

Curriculum Vitae

Mohamad Hasan Bahari

Contact Information:

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Personal details:

- ♦ **Last name:** Bahari
- ♦ **First name:** Mohamad Hasan
- ♦ **Gender/Marital status:** Male / married
- ♦ **Date of Birth:** March 24, 1985

Education and Experience:

♦ **SENSIFAI (Belgium based company in the field of AI)**

- i- CEO & Co-founder (2016-Now)
- ii- Recognized as **TOP 50 COMPANIES** in the European Parliament, 2017
- iii- Supported by **TECHSTARS** and **SAP**, 2017
- iv- Forged Partnership with Huawei, Amazon, Intel, Microsoft
- v- Over 500 Clients worldwide
- vi- Winner of silver medal by IUIA
- vii- Branches in Belgium, Germany, and China
- viii- Raised over \$ 3 Million investment from Techstart, SAP, VLAIO and the European commission
- ix- Sensifai has 4 spin of startups namely Intrasensors, sentelligence and ithermai and cogniteye. The spin-offs work in the filed of safety and security, assistive technologies and thermal cameras.

♦ **Expert in the European Commission**

- i- Evaluating over \$50 Million projects in different EU frameworks in the field of AI.
- ii- Evaluator of projects in Eureka network in the field of AI
- iii- Participation in different consultancy and decision-making meetings in EU

♦ **Mentor at Newchip Accelerator (Texas, USA)**

- i- Helping different companies in the field of AI to grow
- ii- Helping startups to raise fund

♦ **KU Leuven**

Postdoc Scientist
Stadius Center for Dynamical Systems, Signal Processing and Data Analytics
Project: European Union granted FET project:

Heterogenous Ad-Hoc Networks for Distributed, Cooperative, and Adaptive Multimedia Signal Processing
Supervisor: Prof. Marc Moonen
2014- 2016

◆ **KU Leuven & Massachusetts Institute of Technology (MIT)**

PhD

Centre For Processing Speech and Images of KU Leuven and Computer Science and Artificial Intelligence Lab (CSAIL) of MIT

Thesis: Automatic Speaker Characterization

Supervisor: Prof. Hugo Van hamme in KU Leuven and Prof. Jim Glass in MIT

2010-2014

Honors and Awards:

◆ *MIT Technology Review, top ten talents in Belgium under 35 in 2017. The news was featured in several major newspapers in Belgium such as De Tijd and L'Echo*

◆ *Marie-Curie Fellowship, 2010-2013*

◆ *Best Paper Award at INTERSPEECH 2012, Portland, USA*

◆ *FWO Grant for Long Stay Abroad, 2013*

◆ *KU Leuven PhD Scholarship, 2010-2014*

◆ *2nd Place Award of International Reinforcement Learning Competition, Octopus event, Montreal, Canada, 2009.*

Research Interests:

Machine Learning, Video Processing, Data Analytics

Teaching Experiences:

◆ Teacher assistant, Prof. Moonen, Digital Signal Processing, KU Leuven, Fall 2014, Fall 2015.

◆ Teacher assistant, Prof. Wambach, Measurement of physical variables, KU Leuven, Fall 2010, 2011, 2012.

◆ Teacher assistant, Prof. Van Compernelle, Speech Recognition, KU Leuven, Fall 2011.

◆ Supervisor of Master student thesis entitled “Speaker profiling for forensic applications” by Amir Poorjam, 2013-2014.

◆ Tutor, Linear Systems Control Lab, Bahar Institute of Higher Education, <http://baharihe.ac.ir/fa/default.aspx>, Spring 2010.

- ◆ Tutor, Matlab in Electrical Engineering, Bahar Institute of Higher Education, <http://baharihe.ac.ir/fa/default.aspx> , Spring 2010.

