

# Jérémie Schutz, PhD in Industrial Engineering

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🏛️ UFR MIM - LGIPM, University of Lorraine

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## Employment History

- Since 2017 📌 **Head of the Department "Mechanical Technology".** UFR MIM<sup>1</sup>, University of Lorraine.
- Since 2013 📌 **Head of the professional license COSLI<sup>2</sup> in Metz and Tunis**
- Since 2010 📌 **Associate Professor in Industrial Engineering.** University of Lorraine (UFR MIM / LGIPM<sup>3</sup>).

## Education

- 2006 – 2009 📌 **PhD in Industrial Engineering** from Paul Verlaine University (Metz).  
Thesis title: *Contribution to the optimization of operating plans and maintenance, using an approach based on prognosis : application to the naval domain.*
- 2005 – 2006 📌 **Master "Mechanics - Mechanical and Production Engineering", option "Design and Control of Automated Production Systems (X-AP)"** from Paul Verlaine University (Metz).

## Skills

Languages 📌 Python | Java | PHP | SQLite | L<sup>A</sup>T<sub>E</sub>X.

Softwares 📌 MATLAB | Mathematica | ProModel | Digital Tools 3D EXPERIENCE from Dassault Systems (*in course of acquisition*).

## Miscellaneous Experience

### Reviewer

- Journals 📌 CAIE, IJPR, JIM, MDPI (Applied Sciences, Sustainability, Mathematics)
- Conferences 📌 CASE, IESM, IManE, INCOM, INDIN, MOSIM

## Publications

### Articles in international peer-reviewed journals

- 1 📌 Schutz, J., Chelbi, A., Rezg, N. & Ben Salem, S. (n.d.). Production and maintenance strategies for parallel machines with load transfer in case of failure. *Journal of Quality in Maintenance Engineering*, 25(4), 525–544. doi:10.1108/JQME-07-2017-0049

<sup>1</sup>UFR MIM : Training and Research Unit in Mathematics Computer Science Mechanics

<sup>2</sup>COSLI : Design and Optimization of Industrial Logistics Systems




<sup>3</sup>LGIPM : Laboratory of Computer Engineering, Production and Maintenance






- 2 Ezzeddine, W., Schutz, J. & Rezg, N. (2019a). Efficient self control device based on inspection model for Pitot sensors system. *Engineering Failure Analysis*, 103, 400–409. doi:10.1016/j.engfailanal.2019.04.017
- 3 Ezzeddine, W., Schutz, J. & Rezg, N. (2019b). Pitot sensor air flow measurement accuracy: causal modelling and failure risk analysis. *Flow Measurement and Instrumentation*, 65, 7–15. doi:10.1016/j.flowmeasinst.2018.10.021
- 4 Ezzeddine, W., Schutz, J. & Rezg, N. (2017a). Efficient Algorithm for a k-out-of-N System Reliability Modeling–Case Study: Pitot Sensors System for Aircraft Velocity. *Aerospace*, 4(3). doi:10.3390/aerospace4030043
- 5 Schutz, J. & Rezg, N. (2013). Maintenance strategy for leased equipment. *Computers and Industrial Engineering*, 66(3), 593–600. doi:10.1016/j.cie.2013.05.004
- 6 Schutz, J., Rezg, N. & Léger, J.-B. (2013). An integrated strategy for efficient business plan and maintenance plan for systems with a dynamic failure distribution. *Journal of Intelligent Manufacturing*, 24(1), 87–97. doi:10.1007/s10845-011-0543-3
- 7 Schutz, J., Rezg, N. & Léger, J.-B. (2011). Periodic and sequential preventive maintenance policies over a finite planning horizon with a dynamic failure law. *Journal of Intelligent Manufacturing*, 22(4), 523–532. doi:10.1007/s10845-009-0313-7

### Articles submitted to international peer-reviewed journals

- 1 Chaabane, K., Schutz, J. & Dellagi, S. (Submitted, 29 April 2019). Analytical evaluation of TPM performance based on an economic criterion. *International Journal of Operations & Production Management*.


