo and Claveria, Ruben M. and Orchard, Marcos E. and Medjaher, Kamal. Residual-based scheme for detection and characterization of faults in lithium-ion batteries. IFAC SAFEPROCESS 2018, 31 August 2018 - 29 August 2018, Warsaw, Poland.
- Atamuradov, Vepa and Medjaher, Kamal and Camci, Fatih and Dersin, Pierre and Zerhouni, Noureddine. Degradation-level assessment and online prognostics for sliding chair failure on point machines. IFAC SAFEPROCESS 2018, August 2018, Warsaw, Poland.
- F. Tamssaouet, T.P. K. Nguyen, K. Medjaher. System-level Prognostics Based on Inoperability Input-output Model. Annual Conference of the Prognostics and Health Management Society 2018, 24-27 September 2018, Philadelphia, USA.

- V. Atamuradov, K. Medjaher, P. Dersin, N. Zerhouni, F. Camci. A New Adaptive Prognostics Approach Based on Hybrid Feature Selection with Application to Point Machine Monitoring. Annual Conference of the Prognostics and Health Management Society 2018, 24-27 September 2018, Philadelphia, USA.
- Vepa Atamuradov, Kamal Medjaher, Fatih Camci, Pierre Dersin, Noureddine Zerhouni. Degradation-level Assessment and Online Prognostics for Sliding Chair Failure on Point Machines. SAFEPROCESS 2019, Warsaw, Polan, August 2018, IFAC-PapersOnLine 51 (24), 208-213.
- H. Rozas, R. M. Claveria, M. E. Orchard, K. Medjaher. Residual-based scheme for detection and characterization of faults in lithium-ion batteries. SAFEPROCESS 2019, Warsaw, Polan, August 2018, IFAC-PapersOnLine 51 (24), 200-207.
- Khanh T. P. Nguyen, Khaleif Amor, Kamal Medjaher, Antoine Picot, Pascal Maussion, Diego Tobon, Bertrand Chauchat, Regis Cheron. Analysis and comparison of multiple features for fault detection and prognostic in ball bearings. Fourth European conference of the prognostics and health management society 2018, Utrecht, the Netherlands, July 3-6, 2018.
- H. Rozas, D. Muñoz-Carpintero, A. Perez, K. Medjaher, M. Orchard. An Approach to Prognosis-Decision-Making for Route Calculation of an Electric Vehicle Considering Stochastic Traffic Information. Fourth European conference of the prognostics and health management society 2018, Utrecht, the Netherlands, July 3-6, 2018.
- H. Sarih, A. Tchangani, K. Medjaher, E. Péré. Critical components identification based on experience feedback data in the framework of PHM. INCOM 2018, IFAC-PapersOnLine 51 (11), 429-434, Bergamo, Italy.
- Vepa Atamuradov, Kamal Medjaher, Benjamin Lamoureux, Pierre Dersin and Noureddine Zerhouni. Fault Detection By Segment Evaluation Based On Inferential Statistics For Asset Monitoring. Annual Conference of the Prognostics and Health Management Society 2017, Oct 2 - Oct 5, 2017, St. Petersburg, Florida, USA.
- H. Skima, K. Medjaher, C. Varnier, N. Zerhouni. Experimental Monitoring Data for Prognostics and Health Management of MEMS. CoDIT'17, April 5-7 2017, Barcelona, Spain.
- H. Skima, K. Medjaher, C. Varnier, E. Dedu, J. Bourgeois, N. Zerhouni. Fault Prognostics of Micro-Electro-Mechanical Systems Using Particle Filtering. IFAC AMEST'16, October 1-21 2016, Biarritz, France.
- M. Brahimi, K. Medjaher, M. Leouatni, N. Zerhouni. Development of a prognostics and health management system for the railway infrastructure – Review and methodology. In Prognostics and System Health Management Conference (PHM-Chengdu), October 2016, pp. 1-8, Chengdu, China.
- M. Brahimi, K. Medjaher, M. Leouatni, N. Zerhouni. Critical Components Selection for a Prognostics and Health Management System Design: An Application to an Overhead Contact System. In Annual Conference of the Prognostics and Health Management Society 2016, October 2016, Denver, USA.
- Skima H., Dedu E., Bourgeois J. Varnier C., and Medjaher K., Optimal Path Evolution in a Dynamic Distributed MEMS-based Conveyor, In International Conference on Dependability and Complex Systems, pp. 1-13, Brunow Palace, Poland, Juin 2016.
- Jayant SEN GUPTA, Christian TRINQUIER, Kamal MEDJAHER, Noureddine ZERHOUNI. A PHM System Approach: Application to a Simplified Aircraft Bleed System. 2016 IEEE Aerospace Conference, March 2016, Big Sky, Montana, USA.
- H. Skima, K. Medjaher, C. Varnier, N. Zerhouni, E. Dedu, and J. Bourgeois. Accelerated lifetime tests and failure analysis of an electrothermally actuated mems valve. In The 27th IEEE International Conference on Microelectronics (ICM). Casablanca, Marocco, December 2015.
- A. Mosallam, K. Medjaher, N. Zerhouni. Component based data-driven prognostics for complex systems: Methodology and applications. First International Conference on Reliability Systems Engineering – 2015 Prognostics and System Health Management Conference - Beijing (2015 ICRSE - PHM, Beijing), 21 – 23 October 2015, Beijing, China.
- Jayant SEN GUPTA, Christian TRINQUIER, Kamal MEDJAHER, Noureddine ZERHOUNI. Continuous validation of the PHM function in aircraft industry. First International Conference on Reliability Systems Engineering - 2015 Prognostics and System Health Management Conference - Beijing (2015 ICRSE - PHM, Beijing), 21 - 23 October 2015, Beijing, China.

