Curriculum Vitae

Nikolaos Charalampidis

PhD Candidate
Laboratory of Nonlinear Systems – Circuits & Complexity (LANSCOM)
Department of Physics
Aristotle University of Thessaloniki, Greece
Webpages:
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Personal Data

Date of Birth	*02-03-1991*
Place of Birth	*Thessaloniki, Greece*
Nationality	*Greek*

Summary of Scientific – Academic Activities

➢ 2 International Journal publications and 2 IEEE Conference contributions.

Education

2021 -	PhD student. Physics Department, Aristotle University of Thessaloniki (AUTH), Greece "Design of Chaos-Based Cryptographic Systems".
2019-2020	8 months service in the Greek Army.
2017-2019	MSc. Applied Mathematics (Systems & Control), University of Groningen/Faculty of Science and Engineering, GPA 7.4
2009-2016	Bachelor. Department of Mathematics, AUTH. GPA: 6.13.

Research Interests

➢ Control Systems – Structural Controllability	Applications of chaos in:
➢ Chaotic Systems	➢ Secure Communications
➢ Chaos Synchronization	➢ Random Number Generators
➢ Chaotification	➢ Data Encryption
➢ Chaos in Education	

Journal Publications

➢ Jia, J., Trentelman, H.L., Charalampidis, N., Camlibel, M.K. Strong Structural Controllability of Colored Structured Systems. Systems & Control Letters, 2021 Jun 1; 152:104924.

➢ Moysis, L., Azar, A.T., Kafetzis, I., Tsiaousis, M., Charalampidis, N. *Introduction to Control Systems Design Using Matlab*. International Journal of System Dynamics Applications (IJSDA), 2017, Jul 1; 6(3):130-70.

Conference Publications

➢ N. Charalampidis, C. Volos, L. Moysis, H. E. Nistazakis and I. Stouboulos, "A Novel Piecewise Chaotic Map for Image Encryption," *2022 11th International Conference on Modern Circuits and Systems Technologies (MOCAST)*, 2022, pp. 1-4, doi: 10.1109/MOCAST54814.2022.9837545.

➢ N. Charalampidis, C. Volos, L. Moysis, A. V. Tutueva, D. Butusov and I. Stouboulos, "Text Encryption Based on a Novel One Dimensional Piecewise Chaotic Map," *2022 Conference of Russian Young Researchers in Electrical and Electronic Engineering (ElConRus)*, 2022, pp. 263-268, doi: 10.1109/ElConRus54750.2022.9755622.

Conference/Workshops

➢ Charalampidis, N., Volos, C., Moysis, L., Stouboulos, I., *A Chaotification Model Based on Modulo Operator and Secant Functions for Enchancing Chaos.* In 2022 Meeting for the dissemination of research in the study of complex systems and their applications (EDIESCA 2022), 28th -30th of September, Mexico.

➢ Charalampidis, N., Volos, C., Moysis, L., Stouboulos, I., *Color Image Encryption Using Robust Chaotic Map.* In 2022 Conference on Nonlinear Science and Complexity (NSC 2022), 26th -29th of September, Thessaloniki.

➢ Charalampidis, N., Volos, C., Moysis, L., Nistazakis, H.E., Stouboulos, I. *Composition of Fuzzy Numbers with Chaotic Maps.* In 2nd Online Conference on Nonlinear Dynamics and Complexity (NDC), 4th-6th of October 2021.

➢ Charalampidis, N. *Introduction of New Chaotic Systems Based on Fuzzy Numbers*. In Educational Seminar on the Research Activities of the Laboratory of Nonlinear Systems, Circuits & Complexity (LaNCSom) of the Department of Physics at the Aristotle University of Thessaloniki, 29th of May 2021.

Participation in Research Projects

➢ *Tuning of a PI Controller Using LQR at Cryogenic Temperatures* for the Athena X-IFU instrument, Netherlands Institute for Space Research-University of Groningen, Funded by the Dutch Research Council (NWO), Trainee.