



Grzegorz Marcin Wójcik

Professor of Computer Science and Telecommunication

Curriculum Vitae

Scientific Biography

- 25.07.2024 **Professorship in Engineering and Technical Sciences in the field of Computer Science and Telecommunication**, *Resolution of the President of the Republic of Poland of July 25, 2024, No. 115.7.2024*, Monitor Polski of August 22, 2024, Pos. 791
- 18.06.2013 **Habilitation in Technical Sciences in the field of Biocybernetics and Biomedical Engineering**, *Faculty of Automatic Control, Electronics and Computer Science*, Silesian University of Technology, Gliwice, Poland
- 13.12.2004 **Doctorate in Physical Sciences**, *Faculty of Mathematics, Physics and Computer Science*, Maria Curie-Skłodowska University in Lublin, Poland
- 2000–2004 **Doctoral studies at Institute of Physics**, *Faculty of Mathematics, Physics and Computer Science*, Maria Curie-Skłodowska University in Lublin, Poland
- 20.06.2000 **Master's of Science Degree in the field of Computer Physics**, *Faculty of Mathematics and Physics*, Maria Curie-Skłodowska University in Lublin, Poland
- 1995–2000 **Master studies in Physics**, *Faculty of Mathematics and Physics*, Maria Curie-Skłodowska University in Lublin, Poland
- 1991–1995 **1st Stanislaw Staszic High School in Lublin**, *Class profiled for Mathematics, Physics and Computer Science*, Poland
- 1983–1991 **Romuald Traugutt Primary School No. 6 in Lublin**, Poland

Employment

[Maria Curie-Skłodowska University in Lublin](#)

- 1.09.2024– **Full Professor**, *Faculty of Mathematics, Physics and Computer Science*, Institute of Computer Science
- 14.11.2022– **Senator of MCSU**

*Maria Curie-Skłodowska University, Institute of Computer Science
ul. Akademicka 9, 20-033 Lublin, Poland*

☎ +48 (81) 53-72-940 • 📠 +48 (81) 53-76-262
✉ gmwojcik@umcs.edu.pl • 🌐 gmwojcik.pl • in gmwojcik
🐦 gmwojcik • 🔄 gmwojcik

- 1.10.2019– **Head of the Department of Neuroinformatics and Biomedical Engineering**, *Faculty of Mathematics, Physics and Computer Science*, Institute of Computer Science
- 1.10.2015– **Associate Professor**, *Faculty of Mathematics, Physics and Computer Science*, 31.08.2024 Institute of Computer Science
- 1.09.2016– **Head of Department of Neuroinformatics**, *Faculty of Mathematics, Physics and Computer Science*, Institute of Computer Science, 30.09.2019
- 1.09.2014– **Head of Laboratory of Neuroinformatics**, *Faculty of Mathematics, Physics and Computer Science*, Institute of Computer Science, 31.08.2016
- 1.07.2013– **Assistant Professor with Habilitation**, *Faculty of Mathematics, Physics and Computer Science*, Institute of Computer Science, 30.09.2015
- 1.10.2005– **Assistant Professor**, *Faculty of Mathematics, Physics and Computer Science*, Institute of Computer Science, 30.06.2013
- [Polish-Japanese Academy of Information Technology](#)
- 1.10.2024– **Full Professor**, *Faculty of Computer Science*
- 1.03.2024– **Head of postgraduate studies "Python – Programming for Artificial Intelligence"**, *Faculty of Computer Science*
- 1.03.2024– **Head of postgraduate studies "Security Testing of IT Systems"**, *Faculty of Computer Science*
- 1.07.2021– **Senator of PJAiT**
- 1.07.2021– **Head of the Department of Intelligent Systems and Data Science**, *Faculty of Computer Science*
- 1.07.2021– **Head of "Data Science" specialisation at Computer Science 2nd degree studies**, *Faculty of Computer Science*
- 20.10.2020– **Head of "Intelligent Data Processing Systems" specialisation at Computer Science 1st degree studies; since 2025 Intelligent Systems and Data Science**, *Faculty of Computer Science*
- 1.10.2018– **Head of postgraduate studies "Cybersecurity of Information and Telecommunication Systems"**, *Faculty of Computer Science*
- 1.10.2017– **Head of postgraduate studies "Big Data Engineering"**, *Faculty of Computer Science*
- 1.10.2017– **Associate Professor**, *Faculty of Computer Science*, 30.09.2024
- [University of Economics and Innovation in Lublin](#)
- 1.10.2013– **Associate Professor**, *Faculty of Transport and Computer Science*, 30.09.2017
- 1.10.2012– **Assistant Professor**, *Faculty of Transport and Computer Science*, 30.09.2013
- 1.10.2008– **Dean's Proxy for the 1st Degree Graduate Studies in Computer Science**, 30.09.2009 *Faculty of Transport and Computer Science*