- H. Skima, K. Medjaher, C. Varnier, E. Dedu, J. Bourgeois. Hybrid prognostic approach for Micro-Electro-Mechanical Systems. 2015 IEEE Aerospace Conference, March 2015, Big Sky, Montana, USA.
- W. ElGhazel, A. Farhat, J. Bahi, C. Guyeux, M. Hakem, K. Medjaher, N. Zerhouni. Random Forests for Industrial Device Functioning Diagnostics Using Wireless Sensor Networks. 2015 IEEE Aerospace Conference, March 2015, Big Sky, Montana, USA.
- W. Elghazel, J. Bahi, C. Guyeux, M. Hakem, K. Medjaher, N. Zerhouni. Prognostics and Health Management Based on Dependable Wireless Sensor Networks. 4th Int. Conf. on Sensor Networks (SENSORNETS 2015), February 2015, Angers, France.
- W. Elghazel, J. Bahi, C. Guyeux, M. Hakem, K. Medjaher, N. Zerhouni. Dependable Wireless Sensor Networks for Prognostics and Health Management: A Survey. Annual Conference of the Prognostics and Health Management Society 2014, pp 681-691, Texas, USA.
- H. Skima, K. Medjaher, N. Zerhouni. Accelerated life tests for prognostic and health management of MEMS devices. Second European Conference of the Prognostics and Health Management Society, PHM Society'2014, 8-10 July 2014, Nantes, France.
- A. Mosallam, K. Medjaher, N. Zerhouni. Integrated Bayesian Framework for Remaining Useful Life Prediction. IEEE International Conference on Prognostics and Health Management, PHM'2014, 22-25 June 2014, Spokane (WA), USA.
- K. Medjaher, N. Zerhouni, J. Baklouti. Data-Driven Prognostics Based on Health Indicator Construction: Application to PRONOSTIA's Data. European Control Conference (ECC 2013), 17-19 July 2013, Zurich, Switzerland.
- K. Medjaher, N. Zerhouni. Framework for a hybrid prognostics. In 2013 Prognostics and System Health Management Conference (PHM-2013), Milan 8-11 September, 2013. Paper published in Chemical Engineering Transactions, volume 33, pages: 91-96, 2013.
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- A. Mosallam, K. Medjaher, N. Zerhouni. Unsupervised Trend Extraction for Prognostics and Condition Assessment. 2nd IFAC Workshop on Advanced Maintenance Engineering, Services and Technology (AMEST'12), 22 - 23 November 2012, Seville, Spain.
- P. Nectoux, R. Gouriveau, K. Medjaher, E. Ramasso, B. Morello, N. Zerhouni, C. Varnier. PRONOSTIA: An Experimental Platform for Bearings Accelerated Degradation Tests. IEEE International Conference on Prognostics and Health Management, PHM'12, Denver, USA, 2012.
- T. Benkedjouh, K. Medjaher, N. Zerhouni, S. Rechak. Fault prognostic of bearings by using support vector data description. IEEE Conference on Prognostics and Health Management, PHM'12, Denver, USA, 2012.
- K. Medjaher, F. Camci, N. Zerhouni. Feature Extraction and Evaluation for Health Assessment and Failure Prognostics. First European Conference of the Prognostics and Health Management Society, July 3-5, Dresden, 2012.
- D. Tobon-Mejia, K. Medjaher, N. Zerhouni, G. Tripot. Estimation of the remaining useful life by using Wavelet Packet Decomposition and HMMs. In IEEE Aerospace Conference AIAA - 2011, Montana, USA. Pages: 1-10, ISBN: 978-1-4244-7350-2, DOI: 10.1109/AERO.2011.5747561, 2011.
- D. Tobon-Mejia, K. Medjaher, N. Zerhouni, G. Tripot. Hidden Markov models for failure diagnostic and prognostic. In Prognostics and System Health Management Conference PHM'11, Shenzhen, China. Pages: 1 - 8, DOI : 10.1109/PHM.2011.5939488, ISBN : 978-1-4244-7951-1, 2011.
- D. Tobon-Mejia, K. Medjaher, N. Zerhouni. CNC machine tool health assessment using Dynamic Bayesian Networks. In 18th World Congress of the International Federation of Automatic Control, IFAC'11. Milano, Italy, 2011.
- D. Tobon-Mejia, K. Medjaher, N. Zerhouni, G. Tripot. A mixture of gaussians hidden markov model for failure diagnostic and prognostic. In 6th Annual IEEE Conference on Automation Science and Engineering, CASE'10, Toronto, Canada. Pages 338 - 343, ISBN: 978-1-4244-5447-1, DOI: 10.1109/COASE.2010.5584759, 2010.
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6. RESPONSIBILITIES & SUPERVISION

