Alexandros Lattas

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Education

Imperial College London | PhD in Computer Science | 2019 – 2023 | Supervised by Prof S. Zafeiriou and Prof A. Ghosh

Thesis Title | Capturing, Modeling and Reconstructing Photorealistic Avatars

Published in | CVPR, ICCV, ECCV, TPAMI, NeurIPS, SIGGRAPH, ICLR. 3 commercialized projects, 2 Patents

Imperial College London | MSc in Advanced Computing | 2017-2018

Thesis | High Resolution 3D Face Generation with Generative Adversarial Networks (Python, Tensorflow, Graphics)

Modules | Statistical Machine Learning, Graphics, Reinforcement Learning, Computer Vision, Deep Learning

Athens University of Economics and Business | BSc Management Science and Technology | 2013–2017

Thesis | Improving control on Tensorflow Queues API (Technologies: Python, C++, Tensorflow) (Merged #10175)

Modules | Software Engineering, Algorithms, Statistics, Databases, Business Analytics, IT Systems

University College London | School of Management (Affiliate Student) | 2015 – 2016

Modules | Innovation Management, Project Management, Digital Marketing

Research & Work Experience

Researcher in Computer Vision | Huawei, Noah's Ark Lab | July 2020 – Present

Working on the intersection of Machine Learning, Computer Vision and Computer Graphics.

Research Assistant in Computer Vision (Part-Time) | Imperial College London | October 2018 – Present

Creating an immense dataset of photorealistic high-resolution 3D human faces, improving the Imperial College Light Stage and researching how Machine Learning can generate photorealistic humans for AR and VR. Published in CVPR, ECCV.

Computer Vision Scientist | Facesoft | October 2018 – June 2020

Worked on generating photorealistic human avatars, facial recognition and behavioural analysis. Published in CVPR.

Software Engineering Research Associate | Business Analytics Lab | July 2016 – June 2018

Undertaken three projects, under the guidance of Prof. D. Spinellis. Subjects: memory forensics, UNIX security bug smells and data-driven software engineering. Published in ICSE.

Econometrics Research Assistant | Centre of Planning and Economic Research (KEPE) | August 2014 – February 2015

Performed a linear analysis of the oil market in Greece and indicated anomalies to the Greek Competition Commission.

Technical Consultant Intern | Oracle | March 2017 – May 2017

Customised Oracle Access Manager for three customers by creating Java plug-ins, Servlets and branded pages. Presented practical tutorials and for Oracle's Machine Learning powered cloud security platform to high officers.

Technical Competencies

Programming Skills | Python, PyTorch, PyTorch3D, TensorFlow, UNIX, SQL, PHP, git.
General Skills | Deep Learning, Computer Vision, Graphics, Rendering, 3D Models, Photogrammetry, Visualization.

Achievements

Postgraduate Scholarship 2017-2018 | Hellenic Petroleum

Postgraduate scholarship of £24,000, for studies in Advanced Computing at Imperial College London (1 out of 7 total).

Social Impact Award 2014 | Impact Hub Athens

With Blood-e, a novel e-platform for blood donation (€3,000) (1 out of 3 total) (bloode.org).

5 Honorary Distinctions | Athens University of Economics and business

Awarded by AUEB during my BSc for academic performance, entrepreneurship endeavours and exceptional projects.

Co-founded and led Junior Achievement Alumni Greece | June 2013 – February 2017

Entrepreneurship network with more than 200 members, part of a European parent organization. Co-founded it and started as Project Manager, organising more than 10 seminars, networking events and contests. Since 2015, was international coordinator, responsible for our brand image and international events. (ja-alumni.eu).

Selected Publications

scholar.google.com

- Papantoniou F, **Lattas A**, Moschoglou S, Zafeiriou S. Relightify: Relightable 3D Faces from a Single Image via Diffusion Models. International Conference on Computer Vision 2023 (ICCV).
- **Lattas A**, Moschoglou S, Ploumpis S, Gecer B, Deng J, Zafeiriou S. FitMe: Deep Photorealistic 3D Morphable Model Avatars. IEEE/CVF Conference on Computer Vision and Pattern Recognition 2023 (CVPR).
- **Lattas A**, Lin Y, Kannan J, Ozturk E, Filipi L, Guarnera GC, Chawla G, Ghosh A. Practical and Scalable Desktop-based High-Quality Facial Capture. European Conference on Computer Vision 2022 (ECCV Oral).
- Miao Y*, **Lattas A***, Deng J, Han J, Zafeiriou S. Physically-Based Face Rendering for NIR-VIS Face Recognition Advances in Neural Information Processing Systems 2022 (NeurIPS).
- Li S, Waheed U, Bahshwan M, Wang L, Kalossaka L, Choi J, Kundrak F, **Lattas A**, Ploumpis S, Zafeiriou S, Myant C. A scalable mass customisation design process for 3D-printed respirator mask to combat COVID-19. Rapid Prototyping Journal (2021) (RPJ).
- **Lattas A**, Moschoglou S, Ploumpis S, Gecer B, Ghosh A, Zafeiriou S. AvatarMe++: Facial Shape and BRDF Inference with Photorealistic Rendering-Aware GANs. IEEE Transactions on Pattern Analysis and Machine Intelligence 2021 (TPAMI).
- **Lattas A**, Moschoglou S, Gecer B, Ploumpis S, Triantafyllou V, Ghosh A, Zafeiriou S. AvatarMe: Realistically Renderable 3D Facial Reconstruction. IEEE/CVF Conference on Computer Vision and Pattern Recognition 2020 (CVPR).
- Gecer B, **Lattas A**, Ploumpis S, Deng J, Papaioannou A, Moschoglou S, Zafeiriou S. Synthesizing Coupled 3D Face Modalities by Trunk-Branch Generative Adversarial Networks. European Conference on Computer Vision 2020 (ECCV).

Courses and Certifications

Summer School in Machine Learning for Digital English Language Teaching	University of Cambridge	2017
Quality Software Developer Foundation Certificate in Maintainability	Software Improvement Group	2016