



Vasiliki (Vicky) Fiska

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WORK EXPERIENCE

Digital Innovation & Medical Physics Laboratory - Aristotle University of Thessaloniki (AUTH) – Thessaloniki, Greece

City: Thessaloniki | **Country:** Greece | **Website:** <https://medphys.med.auth.gr/berd> | **Name of unit/department:** School of Medicine - Biomedical Electronics Robotics & Devices (BERD) Group - **Business/sector:** Professional, scientific and technical activities

Research Associate

[07/12/2024 – Current]

- Project management and coordination for multidisciplinary teams (post-graduate students, electrical, clinical)
- Design and prototype soft-robotic gloves for hand rehabilitation: OpenSCAD modeling, material selection (silicone/elastomer), mold fabrication
- Develop and integrate pneumatic actuation systems, sensors (pressure, flex), and embedded control algorithms
- Oversee testing & validation protocols, collect performance data, iterate on ergonomics and safety
- Interface with clinical partners to align device functionality with patient needs (co-creation)

Centre for Research Technology Hellas (CERTH) – Thessaloniki, Greece

City: Thessaloniki | **Country:** Greece | **Website:** <https://bhv.itl.gr/person/fiska-vicky/> | **Name of unit/department:** Information Technologies Institute (ITI), Brain, Health & Vision Team - **Business/sector:** Professional, scientific and technical activities

Research Associate

[01/02/2021 – Current]

- Conduct and co-author peer-reviewed publications in Medical Informatics & Digital Health.
- Draft and shape competitive research proposals for national and EU funding.
- Design and develop RESTful APIs and full-stack applications using Python, JavaScript and CSS for data acquisition, processing and analysis.
- Architect and optimize data models and integration pipelines for heterogeneous research datasets.
- Implement scalable front-end and back-end solutions to support intuitive user workflows.
- Engineer AI and rule-based systems grounded in behaviour-change frameworks to deliver personalised content.
- Integrate and manage secure data exchange via external connectors.

MALVI Design & Communication Agency – Thessaloniki, Greece

City: Thessaloniki | **Country:** Greece

Software Engineer

[01/09/2017 – 01/02/2021]

- Responsible for the execution of full lifecycle software development, programming well-designed, testable, efficient code and producing specifications that determine operational feasibility.

Center of Talented Youth (CTY) Greece, at Anatolia College of Thessaloniki – Thessaloniki, Greece

City: Thessaloniki | Country: Greece

Online Educator in Computer Sciences

[01/10/2017 – 30/05/2021]

- Responsible for teaching JAVA programming and Web Design to groups of extremely bright, creative, and inquisitive students through Johns Hopkins Center for Talented Youth online platform.

Robotics Academy, University of Macedonia – Thessaloniki, Greece

City: Thessaloniki | Country: Greece

Robotics & Coding Educator

[01/10/2015 – 30/08/2018]

- Responsible for the design and implementation of an imaginative curriculum using robotics and coding as key components to teach students many subjects, including math, programming, scientific processes, project management, problem solving, teamwork and communication skills.

EDUCATION AND TRAINING

Informatics & Telecommunications Engineer

University of Western Macedonia

Country: Greece | Website: <https://ece.uowm.gr/> | Level in EQF: EQF level 7

MSc Medical Informatics

School of Medicine - Aristotle University of Thessaloniki

Country: Greece | Level in EQF: EQF level 7

PhD Student - Biomedical Engineering

Biomedical Technology and Digital Health Laboratory - University of Western Macedonia (UOWM - ECE) [01/03/2021 – Current]

Country: Greece | Website: <https://biomed.ece.uowm.gr/> | Level in EQF: EQF level 8

LANGUAGE SKILLS

Mother tongue(s): Greek

Other language(s): English | French

HONOURS AND AWARDS

[01/12/2016] IEEE TISP

IEEE TISP Champion

[15/06/2018] Erasmus +

Youthpass Certificate

- APV Leader of the Greek team Mataroa at the Erasmus+ YE about "Innovation through Robotics" in Tallinn, Estonia.