- Deputy Director of Production Engineering Laboratory (LGP).
- Leader of six projects related to Prognostics and Health Management.
- Responsible of work packages in three projects related Prognostics and Health Management.
- Elected member of the Scientific Council (2013 – 2015) and of the Administration Council (2015 – 2016) of the National Institute of Mechanics and Microtechnologies (ENSMM).
- Elected member of the Administration Council of the Tarbes National Engineering School (2017 – 2021).
- Elected member of the Production Engineering Laboratory Council (since 2019).
- Supervision of five (05) Postdocs (Abdenour Soualhi, Vepa Atamuradov, Amor Khlaief, Djihed Bensaad, Moncef Soualhi), eleven (11) PhDs (Diego Alejandro Tobon Mejia, Ahmed Mosallam, Wiem Elghazel, Haithem Skima, Mehdi Brahimi, Houda Sarih, Ferhat Tamssaouet, Romy Ratolojanahary, Moncef Soualhi, Bilal Elyousfi, Sylvain Poupry) and more than six Masters.

7. COMMITTEES & REVIEWING ACTIVITIES

7.1. JOURNAL & CONFERENCE COMMITTEES

- Associate Editor in Journal of Intelligent Manufacturing, since October 2019 (https://www.springer.com/journal/10845/editors).
- Member of the Editorial Board of International Journal of Prognostics and Health Management, https://www.phmsociety.org/journal/masthead, since July 2017.
- Review Manager for International Journal of Prognostics and Health Management, https://www.phmsociety.org/journal/masthead, since March 2014.
- Special Session entitled " Prognostics and Health Management: From Condition Monitoring to Predictive Maintenance". Conference : ESREL 2021, 19 – 23 September 2021, Angers, France, http://esrel2021.org/en/call-for-paper/special-sessions-presentation.html. Organizers: K.T.P. Nguyen, R. Houé-Ngouna, K. Medjaher (ENIT/LGP), Z. Al Masry, N. Zerhouni (ENSMM – FEMTO-ST).
- Special Session entitled "Adaptive Optimization of Maintenance Strategies for Complex Systems". Conference: ESREL 2021, 19 – 23 September 2021, Angers, France, http://esrel2021.org/en/call-for-paper/special-sessions-presentation.html. Organizers: S. Khebbache (IRT SystemX), K. Medjaher (ENIT/LGP), M. Anjos (University of Edinburgh).