### Communications with proceedings in international congress




- 1 Ben Mechlia, M., Schutz, J. & Dellagi, S. (2018). Integrated maintenance policy for transportation system according to a supply chain. In *Euro-Mediterranean Conferences on Mathematical Reliability (ECMR 2018)*. Djerba, Tunisia.   
<https://hal.univ-lorraine.fr/hal-01926541>
- 2 Chaabane, K., Schutz, J. & DELLAGI, S. (2017). TPM implantation in manufacturing systems: A survey of the state-of-the-art and extensions. In *IManE&E 2017* (Vol. 112). Iasi, Romania. doi:10.1051/mateconf/201711201007
- 3 Gavriluță, A., Gavriluță, A., Nițu, E.-L. & Schutz, J. (2017). From 3D layout to dynamic simulation model. In *IManE&E 2017* (Vol. 112). Iasi, Romania. doi:10.1051/mateconf/201711206020
- 4 Gavriluță, A., Nițu, E.-L., Gavriluță, A. & Schutz, J. (2017). Analysis on the influence of supply method on a workstation with the help of dynamic simulation. In *IManE&E 2017* (Vol. 112). Iasi, Romania. doi:10.1051/mateconf/201711206021
- 5 Ezzeddine, W., Schutz, J. & Rezg, N. (2017b). Algorithm for Manufacturing Planning Under Unavailability Constraints. In *International Conference on Communication, Management and Information Technology (ICCMIT 2017)*. Warsaw, Poland.   
<https://hal.univ-lorraine.fr/hal-01926569>
- 6 Ezzeddine, W., Schutz, J. & Rezg, N. (2016a). Pitot sensor airflow measurement accuracy. In *European Safety and Reliability Conference (ESREL 2016)*. Glasgow, United Kingdom.   
<https://hal.univ-lorraine.fr/hal-01333307>

