

Dragoş-Florin Nastasiu

Nationality: Romanian 📞 (+40) 758740319 **Date of birth:** 23/01/1996 **Gender:** Male

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📍 **Address:** Bucharest, (Romania)

WORK EXPERIENCE

Research Engineer | Teaching assistant

Military Technical Academy "Ferdinand I" [01/10/2019 – Current]

City: Bucharest

Country: Romania

Research is mainly focused on signal and image processing:

- image reconstruction, denoising, decomposition, analysis, characterization and classification
- feature extraction
- time-frequency analysis

Teaching classes:

- digital signal and image processing
- mobile application development with Ionic Framework

Research and Development Engineer

GIPSA-Lab [15/01/2019 – 15/07/2019]

City: Grenoble

Country: France

- Provide solutions to real industry problems in terms of data analysis and processing
- Collaborate in an international environment with many experts from the electrical and data processing field
- Implementation of data processing algorithms and DEMO apps in order to easily disseminate knowledge

RESEARCH PROJECTS

Member of Research Project – AUSTRALE - Authentification Unitaire Sécurisée dans les domaines THz et Radiofréquences

[01/10/2020 – Current]

Partners : IMEP-LAHC, GIPSA Lab (Grenoble, France), LCIS (Valence, France), CTP (Grenoble, France)

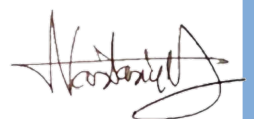
- Feature extraction and ML for signal classification
- Frameworks: Matlab, PyTorch

Member of Research Project – AUTHANTIC - Authentification TeraHertz

[01/10/2020 – Current]

Partners : IMEP-LAHC, GIPSA Lab (Grenoble, France), TIHIVE (Meylan, France), ARJO SOLUTIONS (Le Bourget du Lac, France)

- Feature extraction and ML for signal and image classification
- Frameworks: Matlab, PyTorch



Member of Research Project - UAV system for early anomaly detection

[01/02/2022 – Current]

- Video transmission and early prediction of anomalies
- Frameworks: Matlab, PyTorch

EDUCATION AND TRAINING

PhD

Joint thesis supervision: Universite Savoie Mont-Blanc and Military Technical Academy - Bucharest [01/10/2020 – Current]

Field(s) of study: Signal, Image, Speech and Telecommunications

Thesis: New methods of identification and authentication in THz domain

EEATS Doctoral School – Electronique Electrotechnique Automatique & Traitement du signal | University of Grenoble Alpes, France

- Signal and Image processing using the concept of Phase Diagram; Image enhancement techniques; View-point variation challenge;
- Image classification using ML and DL approaches: SVM, kNN, Ensembles, NN and Graph Neural Networks.
- Matlab, DGL, PyTorch

Master's Degree

Military Technical Academy "Ferdinand I" [2019 – 2021]

Address: Bucharest (Romania)

Field(s) of study: Telecommunications and Data processing

Thesis: Artificial intelligence in communication systems

Collaborations with GIPSA-lab, Grenoble, France tackling the view-point variation problem in Computer Vision.

- image decomposition and feature extraction; image enhancement and denoising
- Matlab, PyTorch

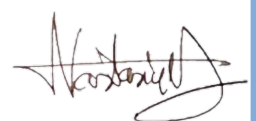
Bachelor Degree in Telecommunications

Military Technical Academy "Ferdinand I" [2015 – 2019]

Address: Bucharest (Romania)

Field(s) of study: Telecommunications and Information Technology

Thesis: Remote monitoring system for electrical grids



DIGITAL SKILLS

My Digital Skills

Programming Skills

Experience in JS, Angular, HTML and CSS / Experience in Matlab and Python / Basic knowledge in C/C++

Artificial Intelligence

Experience with Jupyter Notebook environment / Experience with Computer Vision tools in Matlab and PyTorch / Experience with Matlab App Designer / Experience with Matlab and external libraries (LibTiePie) for signal and image processing / Experience with PyTorch, Keras and DGL (for graph processing) for DL

Data Science

Experience with statistical tool of analysis / Experience with data-driven tools of signal analysis (Phase Diagram and EMD) / Experience with time-frequency analysis

CONFERENCES AND SEMINARS

Students' international conference "CERC"

[Bucharest, Romania, 23/04/2019 – 25/04/2019]

