

PERSONAL INFORMATION

PAOLO FAZZINI



📍 Rome (It), 00176, via Conte di Carmagnola 12

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✉ paologfazzini@gmail.com

Sex M | Date of birth 10/12/1969 | Nationality Italian

RELEVANT WORK EXPERIENCE

(Jan 2018 - present)

Research Fellow

[CNR-IIA](#)

- Vehicle Traffic optimization with Multi-Agent Reinforcement Learning
- Mixed Cooperative/Competitive Behavior analysis of Multi-Agent systems with Reinforcement Learning and Natural Evolution Strategies
- Time Series analysis and forecasting with LSTM-based networks, Sarima and FBProphet
- Vegetation classification with Remote Sensing and Convolutional Neural Nets

Business or sector [Machine Learning](#)

(Sept 2016 - Dec 2017)

Senior Researcher

[Photonic Design Ltd](#)

- Research Engineer at Photonic Designs Ltd (London, UK):
- S/W Simulations, H/W prototyping
- Senior Research Engineer
- Fluid dynamic modeling of air-structure interactions

Business or sector [Fluid-Dynamic Modeling](#)

(Jan 2001 - May 2016)

Senior Researcher

[Imagination Technologies](#)

- Patent topics available at: <https://patents.justia.com/inventor/paolo-fazzini>
- Intellectual Property – H/W and S/W Design
- Senior Research Engineer
- 2D and 3D graphics
- Digital Video Processing (De-interlacing, Noise Removal, Super Resolution, Y/C separation)
- Digital Image Processing
- Gamut Mapping
- Neural Networks for artifact detection, noise-removal, super-resolution and
- Semantic Segmentation
- Efficient bump mapping
- Image compression

Business or sector [Digital Video and Image Processing; 2D and 3D Graphics; Machine Learning;](#)

EDUCATION AND TRAINING

(Oct 1988 – Oct 1994)

Master Degree in Nuclear Engineering

School of Engineering – University of Bologna

Mathematical and computational modeling

Patents

Available at: <https://patents.google.com/patent/>

Granted by	Role	A Ref	Title
WO EP US JP GB	Last Author	US7733352B2	Efficient bump mapping using height maps
WO EP US JP GB	Sole Author	EP1623568B1	De-interlacing of video data
US GB	Sole Author	US20200342831A1	Gamut mapping with blended scaling and clamping
WO EP US JP GB	Sole Author	US20060181647A1	Conversion of video data from interlaced to non-interlaced format
WO JP US	Sole Author	US20060176394A1	De-interlacing of video data / 2
WO EP US JP GB	Sole Author	US20060176393A1	Conversion of video data from interlaced to non-interlaced format / 2
WO EP US JP GB	Sole Author	JP5364264B2	Location detection of block defect using neural networks
WO EP US CN GB	Sole Author	GB2484071B	De-interlacing of video data / 3

LEGEND:

WO: WORLD INTELLECTUAL
PROPERTY ORGANIZATION
EP: EUROPEAN PATENT OFFICE
US: UNITED STATES PATENT OFFICE
JP: JAPAN PATENT OFFICE
GB: UK INTELLECTUAL PROPERTY
OFFICE

Publications

- Sentinel-2 Remote Sensed Image Classification with Patchwise Trained ConvNets for Grassland Habitat Discrimination (First and corresponding author, Remote Sensing, <https://www.mdpi.com/2072-4292/13/12/2276>)
- Traffic Signal Control with Communicative Deep Reinforcement Learning Agents: a Case Study (First and corresponding author, Arxiv, <https://arxiv.org/abs/2107.01347>)
- Effects of Smart Traffic Signal Control on Air Quality (First and Corresponding author, Frontiers, <https://www.frontiersin.org/articles/10.3389/frsc.2022.756539/full>)
- Effects of deployment of electric vehicles on air quality in the urban area of Turin (Italy) (co-author, Pubmed, <https://pubmed.ncbi.nlm.nih.gov/34333307/>)

Main Skills

- Programming (Python, C, C++, C#, Assembly, Fortran)
- Numerical Modeling (Matlab)
- Symbolic Modeling (Maple)
- Thermo-Fluid-dynamics (OpenFoam)
- Math and Statistics

Rome 06/06/22