- 7 Ezzeddine, W., **Schutz, J.** & Rezg, N. (2016c). Optimal Inspection Policy based on Measurement Quality Degradation: Case of Pitot Sensors System. In *8th IFAC Conference on Manufacturing Modelling, Management & Control (MIM 2016)*. Troyes, France.   
<https://hal.archives-ouvertes.fr/hal-01284714>
- 8 Ezzeddine, W., **Schutz, J.** & Rezg, N. (2016d). Test for additive interaction in proportional hazard model applied to Pitot sensor's reliability and survivability. In *7th IFAC Conference on Management and Control of Production and Logistics (MCPL 2016)*. Bremen, Germany.   
<https://hal.archives-ouvertes.fr/hal-01284712>
- 9 Ezzeddine, W., **Schutz, J.** & Rezg, N. (2015a). Cox regression model applied to Pitot tube survival data. In *International Conference on Industrial Engineering and Systems Management (IESM 2015)*. Seville, Spain. doi:10.1109/IESM.2015.7380153
- 10 Ezzeddine, W., **Schutz, J.** & Rezg, N. (2015b). Modeling of a Management and Maintenance Plan for Hospital Beds. In N. N. T. Le Thi Hoai An Pham Dinh Tao (Ed.), *Modelling, Computation and Optimization in Information Systems and Management Sciences (MCO 2015)* (pp. 295–306). Metz, France: Springer. doi:10.1007/978-3-319-18167-7\\_26
- 11 **Schutz, J.** (2014a). Joint optimization of production–maintenance plans based on optimal production rates. In *IEEE International Conference on Industrial Engineering and Engineering Management (IEEM 2014)*. Selangor, Malaysia. doi:10.1109/IEEM.2014.7058775
- 12 **Schutz, J.** (2014b). Optimal “Sporadic” and Systematic Preventive Maintenance Policy for Leased Equipment under Various Operating Conditions. In B. Grabot, B. Vallespir, S. Gomes, A. Bouras & D. Kiritsis (Eds.), *IFIP International Conference on Advances in Production Management Systems (APMS)* (Vol. AICT-438, Part I, pp. 451–458). Advances in Production Management Systems. Innovative and Knowledge-Based Production Management in a Global-Local World. Part 2: Knowledge Discovery and Sharing. Ajaccio, France: Springer.  
doi:10.1007/978-3-662-44739-0\\_55
- 13 **Schutz, J.** & Rezg, N. (2012). Lease Maintenance Policies Based On Win-Win Relationships. In *Warranty Chain Management Conference*. Orlando, United States.   
<https://hal.archives-ouvertes.fr/hal-01285758>
- 14 **Schutz, J.** & Rezg, N. (2011). Maintenance strategy for lease equipment. In *41st International Conference on Computers & Industrial Engineering* (pp. 1099–1107). Los Angeles, United States.   
<https://hal.archives-ouvertes.fr/hal-01285223>
- 15 **Schutz, J.**, Rezg, N. & Léger, J.-B. (2009b). Efficient Solution of Business and Maintenance Plans under Adaptive Failure Law. In *20th International Conference on Systems Engineering - ICSE'09*. Coventry, United Kingdom.   
<https://hal.inria.fr/inria-00600909>
- 16 **Schutz, J.**, Rezg, N. & Léger, J.-B. (2008a). Periodic Preventive Maintenance Policy in Finite Horizon With an Adaptive Failure Law. In *International Conference on Industrial Engineering and Engineering Management* (pp. 2117–2121). Singapour, Singapore: IEEE.  
doi:10.1109/IEEM.2008.4738245
- 17 **Schutz, J.**, Rezg, N. & Léger, J.-B. (2008b). Contribution for an Optimal Choice of Business and Maintenance Plans, Based on an Adaptive Failure Law. In *9th IFAC Workshop on Intelligent Manufacturing Systems* (pp. 216–221). Szczecin, Poland.  
doi:10.3182/20081205-2-CL-4009.00039


## Communications with proceedings in national congress

- 1 Ezzeddine, W., **Schutz, J.** & Rezg, N. (2016b). Politique d'inspection séquentielle basée sur la dégradation de la qualité de la mesure des tubes de Pitot. In *11ème Conférence Internationale de*

*Modélisation, Optimisation et Simulation (MOSIM 2016)*. Montréal, Canada.   
<https://hal.univ-lorraine.fr/hal-01334203>

- 2 **Schutz, J.** & Rezg, N. (2010). Determination of the Optimal Production Plan and Optimal Maintenance Plan following an Integrated Strategy for an Finite Time Horizon. In *8ème Conférence Internationale de Modélisation et de Simulation - MOSIM 2010*. Hammamet, Tunisia.   
<https://hal.inria.fr/inria-00601400>
- 3 **Schutz, J.**, Rezg, N. & Léger, J.-B. (2009a). Détermination conjointe de plans efficaces d'exploitation et de maintenance soumis à une loi de défaillance dynamique. In *4ème colloque international francophone "Performances et Nouvelles Technologies en Maintenance - PENTOM'09*. Autrans,, France.  <https://hal.inria.fr/inria-00600911>
- 4 **Schutz, J.**, Rezg, N. & Léger, J.-B. (2008c). Contribution au développement d'un plan d'exploitation et de maintenance basé sur une loi de dégradation évolutive. In *Modélisation, Optimisation et Simulation des Systèmes : Communication, Coopération et Coordination* (Vol. 3, pp. 1841–1850). Paris, France.  <https://hal.archives-ouvertes.fr/hal-00426013>

## Thesis

- 1 **Schutz, J.** (2009). *Contribution à l'optimisation des plans d'exploitation et de maintenance, selon une approche basée sur le pronostic : application au domaine naval* (Theses, Université Paul Verlaine - Metz).  <https://hal.univ-lorraine.fr/tel-01752658>