EUROPEAN
CURRICULUM VITAE
FORMAT

PERSONAL INFORMATION

Name	**MOMENZADEH Alireza**

EDUCATION

• Date	November 2022 – Present
• Name and type of organisation providing education and training	Sapienza University of Rome - Department of Information Engineering, Electronics and Telecommunications
• Principal subjects/occupational skills covered	Information and Communication Engineering
• Title of qualification awarded	PhD student

• Date	October 2023 - September 2024
• Name and type of organisation providing education and training	IIT-CNR, Pisa branch
• Principal subjects/occupational skills covered	Deep learning training algorithms
• Title of qualification awarded	Research grant holder

• Date	October 2022 - September 2023
• Name and type of organisation providing education and training	Sapienza University of Rome - Department of Information Engineering, Electronics and Telecommunications
• Principal subjects/occupational skills covered	Fog Computing for the support of deep learning algorithms for real-time image analysis
• Title of qualification awarded	Research grant holder; Call code AR-B 6/2022

• Date	April 2018 - March 2020
• Name and type of organisation providing education and training	Sapienza University of Rome - Department of Information Engineering, Electronics and Telecommunications
• Principal subjects/occupational skills covered	Fog-supported networks
• Title of qualification awarded	Research grant holder; Call code N.4/2018

• Date	2016 - 2017
• Name and type of organisation providing education and training	Sapienza University of Rome - Department of Basic and Applied Sciences for Engineering
• Principal subjects/occupational skills covered	Optimal control theory - Numerical approaches to fractional differential equations
• Title of qualification awarded	Research activities

• Date	2012 - 2015
• Name and type of organisation providing education and training	University Technology 2007Malaysia - Department of Structure and Material
• Principal subjects/occupational skills covered	Civil - Structural engineering
• Title of qualification awarded	Master of Engineering
• Date	2001 - 2007
• Name and type of organisation providing education and training	Azad University of Estahban - Department of Civil Engineering
• Principal subjects/occupational skills covered	Civil engineering
• Title of qualification awarded	Bachelor of engineering
• Date	1988 - 1992
• Name and type of organisation providing education and training	Privileged Andisheh High School - Shiraz (Iran)
• Principal subjects/occupational skills covered	Mathematics and Physics
• Title of qualification awarded	Diploma in Mathematics and Physics

SKILLS

LANGUAGE

MOTHER TONGUE	**PERSIAN**
OTHER LANGUAGES	
	ENGLISH
• Reading skills	GOOD
• Writing skills	GOOD
• Verbal skills	GOOD

COMPUTER

1) MATLAB programming environment.
2) Python programming language.

MATHS

1) Optimization.
2) Optimal control theory.
3) Dynamical systems.
4) Matrix analysis and advanced linear algebra.

OTHERS

1) Deep Learning.
2) Limited acquaintance with Fog computing.

PUBLICATIONS

1.

Multi-resolution Twinned Residual Auto-Encoders (MR-TRAE)—A Novel DL Model for Image Multi-resolution.

Cognitive Computation 2024 | Journal article

DOI: 10.1007/s12559-024-10293-1

CONTRIBUTORS: Momenzadeh, A., Baccarelli, E; Scarpiniti, M; Sarv Ahrabi, S.

2.

Energy-minimizing 3D circular trajectory optimization of rotary-wing UAV under probabilistic path-loss in constrained hotspot environments.

Vehicular Communications 2024 | Journal article

DOI: 10.1016/j.vehcom.2024.100730

CONTRIBUTORS: Baccarelli, E; Scarpiniti, M.; Momenzadeh, A.

3.

Twinned Residual Auto-Encoder (TRAE)—a new DL architecture for denoising super-resolution and task-aware feature learning from COVID-19 CT images.

Expert Systems with Applications 2023 | Journal article

DOI: 10.1016/j.eswa.2023.120104

CONTRIBUTORS: Baccarelli, E; Scarpiniti, M.; Momenzadeh, A.

4.

How much BiGAN and CycleGAN-learned hidden features are effective for COVID-19 detection from CT images? A comparative study.

Journal of Supercomputing 2023 | Journal article

DOI: 10.1007/s11227-022-04775-y

CONTRIBUTORS: Sarv Ahrabi, S.; Momenzadeh, A.; Baccarelli, E.; Scarpiniti, M.; Piazzo, L.

5.

A novel unsupervised approach based on the hidden features of deep denoising autoencoders for COVID-19 disease detection.

Expert Systems with Applications 2022 | Journal article

DOI: 10.1016/j.eswa.2021.116366

CONTRIBUTORS: Scarpiniti, M.; Sarv Ahrabi, S.; Baccarelli, E.; Piazzo, L.; Momenzadeh, A.

