

Emanuel-Attila Kokovics

Ph.D. student

West University of Timisoara

Department of Mathematics

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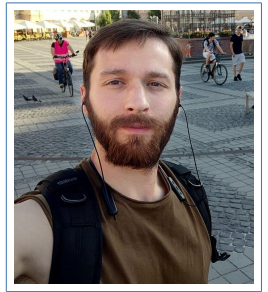
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Academic & Work Experience

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| Dec 2023 - Present | Scientific Research Assistant , Institute for Advanced Environmental Research, West University of Timisoara. <ul style="list-style-type: none">○ Delay Differential Equations, Neuroscience Mathematical Modeling, Dynamical Systems, Neuron modeling, Artificial neurons |
| Sep 2023 - Present | Junior Software Programmer , Vitesco, Timisoara, Romania. <ul style="list-style-type: none">○ C, C Embedded |
| Feb 2023 - Present | External Assistant Professor , West University of Timisoara, Faculty of Mathematics and Computer Science. <ul style="list-style-type: none">○ Numerical Simulations with applications in Python. |
| Jan 2023 - Apr 2023 | Junior Software Programmer , Wenglor, Sibiu, Romania (remote). <ul style="list-style-type: none">○ C++, Qt. |
| Apr 2022 - Dec 2022 | Analyst Programmer , TimeLine Business Systems, Sibiu, Romania (remote). <ul style="list-style-type: none">○ C#, Visual Basic, Stochastic Processes. |
| Oct 2021 - Jan 2022 | Software Programmer , Accenture Industrial Software Solutions, Cluj-Napoca, Romania (remote). <ul style="list-style-type: none">○ 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. <ul style="list-style-type: none">○ Calculus, Differential Equations, Programming in C, Microsoft Office Suite Lectures. |
| Oct 2017 - Jun 2018 | Freelancer , Math & Programming Private Lessons. <ul style="list-style-type: none">○ Calculus & Programming in C Lectures. |
| Oct 2014 - Jun 2016 | Freelancer , Math Private Lessons. <ul style="list-style-type: none">○ 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/UCHULjyQTjrmhK07E1aaq9A>
- 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

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| 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. <ul style="list-style-type: none"> ◦ 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. <ul style="list-style-type: none"> ◦ 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. <ul style="list-style-type: none"> ◦ Project: Dynamics H2020-MSCA-RISE-2017 - 777911. ◦ first presentation title: Obtaining polar forms for Chenciner bifurcation, July 9th, 2019. ◦ second presentation title: Studying a normal form for double-Hopf bifurcation, August 21st, 2019. ◦ third 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. <ul style="list-style-type: none"> ◦ Project: Dynamics H2020-MSCA-RISE-2017 - 777911. ◦ presentation 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.
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- 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).**