*Maria Curie-Skłodowska University, Institute of Computer Science
ul. Akademicka 9, 20-033 Lublin, Poland*

☎ +48 (81) 53-72-940 • 📠 +48 (81) 53-76-262
✉ gmwojcik@umcs.edu.pl • 🌐 gmwojcik.pl • in gmwojcik
🐦 gmwojcik • 🔄 gmwojcik

1.10.2007– **Lecturer, Faculty of Transport and Computer Science**
30.09.2012

[1st Stanislaw Staszic High School in Lublin](#)

1.09.2004– **Contract Teacher**
30.09.2005

1.09.2003– **Trainee Teacher**
31.08.2004

[Daewoo Motor Poland, Lublin](#)

3.07.2000– **Analyst Programmer**
14.10.2000

1.05.2000– **Application Programmer**
2.07.2000

1.02.2000– **Referent**
30.04.2000

[Additional](#)

2001-2004 **Computational Neuroscience Teacher, Youth Academy of Skills, Ignacy Jan Paderewski Foundation for the Promotion of Alternative Forms of Education in Lublin**

Projects

- 1.04.2024–31.05.2024 – UMCS Programming Academy". Contractor. Grant under the "Social Responsibility of Science" program. Ministry of Science and Higher Education (MNiSW) No.: POPUL/SP/0193/2023/01
- 1.01.2021–31.12.2023 – pREservIng fuNdamental rIghTs In the use of digitAl technoLogies for e-health ServicEs (REINITIALISE). Scientific Board Member, Team Member. Horizon 2020, No.: 952357
- 30.06.2022–31.05.2023 – Investigations of brain cortex activity in deep state of relaxation. Investigator. Minigrants of Maria Curie-Skłodowska University, 2nd edition.
- 13.12.2021–31.05.2022 – Head of the task "Conducting neurological and psychological tests" as part of the EEGDigiTrack Biofeedback AI project implemented by UMCS - an innovative device for personalized neurotherapy with scientifically proven effectiveness RPMA0.01.02.00-14-b459/18-00
- 15.07.2021–15.07.2022 – Understanding the Brain Fog – Research on COVID-19 Post-Infectious Chronic Fatigue Syndrome. NAWA Urgency Grants. Project Coordinator. Grant No. BPN/GIN/2021/1/00019/U/00001
- 1.07.2020–15.02.2022 – Integrated system for the treatment of speech impediments – VIRTUAL SPEECH THERAPY SYSTEM – VSTS. Chief R&D Officer. No. POIR.01.01.01-00-0842/19
- 1.07.2020–31.10.2021 – EEGDigiTrack Biofeedback AI – an innovative device for personalized neurotherapy with scientifically proven effectiveness. Senior Machine Learning Researcher. No. RPMA.01.02.00-14-b459/18-00

