

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 US GB	Sole Author	EP1623568B1	De-interlacing of video data
	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