- Open Invited Track at IFAC World Congress 2020. Title: Prognostics and health management in manufacturing: New challenges and perspectives in the era of Industry 4.0. Conference : IFAC World Congress 2020, 12-17 July 2020, Berlin, Germany, https://www.ifac2020.org/. Organizers: Khanh T. P. Nguyen (ENIT/LGP), Kamal Medjaher (ENIT/LGP), Joo Ho Choi (School of Aerospace & Mechanical Engineering, Korea Aerospace University, Korea).
- Chair of 2 sessions, "Explainable AI for PHM" and "Wind Turbine Fault Diagnosis and Prognostics" during PHM Europe 2020, Virtual event, 27 – 31 July 2020, http://phmeurope.org/2020/.
- Chair of the session "Data-driven prognostics" during PHM Asia Pacific 2019, 22 – 24 July 2019, Beijing, China, www.phmap.cn
- Chair of the session "Failure Prognostics of Complex Systems" during CoDIT 2019, CoDIT 2019, 23 – 26 April 2019, Paris, France, https://codit19.com/index.php/special-sessions.
- Chair of the session "Prognostic 1" and "Sensor Networks" during PHM Society Conference 2018, 24 – 27 September 2018, Philadelphia, Pennsylvania, USA (https://www.phmsociety.org/events/conference/phm/18).
- Co-chair of the session "Physics-based Automotive PHM Applications" during PHM Society Conference 2018, 24 – 27 September 2018, Philadelphia, Pennsylvania, USA (https://www.phmsociety.org/events/conference/phm/18).
- Co-Chair of the session "Fault Prognostics: New Challenges and Recent Achievements" during SAFEPROCESS, 29 – 31 August 2018, Warsaw, Poland (http://safeprocess18.uz.zgora.pl/).
- Co-Chair of the session "Fault Diagnosis and Prognosis for Predictive Maintenance of Rotating Machines" during SAFEPROCESS, 29 – 31 August 2018, Warsaw, Poland (http://safeprocess18.uz.zgora.pl/).
- Co-Chair of the session "Prognostics and Health Management" during CoDIT 2017, 05 – 07 April 2017, Barcelona, Spain (http://codit2017.com/).
- Co-Chair of the International Scientific Committee of PHM Europe Conference, Virtual event, 28 June – 02 July 2021, https://phm-europe.org/.
- Chair of Technical Program Committee of PHM Europe Conference, Turin, Italy, Virtual event, 27 – 31 July 2020, http://phmeurope.org/2020/.
- Program Chair of 2020 Prognostics & Health Management Conference, 4-7 May 2020, Besançon, France, http://www.phmice.org/committees.html.
- Member of the International Program Committee of IFAC AMEST 2020, 10-11 September 2020, Cambridge, UK, https://www.amest2020.eng.cam.ac.uk/organisers.
- Member of the "PHM Data Challenge" during PHM Society 2019, 21-26 September 2019, Scottsdale, Arizona, USA, https://www.phmsociety.org/events/conference/phm/19.
- Guest Editor for ISA Transactions (https://www.journals.elsevier.com/isa-transactions/call-for-papers/prognostics-and-health-management-of-complex-systems) for the Special Issue on Prognostics and Health Management of Complex Systems, 2020.
- Member of the "International Program Chairs" of the PHM Asia Pacific 2019 conference, Beijing, China, 2019 (http://www.phmap.cn/).
- Member of the "PHM Data Challenge" committee of the 11th Annual Conference of the PHM Society 2019, Arizona, USA (https://www.phmsociety.org/events/conference/phm/19).
- Member of the Technical Program Committee of the 2018 PHM Society Conference, Philadelphia, USA (https://www.phmsociety.org/events/conference/phm/18).
- Member of the National Organizing Committee of the IFAC 2017 World Congress, Toulouse, France (http://www.ifac2017.org/).
- Member of the Technical Committee of PHM 2017 Conference, Harbin, China (http://www.phm2017.org/).
- Member of the International Program Committee of CoDIT 2017 Conference, Barcelona, Spain (http://codit2017.com/).
- Member of the Technical Committee of the IFAC AMEST 2016 Conference (http://www.ifac-amest16.com/).
- Member of the First International Conference on Reliability Systems Engineering & 2015 Prognostics and System Health Management Conference (2015 ICRSE & PHM-Beijing), October 21-23, 2015, Beijing, China (http://icrse.cn/index.html).

