Diana MANDACHE

PhD Candidate, Eng, R&D:
signal & image processing, machine learning

231 rue de Vaugirard
Paris 75015
France
+33 (0) 777 730 952
diana.mandache00@gmail.com

Education

2018–2021 (expected) **PhD in INFORMATICS**, *"Machine learning methods applied for automatic detection of cancerous tumors in biopsies imaged with novel optical tomography techniques"*, Pasteur Institute - Bioimage Analysis Unit, LLTech SAS, Paris, France.
- Industry-oriented doctoral fellowship (CIFRE)

2016–2017 **MASTER OF SCIENCE in IMAGE PROCESSING**, *(cursus in French)*
University Pierre and Marie Curie, Sorbonne Sciences, Paris, France.
- Scholarship of The French Government granted on academic criteria ;
- Practical Project : Compressed Sensing based denoising, a Java Plugin for Icy Bioimaging Platform

2012–2016 **BACHELOR OF ENGINEERING in COMPUTER SCIENCE**, *(cursus in English)*
University of Craiova, Faculty of Automation, Computers and Electronics, Craiova, Romania.
- Merit-scholarship of The Romanian Government for academic excellence
- Diploma Project : Python application for simulation of analog electronic circuits with UI

2008–2012 **BACCALAUREATE in Mathematics & Informatics**,
Frații Buzești National College, Craiova, Romania.

Experience

2020 1 week **PASTEUR INSTITUTE, Tunis, Tunisia**, *PHiND Access European Commission Project*, Introduction to Python - intensive course for biologists, teaching assistant for practical work.

2017 5 months **PASTEUR INSTITUTE, Paris, France**, *End-of-Masters Research Internship*, **Bioimage Analysis Unit** in collaboration with **LLTech SAS**, Implementation of a Convolutional Neural Network for detecting cancerous areas in skin biopsies imaged with a Full Field OCT microscope developed by LLTech.

2015 5 months **INSTITUT SUPÉRIEUR D'ÉLECTRONIQUE DE PARIS (ISEP), Paris, France**
Signal, Image an Telecommunication Laboratory, *Erasmus+ Internship*, Development of natural images reconstruction algorithm based on Compressed Sensing.

1 month **EWI INSTITUTE, Wien, Austria**, *Summer Internship*, Web design and promotion.

Skills

Tools Python *NumPy SciPy Pandas Matplotlib Keras ScikitLearn OpenCV Jupyter*
Java, C++, MATLAB, Linux, Git, SLURM, Singularity, LaTeX

Knowledge
- Machine Learning, Convolutional Neural Networks, Classification
- Biomedical Imaging, Computer Vision, Compressed Sensing
- Data Analysis and Visualization
- Object Oriented Programming, Algorithmics, Scientific Writing

Languages

Romanian native
English fluent - C1 *Cambridge Certificate in Advanced English*
French fluent - B2
Spanish notions - A1

Interests

arts music (blues, rock, jazz), theater
humanities culture, ethics, linguistics
outdoors hiking, travel

Publications

1 **D. Mandache**, E.Benoit, J-C. Olivo-Marin and V. Meas-Yedid, *Blind Source Separation in Dynamic Cell Imaging using NonNegative Matrix Factorization applied to Breast Cancer Biopsies*, IEEE International Symposium on Biomedical Imaging (ISBI), Iowa City, 2020, accepted

2 D. Gonzalez, **D. Mandache**, J-C. Olivo-Marin and V. Meas-Yedid, *Icytomine : A User-Friendly Tool for Integrating Workflows on Whole Slide Images*, European Congress on Digital Pathology (ECDP), Warwick, UK, 2019

3 **D. Mandache**, E. Dalimier, J. Durkin, A. C. Boccara, J-C. Olivo-Marin and V. Meas-Yedid, *Basal Cell Carcinoma Detection in Full Field OCT images using Convolutional Neural Networks*, IEEE International Symposium on Biomedical Imaging (ISBI), Washington, DC, 2018, pp. 784-787

4 A. Akbari, **D. Mandache**, M. Trocan and B. Granado, *Adaptive saliency-based compressive sensing image reconstruction*, IEEE International Conference on Multimedia & Expo Workshops (ICMEW), Seattle, WA, 2016, pp. 1-6

5 **D. Mandache**, A. Akbari and M. Trocan, *Image compressed sensing recovery using intra-block prediction*, IEEE 23rd Telecommunications Forum (TELFOR), Belgrade, Serbia, 2015, pp. 748-751