

ANA-ANTONIA NEACȘU

STIC Phd. Candidate Cotutelle – Image and Signal Processing

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EXPERIENCE

PhD Candidate in Image and Signal Processing

ED n° 580 STIC (Pôle 1), CentraleSupélec, Université Paris-Saclay

Doctoral school of Faculty of Electronics, Telecommunications and Information Technology, University Politehnica of Bucharest

📅 October 2019 – Ongoing 📍 France, Romania

- New methods for designing reliable Neural Networks
- Applications to signal processing for audio and physiological data

Teaching assistant

University POLITEHNICA of Bucharest

📅 2019 – December 2023 📍 Bucharest, Romania

- Electronics practical projects
- Microprocessors Architecture
- Microcontrollers

Research assistant

Speech and Dialogue Research Laboratory, UPB

📅 Oct 2016 – Ongoing 📍 Bucharest, Romania

- Machine Learning Engineer
- Infant-cry classification
- Spoken language technology

Intern

Intel

📅 February 2015 – June 2015 📍 Bucharest, Romania

- Embedded solutions for temperature & humidity control
- IoT
- Galileo development boards

COMPUTER SKILLS

Python

Matlab

UNIX shell

LaTeX

Assembly

Arduino

Tensorflow

SciPy

Numpy

EDUCATION

Erasmus exchange

CentraleSupélec, Paris-Saclay

📅 2018-2019 📍 Paris, France

- Semester at Centre de Vision Numérique, OPIS
- Training robust feed-forward networks
- EMG signal processing

M.S. in Electronics, Telecommunication and Information Technology

University Politehnica of Bucharest

📅 2017-2019 📍 Bucharest, Romania

- Multimedia Technologies in Biometrics and Information Security Applications
- Spoken Language Technology
- Advanced Techniques in Digital Signal Processing

B.S. in Electronics, Telecommunication and Information Technology

University Politehnica of Bucharest

📅 2013-2017 📍 Bucharest, Romania

- Specialization in telecommunications
- Computer Science
- Digital Signal Processing

Baccalaureat major in Computer Science

National College Nicolae Bălcescu

📅 July 2013 📍 Brăila, Romania

LANGUAGES

Romanian

English

French



HOBBIES

Hiking

Table tennis

Reading

Traveling

PUBLICATIONS

Journal Papers

- Neacșu, A., Pesquet, J.-C., & Burileanu, C. (2023). "EMG-based automatic gesture recognition using lipschitz-regularized neural networks". in *ACM Transactions on Intelligent Systems and Technology (TIST)*.
- Lassau, N., Ammari, S., Chouzenoux, E., Gortais, H., Herent, P., Devilder, M., ... Neacșu, A. [Ana], et al. (2021). "Integrating deep learning CT-scan model, biological and clinical variables to predict severity of COVID-19 patients". *Nature Communications*, 12(1), 1–11.

Conference Proceedings

- Neacșu, A., Pesquet, J.-C., & Burileanu, C. (2022). "Design of robust complex-valued feed-forward neural networks". In *Submitted to Proc. IEEE Int. Conf. Acoust. Speech Signal Process.* Singapore.
- Neacșu, A., Gupta, K., Pesquet, J.-C., & Burileanu, C. (2021). "Signal denoising using a new class of robust neural networks". In *Proc. IEEE European Signal Process. Conf.* (pp. 1492–1496). Amsterdam, Netherlands.
- Vasilescu, V., Neacșu, A., Chouzenoux, E., Pesquet, J.-C., & Burileanu, C. (2021). "A deep learning approach for improved segmentation of lesions related to COVID-19 chest CT scans". In *Proc. IEEE Int. Symposium on Biomedical Imaging* (pp. 635–639). IEEE. Nice, France.
- Andronache, C., Negru, M., Neacșu, A., Cioroiu, G., Rădoi, A., & Burileanu, C. (2020). "Towards extending real-time EMG-based gesture recognition system". In *Proc. IEEE Int. Conf. Telecomm. Signal Process.* (pp. 301–304). Milan, Italy.
- Neacșu, A., Pesquet, J.-C., & Burileanu, C. (2020). "Accuracy-robustness trade-off for positively weighted neural networks". In *Proc. IEEE Int. Conf. Acoust. Speech Signal Process.* (pp. 8389–8393). Barcelona, Spain.
- Neacsu, A. A., Cioroiu, G., Radoi, A., & Burileanu, C. (2019). "Automatic EMG-based hand gesture recognition system using time-domain descriptors and fully-connected neural networks". In *Int. Conf. Telecommunications Signal Process.* (pp. 232–235). Budapest, Hungary.