[01/12/2018] TechCamp

Leader of the winning team at the TechCamp - Digital Citizenship in the Disinformation Age

Leader of the winning team at the TechCamp - Digital Citizenship in the Disinformation Age, Cyprus, a co-organized program

by the Department of State's International Information Programs, the U.S. Embassy in Cyprus and the American Center at the University of Nicosia.

[10/12/2019] International Visitor Leadership Program - U.S. Department of State

IVLP Alumna

Selected to participate in the U.S. Department of State's International Visitor Leadership Program (IVLP), a three-week

exploration of women's contributions to STEM through research, leadership, education, and policy. Inspired by the film Hidden Figures, the program featured meetings with leading institutions such as Koch Institute for Integrative Cancer Research at MIT, the IBM Watson Health – AI Healthcare Solutions Laboratory, the Caltech University. The visit spanned Washington, D.C., Charleston, Boston, and Los Angeles, showcasing innovative practices and strategies to enhance women's participation in STEM.

NETWORKS & MEMBERSHIPS

Member - Hellenic Society of Biomedical Technology (ELEVIT)

Member - Hellenic U.S. Alumni Association

PROJECTS

[2024 – 2027]

MELIORA

Horizon EU Project, HORIZON-MISS-2023-CANCER-01:

- Responsible for the design and development of AI models using the COM-B framework to provide personalized physical activity and nutrition recommendations to empower women at risk of breast cancer, patients, and survivors, fostering sustainable behavioural changes.

[2022 – 2026]

RAISE

Horizon EU Project, HORIZON-INFRA-2021-EOSC-01:

- Assisting in the development of an extensible, robust and rich data reference model for the targeted pilot application domains.

[2022 – 2025]

HEROES: Human Extremity Robotic Rehabilitation and Outcome Enhancement for Stroke

Research Grant from Hellenic Foundation for Research and Innovation (HFRI):

- Responsible for the design and fabrication of Soft Robotic Wearable Gloves using multi-sensor data fusion and soft robotic actuation for the rehabilitation of the human hand.

[2021 – 2024]

VITALISE

Horizon EU Project, H2020-INFRAIA-2018-2020:

- Responsible for the design & development of both the front-end and back-end of the VITALISE Discovery Portal web platform using Node.js, Vanilla JavaScript and CSS enabling the search and discovery of Living Lab datasets across Europe.

[2021 – 2024]

HealthTourismHub

Operational Program of the Region of Central Macedonia 2021–2027, under the “Innovation Investment Plans” (project code: KMP6-0081778):

- Led the design and development of the HealthTourismHub platform, which offers the discovery and booking of health tourism packages promoting and supporting medical tourism in the Region of Central Macedonia, utilizing technologies such as Python, JavaScript and CSS.

[2020 – 2023]

uPrevent

Operational Programme Competitiveness, Entrepreneurship and Innovation 2014-2020 (EPAnEK):

- Responsible for the design & development of a software platform using Python, JavaScript and CSS to collect and analyze data from a smart shoe that redistributes foot pressure in diabetic patients.

[2020 – 2023]

DEMIGOD

Operational Programme Competitiveness, Entrepreneurship and Innovation 2014-2020 (EPAnEK):

- Design & development of a sweat-based glucose monitoring graphene nanodevice (closed-loop) with controlled transdermal nanoemulsion release for hypoglycemic drug delivery.

[2019 – 2022]

NeuroSuitUp: Neurorehabilitation through synergistic man-machine interfaces promoting dormant neuroplasticity in spinal cord injury

- Research Grant from 2019 National Strategic Reference Framework (NSRF) Supporting researchers with emphasis on young researchers

PUBLICATIONS

Integration and Validation of Soft Wearable Robotic Gloves for Sensorimotor Rehabilitation of Human Hand Function

Fiska V, Mitsopoulos K, Mantiou V, Petronikolou V, Antoniou P, Tagaras K, Kasimis K, Nizamis K, Tsipouras MG, Astaras A, et al., Applied Sciences. 2025; 15(10):5299.