Memberships:

- ◆ IEEE Member, Signal Processing Society
- ◆ Society for Industrial and Applied Mathematics (SIAM)
- ◆ Institute of Mathematical Statistics

Community Services:

- ◆ Scientific Committee of International workshop on Sensing, Processing and Learning for Intelligent Machines (SPLINE), 2016
- ◆ Organization of a special session titled “Real-life Challenges In Voice And Multimodal Biometrics” at 19th International Conference on Speech and Computer
- ◆ Reviewer of IEEE/ACM transactions on audio speech and language processing
- ◆ Reviewer of Elsevier Journal of Computer Speech and Language
- ◆ Reviewer of Elsevier Journal of Statistical Signal Processing
- ◆ Reviewer of Asian Journal of Control
- ◆ Reviewer of Journal of Inverse Problems in Science and Engineering

Selected Publications:

Book Chapters:

- ◆ M.H. Bahari, H. Van hamme (2014) “Normalized ordinal distance; a performance metric for ordinal, probabilistic-ordinal or partial-ordinal classification problems,” edited book Case Studies in Intelligent Computing-Achievements and Trends, CRC Press, Taylor and Francis.
- ◆ M. H. Bahari, H. Fadishei, R. Rajaei, "Genetic Fuzzy Maneuvering Target Tracker," Emerging Technologies, Robotics and Control Systems, Third edition, pp. 203-208, 2009. (ISBN: 978-88-901928-8-3)
- ◆ M. H. Bahari, A. Bahari and H. Fadishei, "Adaptive Neuro-Fuzzy Inference System with Subtractive Clustering for Drilling Rate Prediction," Emerging Technologies, Robotics and Control Systems, Third edition, pp. 197-202, 2009. (ISBN: 978-88-901928-8-3)

Journals:

- ◆ A. Hassani, J. Plata-Chaves, M. Hasan Bahari, A. Bertrand and M. Moonen, “Multi-task wireless sensor network for joint distributed node-specific signal enhancement, LCMV beamforming and DoA estimation,” IEEE Journal of Selected Topics in Signal Processing, 2017
- ◆ M. Bahari, A. Bertrand, and M. Moonen, “Blind microphone sampling rate offset estimation and compensation for multi-channel noise reduction,” IEEE/ACM transactions on audio speech and language processing, 2017

- ◆ M. H. Bahari, J. Plata-Chaves, K. Hamaidi, M. Muma, M. Moonen and A. M. Zoubir. Distributed multi-speaker voice activity detection in wireless sensor networks,” IEEE/ACM transactions on audio speech and language processing (*Submitted*), 2016
- ◆ M. H. Bahari, N. Dehak, H. Van hamme, L. Burget, A. Ali, J. Glass, “Non-negative Factor Analysis of Gaussian Mixture Model Weight Adaptation for Language and Dialect Recognition,” IEEE/ACM transactions on audio speech and language processing, vol. 22, no. 7, pp. 1117-1129, July 2014.
- ◆ M. H. Bahari, M. McLaren, H. Van hamme, D. van Leeuwen, “Age Estimation from Telephone Speech,” Engineering Applications of Artificial Intelligence, Elsevier, 2014, vol. 34, pp. 99-108, 2014.
- ◆ M. H. Bahari, A. Azemi, M. M. Mirsalehi, M. Mahmoodi, M. Khademi, “Identifying Pathogenic Antibodies in SLE Using General Regression Neural Networks,” International Journal of Innovative Computing, Information and Control, Vol. 8, Num. 4, pp. 2855–2864, 2012.
- ◆ M. H. Bahari, A. Bahari, H. Moradi "Intelligent Drilling Rate Predictor," International Journal of Innovative Computing, Information and Control, Vol. 7, No. 2, pp. 1511-1520, 2011.
- ◆ M. H. Bahari, A. Karsaz, and N. Pariz "High Maneuvering Target Tracking Using a Novel Hybrid Kalman Filter-Fuzzy Logic Architecture," International Journal of Innovative Computing, Information and Control, Vol. 7, No. 2, pp. 501-510, 2011.
- ◆ M. H. Bahari, N. Pariz, M. B. Naghibi-s, "Intelligent Fading Memory for High Maneuvering Target Tracking" International Journal of Physical Sciences, Vol. 4 No. 10, pp. 548-554, 2009.
- ◆ H. Moradi, M. H. Bahari, M. B. Naghibi-S, A. Bahari, "Drilling rate prediction using an innovative soft computing approach," Scientific Researches and assays, Vol. 5, No. 13, pp. 1583 – 1588, 2010.
- ◆ M. H. Bahari, A. Azemi, M. M. Mirsalehi, M. Mahmoodi, M. Khademi, “Early Diagnosis of Systemic Lupus Erythmatosus Using Artificial Neural Networks,” Bioinformation, Vol. 5, No. 2, 2010.
- ◆ M. H. Bahari, N. Pariz, M. B. Naghibi-s, "Intelligent Fading Memory for High Maneuvering Target Tracking" International Journal of Physical Sciences, Vol. 4 No. 10, pp. 548-554, 2009.
- ◆ M. H. Bahari, and N. Pariz, "High maneuvering target tracking using an input estimation technique associated with fuzzy forgetting factor" Scientific Researches and assays, Vol. 4, No. 10, pp. 936-945, 2009.