6.

Exploiting probability density function of deep convolutional autoencoders' latent space for reliable COVID-19 detection on CT scans.

Journal of Supercomputing 2022 | Journal article

DOI: 10.1007/s11227-022-04349-y

CONTRIBUTORS: Sarv Ahrabi, S.; Piazzo, L.; Momenzadeh, A.; Scarpiniti, M.; Baccarelli, E.

7.

A histogram-based low-complexity approach for the effective detection of COVID-19 disease from CT and X-ray images.

Applied Sciences 2021 | Journal article

DOI: 10.3390/app11198867

CONTRIBUTORS: Scarpiniti, M.; Sarv Ahrabi, S.; Baccarelli, E.; Piazzo, L.; Momenzadeh, A.

8.

An accuracy vs. complexity comparison of deep learning architectures for the detection of COVID-19 disease.

Computation 2021 | Journal article

DOI: 10.3390/computation9010003

CONTRIBUTORS: Sarv Ahrabi, S.; Scarpiniti, M.; Baccarelli, E.; Momenzadeh, A.

9.

DeepFogSim: A toolbox for execution and performance evaluation of the inference phase of conditional deep neural networks with early exits atop distributed fog platforms.

Applied Sciences 2021 | Journal article

DOI: 10.3390/app11010377

CONTRIBUTORS: Scarpiniti, M.; Baccarelli, E.; Momenzadeh, A.; Sarv Ahrabi, S.

10.

Learning-in-the-Fog (LiFo): deep learning meets Fog Computing for the minimum-energy distributed early-exit of Inference in delay-critical IoT realms.

IEEE Access 2021 | Journal article

DOI: 10.1109/ACCESS.2021.3058021

CONTRIBUTORS: Baccarelli, E.; Scarpiniti, M.; Momenzadeh, A.; Sarv Ahrabi, S.

11.

Metaheuristics and Pontryagin's minimum principle for optimal therapeutic protocols in cancer immunotherapy: a case study and methods comparison.

Journal of Mathematical Biology 2020 | Journal article

DOI: 10.1007/s00285-020-01525-7

CONTRIBUTORS: Sarv Ahrabi, S.; Momenzadeh, A.

12.

Optimized training and scalable implementation of conditional deep neural networks with early exits for Fog-supported IoT applications.

Information Sciences 2020 | Journal article

DOI: 10.1016/j.ins.2020.02.041

CONTRIBUTORS: Baccarelli, E.; Scardapane, S.; Scarpiniti, M.; Momenzadeh, A.; Uncini, A.

13.

EcoMobiFog - design and dynamic optimization of a 5G Mobile-Fog-Cloud multi-tier ecosystem for the real-time distributed execution of stream applications.

IEEE Access 2019 | Journal article

DOI: 10.1109/ACCESS.2019.2913564

CONTRIBUTORS: Baccarelli, E.; Scarpiniti, M.; Momenzadeh, A.

14.

SmartFog: training the Fog for the energy-saving analytics of smart-meter data.

Applied Sciences 2019 | Journal article

DOI: 10.3390/app9194193

CONTRIBUTORS: Scarpiniti, M.; Baccarelli, E.; Momenzadeh, A.; Uncini, A.

15.

VirtFogSim: a parallel toolbox for dynamic energy-delay performance testing and optimization of 5g Mobile-Fog-Cloud virtualized platforms.

Applied Sciences 2019 | Journal article

DOI: 10.3390/app9061160

CONTRIBUTORS: Scarpiniti, M.; Baccarelli, E.; Momenzadeh, A.

16.

Determination of order in linear fractional differential equations.

Fractional Calculus and Applied Analysis 2018 | Journal article

DOI: 10.1515/fca-2018-0051

CONTRIBUTORS: D'Ovidio, M.; Loreti, P.; Momenzadeh, A.; Sarv Ahrabi, S.

17.

Fog-supported delay-constrained energy-saving live migration of VMs over multipath TCP/IP 5G connections.

IEEE Access 2018 | Journal article

DOI: 10.1109/ACCESS.2018.2860249

CONTRIBUTORS: Baccarelli, E.; Scarpiniti, M.; Momenzadeh, A.

18.

On failed methods of fractional differential equations: the case of multi-step generalized differential transform method.

Mediterranean Journal of Mathematics 2018 | Journal article

DOI: 10.1007/s00009-018-1193-x

CONTRIBUTORS: Sarv Ahrabi, S.; Momenzadeh, A.