A Health Tourism Ontology Framework for Versatile Applications

Gkevrekis, S., Fiska, V., Nikolopoulos, S., Kompatsiaris, I. (2025), Metadata and Semantic Research. MTSR 2024. Communications in Computer and Information Science, vol 2331. Springer, Cham.

Enhancing Sustainability in Health Tourism through an Ontology-Based Booking Application for Personalized Packages

Gkevrekis S, Fiska V, Nikolopoulos S, Kompatsiaris I., Sustainability. 2024; 16(15):6505.

DEMIGOD: A Low-Cost Microcontroller-Based Closed-Loop System Integrating Nanoengineered Sweat-Based Glucose Monitoring and Controlled Transdermal Nanoemulsion Release of Hypoglycemic Treatment with a Software Application for Noninvasive Personalized Diabetes Care

Fiska V, Papanikolaou E, Patila M, Prodromidis MI, Trachioti MG, Tzianni EI, Spyrou K, Angelidis P, Tsipouras MG., Micromachines. 2024; 15(7):887.

A Secure Data Publishing and Access Service for Sensitive Data from Living Labs: Enabling Collaboration with External Researchers via Shareable Data

Hernandez M, Konstantinidis E, Epelde G, Londoño F, Petsani D, Timoleon M, Fiska V, Mpaltadoros L, Maga-Nteve C, Machairas I, et al. Big Data and Cognitive Computing. 2024; 8(6):55.

Stepping Forward: A Scoping Systematic Literature Review on the Health Outcomes of Smart Sensor Technologies for Diabetic Foot Ulcers

Lazarou I, Fiska V, Mpaltadoros L, Tsaopoulos D, Stavropoulos TG, Nikolopoulos S, Dafoulas GE, Dailiana Z, Bargiota A, Kompatsiaris I., Sensors. 2024; 24(6):2009

NeuroSuitUp: System Architecture and Validation of a Motor Rehabilitation Wearable Robotics and Serious Game Platform

Mitsopoulos K., Fiska V., Tagaras K., Papias A., Antoniou P., Nizamis K., Kasimis K., et al., (2023) Sensors, 23(6), 3281

A non-invasive closed-loop diagnostic and therapeutic wearable device for diabetic hyperglycemia prevention: System Architecture

V. Fiska, S. Evangelou, N. Giannakeas, A. T. Tzallas, P. Angelidis and M. G. Tsipouras, 2022 7th South-East Europe Design Automation, Computer Engineering, Computer Networks and Social Media Conference (SEEDA-CECNSM), Ioannina, Greece, 2022, pp. 1-4

Neurorehabilitation Through Synergistic Man-Machine Interfaces Promoting Dormant Neuroplasticity in Spinal Cord Injury: Protocol for a Nonrandomized Controlled Trial

Athanasiou A, Mitsopoulos K, Praftsiotis A, Astaras A, Antoniou P, Pandria N, Petronikolou V, Kasimis K, Lyssas G, Terzopoulos N, Fiska V, et al., JMIR Res Protoc 2022;11(9):e41152

Automatic Parkinson's tremor assessment with data analysis from daily activities

V. Fiska, V. Gakilazou, N. Katertsidis, A. T. Tzallas, N. Giannakeas and M. G. Tsipouras, 2021 6th South-East Europe Design Automation, Computer Engineering, Computer Networks and Social Media Conference (SEEDA-CECNSM), Preveza, Greece, 2021, pp. 1-5

Motor data analysis of Parkinson's disease patients

V. Fiska, N. Giannakeas, N. Katertsidis, A. T. Tzallas, K. Kalafatakis and M. G. Tsipouras, 2020 IEEE 20th International Conference on Bioinformatics and Bioengineering (BIBE), Cincinnati, OH, USA, 2020, pp. 946-950