Maria Curie-Skłodowska University, Institute of Computer Science

ul. Akademicka 9, 20-033 Lublin, Poland

☎ +48 (81) 53-72-940 • 📠 +48 (81) 53-76-262

✉ gmwojcik@umcs.edu.pl • 🌐 gmwojcik.pl • in gmwojcik

🐦 gmwojcik • 🔄 gmwojcik

- 14.10.2020–30.12.2020 – Head of the task "Preparation of a dedicated analysis of the feasibility of innovations regarding the support of psychological aspects of recovery and treatment that improve the quality of life" as part of the implementation of the special purpose subsidy agreement of the Lublin Municipality for the VRMed startup. Agreement No. 76/WSP/20
- 1.09.2014–30.09.2016 – Learning with ICT use (LEARN IT). Head, Principal Investigator. University of Economics and Innovation in Lublin, Poland. Foundation for the Development of the Education System. Project implemented under the "Erasmus+" Program, Ka2: cooperation for Innovation and exchange of good practices, action - Strategic Partnerships. No. 2014-1-PL01-KA200-003353
- 23.06.2010–30.04.2013 – Autism Spectrum Disorder: Integrated Theory. Investigator. Grant of Minister of Science and Higher Education (MNiSW) No. 9011/B/T02/2010/38
- 1.04.2009–31.12.2012 – Meritorical Coordinator for ICT in the project "School of Key Competences". University of Economics and Innovation in Lublin, Poland. The project financed by the European Union from the European Social Fund and the State Budget under the Human Capital Operational Program. No. UDA-POKL.03.03.04-00-133/09/01
- 6.06.2008–5.06.2010 – Investigating of the model of primate visual system in the large-scale simulation. Head, Principal Investigator. Grant of Minister of Science and Higher Education (MNiSW) No. N519 403734
- 9.03.2009–10.10.2009 – Meritorical Expert – content author of physics and mathematics in the project "Hand in Hand with Einstein. 2nd Edition". Betacom S.A. Warsaw, Poland. The project financed by the European Union from the European Social Fund. No. UDA-POKL.03.03.04-00-142/08-00
- 17.05.2007–16.05.2009 – Modelling and large-scale simulations of the mammalian visual cortex. Principal Investigator. Grant of Minister of Science and Higher Education (MNiSW) No. N519 01732/2120
- 2.01.2007–15.12.2007 – Investigating the properties of the simulated mammalian visual cortex macro-neural ensembles. Project Coordinator, Principal Investigator. Grant of Maria Curie-Skłodowska University in Lublin Vice-Rector for Science
- 15.12.2004–30.11.2005 – CLUSTERIX – National Linux Cluster. Investigator. Grant of State Committee for Scientific Research (KBN) No. 6T11 2003C/06098

Research Interships

- 26.10.2015–26.04.2016 – Independent Laboratory of Neurophysiological Research. Medical University of Lublin, Poland.
- 1.08.2005–26.08.2005 – Edinburgh Parallel Computing Centre (EPCC), Edinburgh, United Kingdom - HPC-Europa (RII3-CT-2003-506079), with the support of the European Community - Research Infrastructure Action under the FP6 Structuring the European Research Area Programme.
- 1.08.2005–26.08.2005 – Dept. of Computing Science and Mathematics of Stirling University, Stirling, United Kingdom - HPC-Europa (RII3-CT-2003-506079), with the support of the European Community - Research Infrastructure Action under the FP6 Structuring the European Research Area Programme.

Maria Curie-Skłodowska University, Institute of Computer Science

ul. Akademicka 9, 20-033 Lublin, Poland

☎ +48 (81) 53-72-940 • 📠 +48 (81) 53-76-262

✉ gmwojcik@umcs.edu.pl • 🌐 gmwojcik.pl • in gmwojcik

🐦 gmwojcik • 🔄 gmwojcik

Scientific Visits

- 2023 – Jordan University College [JUCo], Morogoro, Tanzania
- 2023 – Mzumbe University, Mzumbe, Tanzania
- 2023 – College of Business Education [CBE], Dar es Salaam, Tanzania
- 2023 – Dar es Salaam Institute of Technology [DIT], Dar es Salaam, Tanzania
- 2022 – Department of Cognitive and Brain Sciences, Ben-Gurion University of the Negev, Beersheba, Israel
- 2016 – Fondo Formación Euskadi, Trapagaran, Spain (LEARN IT)
- 2015, 2016 – Klaipeda State University of Applied Sciences, Lithuania (LEARN IT)
- 2015 – Transport and Telecommunication Institute, Riga, Latvia (LEARN IT)
- 2009, 2012, 2013 – Bergen University College, Bergen, Norway [FSS, EEA Grants, Norway Grants, Erasmus – Life-Long Learning]
- 2006, 2009, 2010 – Dept. of Physiology, Anatomy & Genetics (DPAG), University of Oxford
- 2006, 2008 – Interdisciplinary Center for Neural Computations (ICNC), Hebrew University, Jerusalem, Israel
- 2001 – Institute for Theoretical Computer Science at Technische Universität Graz, Austria

