Emanuel-Attila Kokovics

Ph.D. student
West University of Timisoara
Department of Mathematics
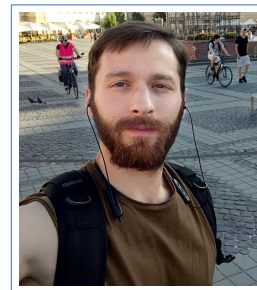`https://www.linkedin.com/in/emanuel-attila-kokovics-91772a152/`
`https://github.com/Professor-Emanuel`

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Academic & Work Experience

Sep 2023 - Present	**Junior Software Programmer**, Vitesco, Timisoara, Romania.
	○ C, C Embedded
Feb 2023 - Present	**External Assistant Professor**, West University of Timisoara, Faculty of Mathematics and Computer Science.
	○ Numerical Simulations with applications in Python.
Jan 2023 - Apr 2023	**Junior Software Programmer**, Wenglor, Sibiu, Romania (remote).
	○ C++, Qt.
Apr 2022 - Dec 2022	**Analyst Programmer**, TimeLine Business Systems, Sibiu, Romania (remote).
	○ C#, Visual Basic, Stochastic Processes.
Oct 2021 - Jan 2022	**Software Programmer**, Accenture Industrial Software Solutions, Cluj-Napoca, Romania (remote).
	○ C/C++, Visual Basic, Manual Testing, Automated Testing.
Oct 2017 - Oct 2020	**External Assistant Professor**, West University of Timisoara, Faculty of Mathematics and Computer Science.
	○ Calculus, Differential Equations, Programming in C, Microsoft Office Suite Lectures.
Oct 2017 - Jun 2018	**Freelancer**, Math & Programming Private Lessons.
	○ Calculus & Programming in C Lectures.
Oct 2014 - Jun 2016	**Freelancer**, Math Private Lessons.
	○ Calculus, Algebra, Geometry, Middle School & High School Level Lectures.

List of Programming Projects

- ○ My Youtube channel where I create programming and math tutorials:
  `https://www.youtube.com/channel/UChULjyQTjrnmhKO7E1aaq9A`
- ○ C/C++ Applications, Front-End Web development games, Python games, SQL/PLSQL:
  `https://github.com/Professor-Emanuel`
- ○ Mathematica 11 codes for the paper: E. Kaslik, E-A. Kokovics, A. Rădulescu - **Stability and bifurcations in Wilson-Cowan systems with distributed delays, and an application to basal ganglia interactions**, Commun Nonlinear Sci Numer Simulat, Elsevier, vol. 104, January 2022, 105984. (available in electronic format).
  `https://github.com/ekokovics/wilson-cowan-simulations`

List of attended Programming Udemy Courses

- ○ C Programming For Beginners - Master the C Language:
  `https://www.udemy.com/course/c-programming-for-beginners-/`

Education

Sep 2018 - Nov 2020	**West University of Timisoara, Romania**, *B.Sc. in Computer Science (dropped out, last year).*
Oct 2017 - present	**West University of Timisoara, Romania**, *Ph.D. in Applied Mathematics, Thesis: Dynamical Systems with Delays and Applications in Epidemiology, under supervision of Conf. Dr. Eva Kaslik.*
Oct 2016 - Jun 2017	**High School "S.A. De Castro", Oristano, Italy**, *Italian Language Certification.*
Oct 2014 - Jun 2016	**West University of Timisoara, Romania**, *M.Sc. Analytical and Geometrical Modeling of Systems.*
Oct 2014 - Jul 2015	**West University of Timisoara, Romania**, *High School Certified Professor Degree.*
	○ *1 semester of pedagogical practice at the "Francesco Saverio Nitti" Economic College, Timisoara.*

Oct 2012 - Jul 2014	**West University of Timisoara, Romania**, *Middle School Certified Professor Degree.*
	○ *1 year of pedagogical practice at the "General School no.13", Timisoara, under the supervision of Mathematics Professor Buse Gabriela.*
Oct 2011 - Jul 2014	**West University of Timisoara, Romania**, *B.Sc. in Mathematics & Computer Science.*
Sep 2007 - Jun 2011	**Traian Lalescu Theoretical High School**, *Mathematics & Computer Science class, valedictorian.*

Research Experiences

Jul 2019 - Sep 2019	**Early-Stage Researcher**, ACMIT, Wiener Neustadt, Austria, under supervision of Associate Professor Dr. Gheorghe Tigan.
	○ **P**roject: Dynamics H2020-MSCA-RISE-2017 - 777911.
	○ *f*irst presentation title: Obtaining polar forms for Chenciner bifurcation, July 9th, 2019.
	○ *s*econd presentation title: Studying a normal form for double-Hopf bifurcation, August 21st, 2019.
	○ *t*hird presentation title: On analysis of a normal form in degenerate double-Hopf bifurcation, September 9th, 2019.
Jul 2018 - Aug 2018	**Early-Stage Researcher**, ACMIT, Wiener Neustadt, Austria, under supervision of Associate Professor Dr. Gheorghe Tigan.
	○ **P**roject: Dynamics H2020-MSCA-RISE-2017 - 777911.
	○ *p*resentation title: Neimark-Sacker bifurcation of fixed points in discrete-time dynamical systems, Augusts 9th, 2019.

