

Prof. Hansenclever F. Bassani

Ph.D. in Computer Science with an emphasis in Artificial Intelligence

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EXPERIENCE

Universidade Federal de Pernambuco, Recife-PE, Brazil. *Assistant Professor*

2014 - Present

Professor, Researcher and Advisor of postgraduate students.

Lectures: Natural Language Processing, Mobile Robotics, Evolutionary Computing (postgraduate level), Introduction to Programming in C.

Instituto Federal de Educação, Ciência e Tecnologia de Pernambuco, Recife. *Substitute Professor*

2009 - 2011

Lectures: Introduction to Artificial Intelligence, Scientific Methodology, Operating Systems, Algorithms, Data Structures.

Universidade Salgado de Oliveira, Recife. *Temporary Professor*

2008 - 2009

Lectures: Artificial Intelligence, Decision Support Systems, Graphs Theory and Simulation.

EDUCATION

Universidade Federal de Pernambuco, Recife — *PhD*

2009 - 2014

Doctor of Computer Science with an emphasis in Artificial Intelligence
Thesis: "Neural Models of Natural Language Acquisition for Embodied Agents".

Universidade Federal de Pernambuco, Recife — *MSc*

2005 - 2007

Master of Computer Science with an emphasis in Artificial Intelligence
Thesis: "Computational Models for the Phenomenon of Spreading Depression: Capabilities and Limitations".

Universidade de Brasília, Brasília-DF, Brazil — *BSc*

1998 - 2003

Bachelor of Computer Science with an emphasis in Image Processing.

RESEARCH TOPICS

Neural Networks

Unsupervised Learning

Language Acquisition

INTERESTS

Machine Learning

Computer Vision

Robotics

Natural Language Processing

Neurocognitive Architectures

LANGUAGES

Portuguese: Native

English: Advanced

French: Basic (reading)

AWARDS

Prize of 3th Best Product with the app "Gradepen" (www.gradepen.com) in the Brazilian Congress of Informatics in Education (CBIE) 2017.

5th place in the IEEE Very Small Size RoboCup Soccer in the Latin American and Brazilian Robotics Competition (LARC/CBR) 2017, with the team *RoboCIn*.

SELECTED R&D PROJECTS

Social Robots for Mobile Manipulation with Dexterity — CIn-UFPE/FACEPE/CNPq

2015 - Present

Implementation of a cognitive architecture for allowing a mobile robot with a manipulator to acquire and understand natural language while cooperating with human instructors.

Robotic Infrared Detection System for Real-Time Thermal Monitoring and Evaluation of Substation Equipment — CHESF/CIn-UFPE/SENAI

2013 - 2016

Development of a mobile robot to inspect the high voltage substation equipment of the Brazilian hydroelectric power generation company - CHESF.

Intelligent Systems for External Inspection of Underwater and Underground Pipelines — Petrobras/CIn-UFPE

2006 - 2008

Development of a sensory processing system for sonar and ground penetrating radar (GPR) data applied for the inspection of underwater and underground oil and gas pipelines for the Brazilian oil company - Petrobras.

SELECTED PUBLICATIONS

Journal Articles:

BASSANI, H.F.; ARAUJO, A. F. R.; Dimension Selective Self-Organizing Maps With Time-Varying Structure for Subspace and Projected Clustering. *IEEE Transactions on Neural Networks and Learning Systems*, v. 25, p. 1-14, 2014.

BASSANI, H. F.; ARAUJO, A. F. R.; BARBOSA, C. T. F.; Guedes, R. C. A.; Modeling the Slow Wave Shapes of Spreading Depression in a Rat Cortex: A Methodology for Seeking Physiological Parameters. *IEEE Transactions on Biomedical Engineering*, v. 59, p. 515-524, 2012.

Conference Papers:

BELFORT, F. D.; BASSANI, H. F.; ARAÚJO, A. F. R.; Online Incremental Supervised Growing Neural Gas. In: *The 2017 International Joint Conference on Neural Networks (IJCNN)*, Anchorage, 2017.

ARAUJO, FLAVIA R. B.; BASSANI, HANSENCLEVER F.; ARAUJO, A. F. R.; Learning vector quantization with local adaptive weighting for relevance determination in Genome-Wide association studies. In: *The 2013 International Joint Conference on Neural Networks (IJCNN)*, Dallas, 2013.

BASSANI, HANSENCLEVER F.; ARAUJO, A. F. R.; Dimension Selective Self-Organizing Maps for clustering high dimensional data. In: *The 2012 International Joint Conference on Neural Networks (IJCNN)*, Brisbane, 2012.

ARAUJO, A. F. R.; BASSANI, HANSENCLEVER F.; PACHECO, RENATO F.; Occurrence of false memories: A neural module considering context for memorization of words lists. In: *2010 International Joint Conference on Neural Networks (IJCNN)*, Barcelona, 2010.