◆ M. H. Bahari, H. Fadishei, R. Rajaei, "Genetic Fuzzy Maneuvering Target Tracker," *International Journal of Factory, Automation, Robotics and Soft Computing*, Issue 3, pp. 45-50, 2009.

◆ M. H. Bahari, A. Bahari and H. Fadishei, "Adaptive Neuro-Fuzzy Inference System with Subtractive Clustering for Drilling Rate Prediction," *International Journal of Factory, Automation, Robotics and Soft Computing*, Issue 2, pp. 60-65, 2009.

Conferences:

◆ A. H. Poorjam, M. H. Bahari, and H. V. hamme, "Speaker weight estimation from speech signals using a fusion of the i-vector and NFA frameworks," in *International Symposium on Artificial Intelligence and Signal Processing (AISP)*, 2015, pp. 118-123

◆ M. H. Bahari, J. Plata-Chaves, A. Bertrand, and M. Moonen. "Distributed labeling of audio sources in wireless acoustic sensor networks using consensus and matching," *European Signal Process. Conf. (EUSIPCO)*, 2016.

◆ A. H. Poorjam, M. H. Bahari, and H. V. hamme, "Multitask speaker profiling for estimating age, height, weight and smoking habits from spontaneous telephone speech signals," in *4th International eConference on Computer and Knowledge Engineering (ICCKE)*, 2014, pp. 7–12.

◆ M. H. Bahari, A. Bertrand, and M. Moonen "Blind Sampling Rate Offset Estimation Based on Coherence Drift in Wireless Acoustic Sensor Networks" *Proc. European Signal Processing Conference (EUSIPCO)*, Nice, France, 2015.

◆ J. Plata-Chaves, M.H. Bahari, M. Moonen, A. Bertrand "Unsupervised diffusion-based LMS for node-specific parameter estimation over wireless sensor networks" *Proc. IEEE International Conference on Acoustics, Speech and Signal processing (ICASSP)*, Shanghai, China, March 2016.

◆ N. Dehak, O. Plchot, M. H. Bahari, L. Burget, H. Van hamme, R. Dehak, "GMM Weights Adaptation Based On Subspace Approaches For Speaker Verification," *Odyssey*, Finland, 2014.

◆ A. Poorjam-A, M.H. Bahari, V. Vasilakakis, H. Van hamme, "Speaker Height Estimation from Spontaneous Telephone Speech Using i-Vectors," *37th International conference on telecommunications and signal processing*, Germany, 2014 .

◆ M.H. Bahari, R. Saidi, H. Van hamme, D. van Leeuwen, "Accent recognition using i-vector, Gaussian mean supervector and Gaussian posterior probability supervector for spontaneous telephone speech," *International conference on acoustics, speech, and signal processing (ICASSP)*, Canada, 2013.

◆ M.H. Bahari, H. Van hamme "Normalized ordinal distance; a performance metric for ordinal, probabilistic-ordinal or partial-ordinal classification problems," *Conf. Biometric Technologies in Forensic Science*, Nijmegen, Netherland, 2013.

