Dr. PAVLO V. TYMOSHCHUK

Curriculum Vitae

EDUCATION

- **D.Sc. in Telecommunications Engineering (2006)**
  from **Odesa National Academy of Telecommunications, Odesa, Ukraine.**
  Doctoral dissertation: "Development of theory and modeling methods of functional blocks of radio engineering systems based on implicit integral-differential equations".
- **PhD in Electrical Engineering (1992)**
  from **L'viv Polytechnic National University, L'viv, Ukraine.**
  Doctoral dissertation: "Approximation models and identification of electric circuits".
- **MSc in Electrical Engineering (1977-1982)**
  from **L'viv Polytechnic National University, L'viv, Ukraine.**

EMPLOYMENT EXPERIENCE

● **Full-time Clinical Associate Professor,** ***University of North Texas,*** (Denton, TX, USA), 08/2022 – present.
● **Full-time and part-time Professor,** ***Silesian University of Technology,*** (Gliwice, Poland), 03/2018 – 09/2023.
● **Full-time Visiting Assistant Professor,** ***St. Mary's College of Maryland,*** (St. Mary's City, MD, USA), 08/2021 – 12/2021.
● **Full-time Professor,** ***L'viv Polytechnic National University,*** (L'viv, Ukraine), 2009 – 06/2021 (Associate Professor (2005-2009); Head of Computer Aided Design Lab (1995-2005); Senior Research Scientist (1992-1995); Research Scientist (1990-1992); Senior Engineer (09/1987 – 1990)).
● **Fulbright Scholar,** ***Missouri University of Science and Technology*** (Rolla, MO, USA), 11/2015 – 08/2016.
● **Full-time and part-time Professor,** ***University of Computer Sciences and Skills,*** (Lodz, Poland), 10/2014 – 09/2015.
● **Full-time and part-time Professor,** ***State University of Telecommunications,*** (L'viv, Ukraine), 09/2008 – 06/2015.
● **Full-time Professor,** ***Lodz University,*** (Lodz, Poland), 10/2011 – 09/2013.
● **Full-time Visiting Researcher,** ***Federal University of Rio de Janeiro*** (Rio de Janeiro, Brazil), 11/2001 – 11/2002.
● **Full-time Engineer,** ***Industrial Companies "Conveyor" and "Lvivsilmash",*** (L'viv, Ukraine), 10/1982 – 08/1987.

SERVICE TO THE PROFESSION, PARTICIPATION IN THE REVIEWING PROCESS

● **Member of the International Programme Committee** of the 2023 IEEE International Scientific and Technical Conference "Fundamentals of Electrotechnics and Circuit Theory" (IEEE SPETO 2023).
● **Member of the Scientific and Methodological Council** of the Institute of Computer Sciences and Information Technologies at L'viv Polytechnic National University, 2018 - 2021.
● **Member of the Editorial Board** of the "Computer Systems of Design. Theory and Practice", 2008 - 2021.
● **Member of the Scientific Council of the Electrical Engineering Department at Silesian University of Technology (Poland),** 2018-2019.
● **Member of the Organizing Committee** of the 2019 IEEE International Conference "The Experience of Designing and Applications of CAD Systems" (IEEE CADSM 2019).
● **Member of two D.Sc. and PhD Juries at L'viv Polytechnic National University (Ukraine),** 2008 – 2015.
● **Member of the International Programme Committee** of the XX and XXII International Ukrainian-Polish Conferences on "CAD in Machinery Design. Implementation and Educational Issues" (CADMD 2012, 2014).
● **Member of the Scientific Council of the Economics and Sociology Department at Lodz University (Poland),** 2011-2013.
● **Member of the International Programme Committee** of the 2010 IEEE International Scientific and Technical Conference **"**Computer Sciences and Information Technologies" (IEEE CSIT 2010).

● **Chair of the State Examination Committee at State University of Telecommunications (Ukraine),** 2009-2011.
● **Chair of the State Examination Committee at Ternopil National Economic University (Ukraine),** 2007-2009.
● **Participant** of more than 25 International Conferences and Workshops, author of more than 30 presentations including invited talks.
● **Reviewing** more than 100 papers in total for such journals as "IEEE Transactions on Neural Networks and Learning Systems", "IEEE Transactions on Industrial Informatics", "Neural Computing and Applications", "Computer Systems of Design. Theory and Practice", and for such IEEE International Conferences as CADSM and MEMSTECH.
● **Proposal reviewing** for the Fulbright Program in Ukraine.

HONORS

● **Acknowledgement for contribution to the development of international cooperation in the scientific, educational and culturological field, as well as for the creation of an intellectual face of the L'viv city** from the Institute of International Education of the Fulbright Program in Ukraine (Kyiv, Ukraine), 2018.
● **Fulbright Scholar Award** from the Fulbright Program in Ukraine (Kyiv, Ukraine), 2015.
● **Acknowledgement for collaboration, professionalism, and involvement and contribution in development of the University** from the Chancellor of University of Computer Sciences and Skills (Lodz, Poland), 2015.
● **Honoured decoration for scientific achievements** from the Rector of L'viv Polytechnic National University (Ukraine), 2006.

MEMBERSHIP IN THE SCIENTIFIC SOCIETIES

Senior Member, INNS, IEEE, IEEE CIS, IEEE CSS

PUBLICATIONS

SELECTED BOOK

1. P. Tymoshchuk and M. Lobur, *Principles of Artificial Neural Networks and Their Applications: Tutorial*. Lviv, Ukraine: Lviv Polytechnic Publishing House, 2020.

SELECTED PEER-REVIEWED JOURNAL PUBLICATIONS

2. P. Tymoshchuk and D. Wunsch, "Design of a K-winners-take-all model with a binary spike train," *IEEE Trans. Syst. Man. Cybern. B, Cybern.*, vol. 49, no. 8, pp. 3131-3140, Aug. 2019.
3. P. V. Tymoshchuk, "A model of analogue K-winners-take-all neural circuit," *Neural Networks*, vol. 42, pp. 44-61, June 2013.
4. P. V. Tymoshchuk, "A discrete-time dynamic K-winners-take-all neural circuit", *Neurocomputing, vol. 72, 2009, pp. 3191-3202*.
5. P.Tymoshchuk and E.Kaszkurewicz, "A winner-take-all circuit using neural networks as building blocks", *Neurocomputing,* vol. 64, 2005, pp. 375-396.

SELECTED PEER-REVIEWED CONFERENCE PROCEEDINGS

6. P. Tymoshchuk, "Optimal control for continuous-time scalar nonlinear systems with known dynamics", in *Proc. 16th Int. Conf. Control, Automation, Robotics and Vision,* Shenzhen, China, 2020, pp. 695–700.
7. P. Tymoshchuk, "A neural circuit model of adaptive robust tracking control for continuous-time nonlinear systems", in *Proc. 28th Int. Conf. ICANN,* LNCS 11727, 2019, pp. 819–835.
8. P. V. Tymoshchuk, "A fast analogue *K*-winners-take-all neural circuit", *in Proc. Int. Joint Conf. Neural Networks,* 2013, pp. 882-889.
9. P. Tymoshchuk, "Continuous-time model of analogue K-winners-take-all neural circuit", *in Proc. 13th Int. Conf. EANN,* CCIS 311, 2012, pp. 94–103.
10. P.Tymoshchuk and E.Kaszkurewicz, "A Winner-take-all circuit based on second order Hopfield neural networks as building blocks", *in Proc. Int. Joint Conf. Neural Networks,* vol. II, 2003, pp. 891-896.