FRANCISCO DE ASSIS BOLDT

Associate Professor - Machine Learning Researcher

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EXPERIENCE

Associate Professor

Ifes - Serra

March 2004 – Ongoing Serra-ES

- Machine Learning Researcher
- Lecturer and advisor for the Master Course

Partner

Coopen - Colatina

Jan 2001 – Jan 2002 Colatina-ES

- Teacher of informatics, developer and programmer

Teacher

Cefetes - Colatina

July 1999 – December 2000 Colatina-ES

- High-school teacher of Informatics

PROJECTS

Automated Bibliometrics

Fapes/Ifes **Coordinator**

July 2019 – June 2021 Serra-ES

- Search, select and compile scientific and technical information about some field of study.
- Apply the automated method to collect data about reuse of ornamental rock wast.

Compilation of real datasets for fault diagnosis

Ifes **Coordinator**

August 2019 – July 2020 Serra-ES

- Select public available datasets used for automatic fault diagnosis.
- Compile the most important datasets and explain how to use them.
- Develop a framework that applies machine learning methods to the selected datasets.

Defect Pattern Recognition in Centrifugal Pump Systems

Petrobras/Ufes **Researcher**

2011-2014 Vitória-ES

This project used computational intelligence techniques to identify defect patterns in submerged centrifugal pumping systems during the testing and acceptance phase of this system.

EDUCATION

Ph.D. in Computer Science

Universidade Federal do Espírito Santo

Dec 2012–July 2017 Vitória-ES

Classifier Ensemble Feature Selection for Automatic Fault Diagnosis

M.Sc. in Informatics

Universidade Federal do Espírito Santo

Feb 2006–June 2008 Vitória-ES

Specialization in Systems Development with Java

Universidade Federal do Espírito Santo

Feb 2005–June 2006 Vitória-ES

Tech. in Data Processing

Unesc

Aug 1995–July 1998 Colatina-ES

LANGUAGES

Portuguese ●●●●●

English ●●●●○

German ●●○○○

REFEREES

Prof. Thomas Walter Rauber
@ Universidade Federal do Espírito Santo
thomas@inf.ufes.br

Prof. Flávio Miguel Varejão
@ Universidade Federal do Espírito Santo
fvarejao@inf.ufes.br

Prof. Karsten Berns
@ University of Kaiserslautern
berns@informatik.uni-kl.de

PUBLICATIONS

Journal Articles

- Boldt, Francisco de Assis, Thomas W Rauber, and Flavio M Varejao (2017). “Cascade feature selection and elm for automatic fault diagnosis of the tennessee eastman process”. In: *Neurocomputing* 239, pp. 238–248.
- Rauber, Thomas W, Francisco de Assis Boldt, and Flávio Miguel Varejão (2015). “Heterogeneous feature models and feature selection applied to bearing fault diagnosis”. In: *IEEE Transactions on Industrial Electronics* 62.1, pp. 637–646.
- Boldt, Francisco de Assis, Thomas Walter Rauber, and Flávio Miguel Varejão (2014). “A fast feature selection algorithm applied to automatic faults diagnosis of rotating machinery”. In: *Journal of Applied Computing Research* 3.2, pp. 78–86.

Conference Proceedings

- Boldt, Francisco de Assis, Thomas W Rauber, and Flávio M Varejão. “Evaluation of the extreme learning machine for automatic fault diagnosis of the tennessee eastman chemical process”. In: *IECON 2014-40th Annual Conference of the IEEE Industrial Electronics Society*. IEEE, pp. 2551–2557.
- Boldt, Francisco de Assis, Thomas Walter Rauber, Thiago Oliveira-Santos, et al. (2017). “Binary feature selection classifier ensemble for fault diagnosis of submersible motor pump”. In: *2017 IEEE 26th International Symposium on Industrial Electronics (ISIE)*. IEEE, pp. 1807–1812.
- Rauber, Thomas W, Thiago Oliveira-Santos, et al. (2017). “Kernel and random extreme learning machine applied to submersible motor pump fault diagnosis”. In: *2017 International Joint Conference on Neural Networks (IJCNN)*. IEEE, pp. 3347–3354.
- Boldt, Francisco de Assis, Thomas W Rauber, and Flávio M Varejao (2015). “Single sequence fast feature selection for high-dimensional data”. In: *2015 IEEE 27th International Conference on Tools with Artificial Intelligence (ICTAI)*. IEEE, pp. 697–704.
- Boldt, Francisco de Assis, Thomas W Rauber, Flávio M Varejão, and Marcos Pellegrini Ribeiro (2015). “Fast feature selection using hybrid ranking and wrapper approach for automatic fault diagnosis of motorpumps based on vibration signals”. In: *2015 IEEE 13th International Conference on Industrial Informatics (INDIN)*. IEEE, pp. 127–132.
- Boldt, Francisco de Assis, Thomas W Rauber, Fláavio M Varejão, et al. (2014). “Performance analysis of extreme learning machine for automatic diagnosis of electrical submersible pump conditions”. In: *2014 12th IEEE International Conference on Industrial Informatics (INDIN)*. IEEE, pp. 67–72.
- Boldt, Francisco de Assis, Thomas W Rauber, and Flavio M Varejao (2013). “Feature extraction and selection for automatic fault diagnosis of rotating machinery”. In: pp. 213–220.
- Rauber, Thomas W et al. (2013a). “Computational intelligence for automatic diagnosis of submersible motor pump conditions in offshore oil exploration”. In: *2013 IEEE 20th International Conference on Electronics, Circuits, and Systems (ICECS)*. IEEE, pp. 477–480.
- – (2013b). “Feature models and condition visualization for rotating machinery fault diagnosis”. In: *2013 IEEE 20th International Conference on Electronics, Circuits, and Systems (ICECS)*. IEEE, pp. 265–268.