

Curriculum Vitae

Dr. Ioannis Kafetzis

Research Associate

Interventional and Experimental Endoscopy (InExEn)

Internal Medicine II

University Hospital of Würzburg, Würzburg, Germany

Webpages:

<https://scholar.google.gr/citations?user=gIV3aJcAAAAJ&hl=en>

<https://github.com/iokaf>

Email: ioanniskaf@gmail.com

Personal Data

Date of Birth

31-03-1993

Place of Birth

Veroia, Greece

Nationality

Greek

Education

2022 - Pres. Research associate, Interventional and Experimental Endoscopy (InExEn), University Hospital Würzburg, Germany.

2021 - 2024 Post-Doc. Physics Department, Aristotle University of Thessaloniki (AUTH), Greece.

2017-2021 PhD in Mathematical Theory of Systems and Control. Dissertation: Notions of equivalence for linear, time invariant, multivariable systems.

2015-2017 MSc. Theoretical Computer Science and Systems & Control Theory. Department of Mathematics, AUTH. GPA: 9.9/10

20011-2015 Bachelor. Department of Mathematics, AUTH. GPA: 7.78/10.

Research Interests

- Deep Learning
- Computer Vision
- Medical AI
- Scientific Prototyping
- Digitalization
- Chaotic Systems
- Secure Communications
- Random Number Generators
- Data Encryption
- Mathematical Control

Scholarships

2021 Teaching Assistant, Aristotle University of Thessaloniki

2017-2021 PhD Studies, State Scholarships Foundation of Greece.

Notable Publications

- Kafetzis, I., Fuchs, K. H., Sodmann, P., Troya, J., Zoller, W., Meining, A., & Hann, A. (2024). Efficient artificial intelligence-based assessment of the gastroesophageal valve with Hill classification through active learning. *Scientific Reports*, 14(1), 18825.
- Kafetzis, I., Moysis, L., & Volos, C. (2023). Assessing the chaos strength of Taylor approximations of the sine chaotic map. *Nonlinear Dynamics*, 111(3), 2755-2778.
- Kafetzis, I., Moysis, L., Tutueva, A., Butusov, D., Nistazakis, H., & Volos, C. (2023). A 1D coupled hyperbolic tangent chaotic map with delay and its application to password generation. *Multimedia Tools and Applications*, 82(6), 9303-9322.
- Kafetzis, I., & Karampetakis, N. (2023). On the Stabilization of Singular, Strictly Proper Transfer Function Matrices. *SIAM Journal on Control and Optimization*, 61(3), 1297-1321.

Open-Source and Prototypes

- Chaotic Password Generator: <https://iokaf-password-generator-app-wh0k6w.streamlit.app/>
- Real-Time, Chaos-based Audio Encryption: <https://github.com/iokaf/Chaotic-Audio-Encryption>
- Chaotic Maps Analysis Tool: <https://iokaf-chaotic-maps-analysis-main-4nqpqn.streamlit.app/>
- Design of Emulators for Non-linear Systems: <https://nonlinear-circuit-emulator.streamlit.app/>
- Active Learning for Medical AI development: <https://www.ukw.de/en/inexen/applied-ai/active-learning/>