DANI SAMER ASSI

ELECTRICAL & BIOMEDICAL ENGINEER

Nationality: Polish

I am a qualified and professional **Electrical and Biomedical Engineer,** specializing in bridging **cutting-edge electronics systems** with **engineering principles** to drive innovation in the ever-evolving landscape of **medical electronics**.

CONTACT

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EXPERTISE

- **Electronics Engineering**
- **Electrical Engineering**
- **Medical Electronics**
- **Signal Processing of Biosignatures**
- **Electronics Systems in Medical Applications**
- **Semiconductor Fabrication and Technology**
- **Robotics and Biomechanics**
- **Sensory Technology**
- **Human Computer-Interfaces (HCI)**
- **Brain Machine-Interfaces (BMI)**
- **Manufacturing Execution Systems**
- **Textronic Biomedical Systems (Wearable Technology)**

EDUCATION

10.2020 - 10.2023

Doctor of Philosophy- Electrical and Electronics Engineering
University of Glasgow (UofG)
College of Science and Engineering

Thesis: Quantum Topological Neuristor for Brain-Computer Interface..

09.2018 - 10.2019

Master of Science - Biomedical Engineering
University of Glasgow (UofG)
College of Science and Engineering

Thesis: Ultrasound Phantoms for High Frequency Quantitative Ultrasound.

10.2014 - 03.2018

Bachelor of Engineering - Biomedical Engineering
Lodz University of Technology (TUL)
Faculty of Electrical, Electronic, Computer and Control Engineering

Thesis: Rehabilitation Device for Mechanical Hand Phantom Control.

02.2016 - 09.2016

Bachelor of Engineering - Biomedical Engineering
Instituto Superior de Engenharia do Porto (ISEP)
Department of Physics

Thesis: Image Segmentation and Feature Extraction for Hand Gesture Recognition.

AWARDS & HONORS

09.2023

Secured Representation for the **University of Glasgow on the international stage in the prestigious U21 Three Minute Thesis (3MT) Competition** (Results will be announced in January 2024).

- Selected as the **sole representative** to present **high-impact research** in a condensed format to an international, interdisciplinary audience.
- Competed against researchers from leading **global universities**, focusing on effective communication of complex scientific topics to a general audience.

03.2023

Winner of the prestigious 3 Minute Thesis (3MT) competition at the University of Glasgow, presenting research on **'Fountain of Youth' (Neuro-electronic device)**.

Demonstrated exceptional **communication skills**, delivering a **clear and concise presentation** that effectively conveyed the importance and impact of the **Neuroelctronics Research** to a panel of judges, BBC and audience members.

To view my winning speech, please click: YouTube Link

09.2018

Awarded DISTINCTION in the Competition **for the BEST ENGINEER DIPLOMA PROJECT** in the Faculty of Electrical, Electronic, Computer and Control Engineering of the **Technical University of Lodz,** presenting research on **Medical Electronic Systems**.

09.2020 - 09.2023

Awarded a Full Scholarship - Doctor of Philosophy, Ph.D
University of Glasgow

09.2018 - 09.2019

Awarded a Full Scholarship - Master of Science, MSc
University of Glasgow

09.2017 - 09.2018

Awarded a Rector's Scholarship for the best students - Bachelor of Science, BSc
Lodz University of Technology (TUL)

02.2016 - 09.2016

Awarded a Full Scholarship - Bachelor of Science, BSc
Instituto Superior de Engenharia do Porto (ISEP)

PUBLICATIONS

Assi, Dani Samer, Huang, H., Karthikeyan, V., Theja, V. C. S., de Souza, M. M., Xi, N., Li, W. J., Roy, V. A. L., Quantum Topological Neuristors for Advanced Neuromorphic Intelligent Systems. **Advance Science** 2023, 10, 2300791. (**Impact Factor: 15.1**).

Assi, Dani Samer, Huang, H., Karthikeyan, V., Theja, V. C. S., de Souza, M. M., Wen Jung Li, Vellaisamy A. L. Roy, Topologically Controllable Synaptic Dynamics for Next Generation Neuromodulation Bioelectronics, **Advanced Materials** (**Impact Factor: 29.4**), Status: Under Review.

Assi, Dani Samer, Haris, M. P., Karthikeyan, V., Kazim, S., Ahmad, S., Roy, V. A. L., Low Switching Power Neuromorphic Perovskite Devices with Quick Relearning Functionality. **Advanced Electronic Materials** 2023, 9, 2300285. (**Impact Factor: 6.2**).

Assi, Dani Samer, Huang, H., Kandira, K.U., Alsulaiman, N.S., Theja, V.C.S., Abbas, H., Karthikeyan, V. and Roy, V.A.L. (2023), Charge-Mediated Copper-Iodide-Based Artificial Synaptic Device with Ultrahigh Neuromorphic Efficacy. **Phys. Status Solidi RRL** 2300191. (**Impact Factor: 2.8**).

Published 10 peer-reviewed articles in the field of **electrical and biomedical engineering**, all of which are accessible via my (please click) **Google Scholar** profile.

EXPERIENCE

10.2020 - 10.2023

Lab Manager - Molecular Electronics (MOLEC) group at the University of Glasgow (UofG).

Responsibilities:

- Responsible for Teaching staff and students in the proper use and maintenance of specialized laboratory equipment.
- Responsible for Equipment Maintenance (GloveBox, AutoLab, Thermal Evaporator and Fume hood)
- Responsible for Logistics and Scheduling.
- Responsible for Administrative Duties.
- Responsible for Resource Allocation (chemicals and machines).

10.2020 - 10.2022

Private tutor

Responsibilities:

- Provided one-on-one tutoring for students in Electrical and Electronics, Mechanical Engineering (CAD softwares), and English.
- Designed custom lesson plans tailored to individual student needs.
- Managed scheduling and communication with clients to ensure consistent progress and feedback.
- Prepared students for standardized exams.

10.2019 - 19.2020

Biomedical Equipment Specialist - FR International Ltd. (Healthcare department).

Responsibilities:

- Responsible for Technology Evaluation used in the Medical Equipment (Ultrasound machines)
- Responsible for Training and Technical Support.
- Actively Collaborate with Medical Staff.
- Responsible for Quality Control of the Medical Equipment (Ultrasound Machines).
- Responsible for Customer Service.

07.2016 - 09.2016

Internship - CD3D Sp. z o. o. is one of the most renowned companies operating in the Medical 3D printing market in Central-Eastern Europe.

Responsibilities:

- Publication of articles related to 3D printing technology.
- Design and simulation in CAD programs such as “Inventor” and “SolidWorks”.
- Actively involved in a series of engineering and rapid prototyping projects using additive manufacturing - especially Fused Deposition Modelling (FDM).

I have undergone technical training concerning **3D printing technology** that included **FDM**, **SLA**, **DLP**, **CJP**, **SLS**, and **DMLS**. I obtained a **certificate of training in 3D printing technology (07.2016)**.

REFERENCE

Prof. Roy Vellaisamy
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Dr. Hasan Abbas
PhD Supervisor
University of Glasgow (UofG)
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