- Member of the organization committee of the 9th IFAC Symposium on Fault Detection, Supervision and Safety for Technical Processes, SAFEPROCESS'15, 2- 4 September 2015, Paris, France (http://safeprocess15.sciencesconf.org/).
- Member of the international scientific committee and review manager of the second European Conference on PHM, July 8–10, 2014, Nantes (http://www.phmsociety.org/events/conference/phm/europe/14/).
- Member of the steering committee of the IEEE/ASME AIM'2014 conference, 8-11 July 2014, Besançon, France (http://www.aim2014.org/).
- Member of the Technical Program Committee of the 11th International Multi-Conference on Systems, Signals and Devices SSD'14, February 11 - 14, 2014, Castelldefels-Barcelona, Spain (http://www.ssd-conf.org/ssd14/).
- Member of the Technical Committee of the 2012 IEEE Conference on Prognostics and System Health Management (PHM 2012), 23-25 May 2012, Beijing, China.
- Chair of the session "PHM for electronics applications" during the second European Conference on PHM, July 8 – 10, 2014, Nantes, France (http://www.phmsociety.org/events/conference/phm/europe/14/).
- Co-chair of the session "PHM in various industrial applications" during the 2013 Prognostics and System Health Management Conference (PHM-2013), 8-11 September 2013, Milan, Italy (http://www.aidic.it/phm/).
- Co-organizer of the "PHM data challenge 2012" during the 2012 IEEE PHM Conference which was held in Denver, USA (http://www.femto-st.fr/en/Research-departments/AS2M/Research-groups/PHM/IEEE-PHM-2012-Data-challenge.php).
- Co-chair of the session "Bond Graphs for Supervision System Design" during SAFEPROCESS 2009, June 30 - July 3, 2009, Barcelona, Spain (http://safeprocess09.upc.es/).

7.2. REVIEWING ACTIVITY FOR THESES

- Member examiner of 2 Habilitations in France.
- Member examiner of 18 PhD committees (12 France, 3 Algeria, 1 Australia, 1 Canada, 1 Italy).

7.3. REVIEWING ACTIVITY FOR JOURNAL PAPERS

Regular reviewer for international journals (IEEE, Elsevier, Springer, Taylor & Francis, etc.) : IEEE Trans. on Reliability, Reliability Engineering and System Safety, J. of Intelligent Manufacturing, Eng. Applications of Artificial Intelligence, J. of Risk and Reliability, Mechanical Systems and Signal Processing, Int. J. of Prognostics and Health Management, IEEE Trans. on Instrumentation and Measurement, Quality and Reliability Engineering International, …

7.4. REVIEWING ACTIVITY FOR CONFERENCE PAPERS

Regular reviewer for international conferences (PHM Society, IFAC, IEEE, etc.) : Prognostics and Health Management Society, IFAC World Congress, IFAC Symposium on Information Control Problems in Manufacturing (INCOM), IFAC Symposium on Fault Detection, Supervision and Safety for Technical Processes (SAFEPROCESS), IFAC Workshop on Advanced Maintenance Engineering, Service and Technology (AMEST), Intelligent Manufacturing Systems (IMS), International Conference on Control, Decision and Information Technologies (CoDIT), PHM China, PHM Asia-Pacific, Int. Conference on Control and Fault-Tolerant Systems (SYSTOL), …

7.5. REVIEWING ACTIVITY FOR PROJECTS

Regular evaluator of research and innovation projects for national and international agencies (France, Canada, Chile, Belgium, Switzerland).