Military Technical Academy "Ferdinand I"

2nd prize

Students' international conference "CERC"

[Bucharest, Romania, 20/06/2018 – 22/06/2018]

Military Technical Academy "Ferdinand I"

1st prize

The 46th International Conference on Infrared, Millimeter and Terahertz Waves

[Chengdu - China, 29/08/2021 – 03/09/2021]

French-German Terahertz International Conference

[La Grande Motte (France), 16/05/2022 – 19/05/2022]

Journées Nationales Microondes 2022

[Limoges (France), 07/06/2022 – 10/06/2022]

EUSIPCO - 30th European Signal Processing Conference

[Belgrade, Serbia, 29/08/2022 – 02/09/2022]

GRETSI - XXVIIIème Colloque Francophone de Traitement du Signal et des Images

[Nancy, France, 06/09/2022 – 09/09/2022]

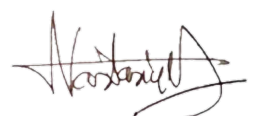
PUBLICATIONS

A New Method of Secure Authentication Based on Electromagnetic Signatures of Chipless RFID Tags and Machine Learning Approaches

[2020]

<https://www.mdpi.com/1424-8220/20/21/6385/htm>

Nastasiu, D.; Scripcaru, R.; Digulescu, A.; Ioana, C.; De Amorim, R., Jr.; Barbot, N.; Siragusa, R.; Perret, E.; Popescu, F.



On the potential of phase diagram analysis to identify the wide band modulations

[2020]

<https://ieeexplore.ieee.org/document/9141963>

Scripcaru, R.; Nastasiu, D.; Digulescu, A.; Stănescu, D.; Ioana, C.; Şerbănescu, A.;

Low Complexity Acoustic Imaging System Based on Time of Arrivals Dynamic Estimation

[2021]

<https://ieeexplore.ieee.org/abstract/document/9460241>

Stanescu, D.; Nastasiu, D.; Ioana, C.; Digulescu, A.; Serbanescu, A.

Phase diagram method for efficient THz images reconstructing

[2021]

IEEE Transactions on Terahertz Science and Technology

Nastasiu, D; Bernier, M.; Ioana C.; Tréhoult, C.; Lyannaz, L.; Garet, F.

<https://ieeexplore.ieee.org/document/9566864/>

A novel machine learning approach in Image Pattern Recognition under invariance constraints

[2022]

Nastasiu, D; Digulescu, A; Ioana, C; Bernier, M; Garet, F; Serbanescu, A.

Accepted for publication for September 2022 at the 30th European Signal Processing Conference (EUSIPCO 2022)

<https://ieeexplore.ieee.org/document/9909907>

Surface roughness classification using a translation invariant Wavelet Packet Decomposition

[2022]

Nastasiu, D; Stanescu, D; Despina-Stoian, C; Digulescu, A; Ioana, C; Serbanescu, A.

LANGUAGE SKILLS

Mother tongue(s): **Romanian**

Other language(s):

English

LISTENING C1 READING C1 WRITING C1

SPOKEN PRODUCTION C1 SPOKEN INTERACTION C1

French

LISTENING B1 READING B1 WRITING B1

SPOKEN PRODUCTION B1 SPOKEN INTERACTION B1

ERASMUS+ MOBILITIES | CO-CURRICULAR EXPERIENCE

Advanced signal processing techniques for image analysis

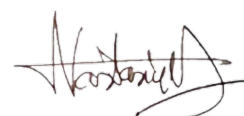
[15/09/2020 – 15/12/2020]

Grenoble, France at Grenoble Institute of Technology

Artificial Intelligence and Neural networks

[15/09/2019 – 15/12/2019]

Grenoble, France at Grenoble Institute of Technology



Mobile application for Detection and Localization of Transient Signals

[15/09/2018 – 15/12/2018]

Grenoble, France at Grenoble Institute of Technology

Acquisition and data transmission from data unit to PC

[15/02/2018 – 15/05/2018]

Grenoble, France at Grenoble Institute of Technology

COMMUNICATION AND INTERPERSONAL SKILLS

Confident and professional speaking abilities

Ambitious and competitive personality

Highly adaptable to different working environments

ORGANISATIONAL SKILLS

Leadership

Organizational skills gained through years lived in military environment

DRIVING LICENCE

Driving Licence: B