- ◆ Bahari, M., et al., Age Estimation from Telephone Speech using i-vectors, Interspeech, Portland, USA, pp. 506-509, Sep. 2012 (*International Speech Communication Association Best Student Paper Award*)
- ◆ D. Van Leeuwen, M.H. Bahari, "Calibration of probabilistic age recognition," Interspeech, Portland, USA, pp. 502-505, Sep. 2012.
- ◆ Bahari, M., Van hamme, H., Speaker Adaptation Using Maximum Likelihood General Regression. The 11th International Conference on Information Science, Signal Processing and their Applications, Montreal, Canada, July 2012.
- ◆ Bahari, M., Van hamme, H., Speaker Age Estimation Using Hidden Markov Model Weight Supervectors. The 11th International Conference on Information Science, Signal Processing and their Applications, Montreal, Canada, July 2012.
- ◆ Bahari, M., Van hamme, H., Speaker age estimation and gender detection based on supervised non-negative matrix factorization. IEEE workshop on biometric measurements and systems for security and medical applications. Milan, Italy, 28 September 2011 (pp. 27-32).
- ◆ Bahari, M., Van hamme, H., Age and gender recognition from speech patterns based on supervised non-negative matrix factorization. . Annual conference of the international association of forensic phonetics and acoustics (IAFPA). Vienna, Austria, 24-28 July 2011 (pp. 3-5).
- ◆ M. H. Bahari, H. Van hamme, "Rapid speaker adaptation using maximum likelihood neural regression", IEEE International Conference on Multimedia and Expo, Barcelona, Spain, 2011.
- ◆ M. H. Bahari, S. M. Davarpanah, N. Pariz, "High Maneuvering Target Tracking Using an Input Estimation Technique Associated With Fuzzy Fading Memory," The 2nd International conference on Computer and Electrical Engineering (IEEE-ICCEE 2009), 2009, Dubai, UAE.
- ◆ M. H. Bahari, A. Azemi, N. Pariz, S. Khorashadi-Z, S. M. Davarpanah, "High Maneuvering Target Tracking Using an Input Estimation Technique Associated With Fuzzy Fading Memory," 14th IEEE International CSI conference (IEEE-CSICC 2009), 2009, Tehran, Iran, 182-187,2009.
- ◆ M. H. Bahari, A. Bahari, R. Rajaei, "Drilling Rate Prediction Using Bourgoyne and Young Model Associated with Genetic Algorithm," 4th ACM International Conference on Intelligent Computing and Information Systems (ACM-ICICIS 2009), CAIRO, EGYPT March, 19-22, 2009.
- ◆ M. H. Bahari, F. Nejati-M, M. A. Ebrahimi-G, A. Karsaz, "Tracking a High Maneuver Target Based on Intelligent Matrix Covariance Resetting," 5th IEEE Symp. on Image and Signal Processing and Analysis, IEEE- ISPA 2007, September, 27-29, Istanbul, Turkey.

- ◆ M. H. Bahari, A. Karsaz, H. Khaloozadeh, "High Maneuver Target Tracking Based on Combined Kalman Filter and Fuzzy Logic," IEEE Conf. on Information, Decision and Control 2007, IEEE-DC 2007, 12-14, 2007, Adelaide Australia.
- ◆ M. H. Bahari, A. Karsaz, H. Khaloozadeh "A New Algorithm based on Combined Fuzzy Logic and Kalman Filter for Target Maneuver Detection," IEEE-ISSCAA 2006, Jan. 2006, pp.520-525, Harbin China.
- ◆ A. Karsaz, H. Khaloozadeh, M. H. Bahari, "A New Algorithm Based on Generalized Target Maneuver Detection," 6th IEEE-Conf. on Control and Automation 2007,IEEE-ICCA 2007, 30 May to June 1, Guangzhou China.
- ◆ M. H. Bahari, M. M. Mirsalehi, M. Khademi, M. Mahmoodi, "Identification of Pathogenic Antibodies in SLE Using General Regression Neural Networks," Iranian Conference on Electrical Engineering 2006, ICEE 2007, 16-18, May 2006, Tehran, Iran