Research Interests

○ *Delay Differential Equations, Neuroscience Mathematical Modeling, Dynamical Systems, Neuron modeling, Artificial neurons.*

Publications

○ Eva Kaslik, Emanuel-Attila Kokovics, and Anca Radulescu. Wilson–Cowan neuronal interaction models with distributed delays. In New Trends in Nonlinear Dynamics, pages 203–211. Springer, 2020.

○ Tigan, G.; Brandibur, O.; Kokovics, E.; Vesa, L.F. Degenerate Chenciner Bifurcation Revisited. Int. J. Bifurcation Chaos 2021, 10, 2150160.

○ E. Kaslik, E. A. Kokovics, and A. Rădulescu, Stability and bifurcations in Wilson-Cowan systems with distributed delays,and an application to basal ganglia interactions, Commun. Nonlinear Sci. Numer. Simul. 104 (2022), 105984.

○ Eva Kaslik, Emanuel-Attila Kokovics, Stability and bifurcations in scalar differential equations with a general distributed delay, Applied Mathematics and Computation, Volume 454, 2023, 128100

○ E. Kaslik, E. A. Kokovics, and A. Rădulescu, Stability of coupled Wilson-Cowan systems with distributed delays (submitted paper).

Grants & Projects

○ grant for participating as a trainee at the Training School on "Computational methods for fractional-order problems" organized by the Cost Action CA 15225 in Bari, Italy , July 22-26, 2019.

○ grant within the mobility project for researchers PN-III-P1-1.1-MC-2019-0924, for participation at the conference "International Conference on Mathematical NeuroScience" (ICMNS) 2019, held at University of Copenhagen, Denmark, June 24-26, 2019.

○ research grant for PhD students within the project "High-level research in West University of Timisoara by supporting and developing the research centers of the University", November 2018.

○ grant within the mobility project for researchers PN-III-P1-1.1-MC2018-1021, for participation at the conference "Emerging Trends in Applied Mathematics and Mechanics" (ETAMM) 2018, organized by the Jagiellonian University in Krakow, June 18-22, 2018.

Conferences & Presentations

11 - 15 Sep 2023	**International Association for Mathematics and Computers in Simulations (IMACS2023), Rome, Italy**.
	○ section: Delay differential equations and applications.
	○ title: Stability of coupled Wilson-Cowan systems with distributed delays.
27 - 30 Jun 2023	**Mathematical Problems in Engineering, Aerospace and Sciences(ICNPAA2023), Prague, Czech Republic**.

○ section: Mathematics domain.

○ title: A generalized approach on the stability and bifurcations in a differential equation with a general distributed delay.

22 - 24 Oct 2020	**3rd Conference of Doctoral Schools of the University Consortium (CSDCU-MIF2020), Iasi, Romania**.

○ section: Mathematics domain.

○ title: A generalized approach on the stability and bifurcations in a differential equation with a general distributed delay.

24 - 26 Jun 2019	**5th International Conference on Mathematical Neuroscience (ICMNS 2019), Copenhagen, Denmark**.

○ section: Poster Session.

○ title: Wilson-Cowan Neuronal Interaction Models with Distributed Delays.

17 - 20 Feb 2019	**1st International Nonlinear Dynamics Conference (NODYCON 2019), Rome, Italy**.

○ section: Recent trends in nonlinear dynamics - BIOLOGICAL SYSTEMS DYNAMICS I.

○ title: Wilson-Cowan Neuronal Interaction Models with Distributed Delays.

03 - 06 Feb 2019	**10th International Conference on Dynamical Systems Applied to Biology and Natural Sciences (DSABNS 2019), Napoli, Italy**.

○ section: Poster section.

○ title: Wilson-Cowan Neuronal Interaction Models with Distributed Delays.

18 - 22 Jun 2018	**Emerging Trends in Applied Mathematics and Mechanics (ETAMM 2018), Krakow, Poland**.

○ section: Dynamical Systems in Medicine and Biology.

○ title: Stability of two-dimensional systems with distributed delays and applications to a SIR model.

Workshops & Presentations

22 - 26 Jun 2019	**attended the Training School "Computational Methods for Fractional-Order Problems" within COST Action CA15225, Bari, Italy**.
10 - 14 Jun 2019	**attended the Summer School "Smooth Dynamical Systems Theory", organized within the project H2020-MSCA-RISE-2017 - 777911-Dynamics, Timisoara, Romania**.
10 - 11 Jan 2019	**attended the ECI workshop and CG and WG meeting within the COST action CA15225, Dublin, Ireland**.
07 - 09 Feb 2018	**attended the Ninth Workshop Dynamical Systems Applied to Biology and Natural Sciences (DSABNS 2018), Torino, Italy**.

Skills & Driving Licence

○ **Language skills.**
   Romanian (native), English (advanced), Italian (intermediate high), German (learning).

○ **Digital Skills.**
   C/C++ program (intermediate), Python program (intermediate), LUA/LOVE2D program (intermediate), Front-end Technologies (intermediate), Microsoft Office Suite (advanced), R Statistics Program (intermediate), LaTeX/Overleaf software (advanced), SQL/PLSQL (advanced).

○ **Driving Licence: B Category (expired).**