Decorations

- 28.11.2025 – Medal of Merit for the City of Lublin – Merentibus Civitatis Lublini
- 5.07.2024 – Medal of the National Education Commission for Special Merits in Education and Upbringing
- 25.02.2024 – Silver Shooting Badge of Polish Shooting Sport Association, Center-fire Pistol (Pcz20), Erma ESP 85A
- 25.02.2024 – Silver Shooting Badge of Polish Shooting Sport Association, Sport Pistol (Psp20), Erma ESP 85A
- 10.12.2023 – Bronze Shooting Badge of Polish Shooting Sport Association, Center-fire Pistol (Pcz20), Erma ESP 85A
- 30.07.2023 – Bronze Shooting Badge of Polish Shooting Sport Association, Sport Pistol (Psp20), Erma ESP 85A
- 23.03.2023 – Gold Shooting Badge of Polish Shooting Sport Association, Air Pistol (Ppn20), FWB 65

Awards

- 2025 – 4th Class Individual Award of Rector of Maria Curie-Skłodowska University in Lublin for outstanding scientific achievements
- 2025 – Homo Didacticus – for outstanding teaching work in the winter semester 2024/25 (UMCS)
- 2025 – Jubilee Award for 25 years of professional work

Maria Curie-Skłodowska University, Institute of Computer Science

ul. Akademicka 9, 20-033 Lublin, Poland

☎ +48 (81) 53-72-940 • 📠 +48 (81) 53-76-262

✉ gmwojcik@umcs.edu.pl • 🌐 gmwojcik.pl • in gmwojcik

🐦 gmwojcik • 🔄 gmwojcik

- 2023 – 3rd Class Individual Award of Rector of Maria Curie-Sklodowska University in Lublin for outstanding service for the University
- 2023 – Award of Rector of Maria Curie-Sklodowska University in Lublin for outstanding scientific work
- 2023 – Homo Didacticus – for outstanding teaching work in the winter semester 2022/23 (UMCS)
- 2021 – 4th Class Team Award of Rector of Maria Curie-Sklodowska University in Lublin for outstanding service for the University
- 2021 – Team Award of Rector of Maria Curie-Sklodowska University in Lublin for outstanding scientific work
- 2020 – 3 × Team Award of Rector of Maria Curie-Sklodowska University in Lublin for outstanding scientific work
- 2020 – Jubilee Award for 20 years of professional work
- 2018 – 2nd Class Individual Award of Rector of Maria Curie-Sklodowska University in Lublin for outstanding service for the University
- 2014 – 3rd Class Individual Award of Rector of Maria Curie-Sklodowska University in Lublin for outstanding service for the University
- 2013 – Individual Award of Rector of Maria Curie-Sklodowska University in Lublin for Habilitation
- 2012 – 3rd Class Individual Award of Rector of Maria Curie-Sklodowska University in Lublin for outstanding service for the University
- 2011 – 3rd Class Individual Award of Rector of Maria Curie-Sklodowska University in Lublin for outstanding service for the University in academic year 2010/2011

Membership

- Since 8.08.2023 – Member of OT73 – Virtual Field Division of Polish Amateur Radio Union
- Since 21.10.2022 – Member of Yacht Club UMCS, Lublin District Yachting Association, Polish Yachting Association
- Since 7.06.2019 – Member of SNAJPER Lublin Shooting Club, Lublin Shooting Sport Association, Polish Shooting Sport Association
- 2016-2020 – Rector's Representative in the Council of Academic Centre of Culture "Chatka Żaka" in Lublin, Poland
- 2016-2020 – Supervisory Council Member of Centre of Transfer of Knowledge and Technology at Maria Curie-Sklodowska University in Lublin, Poland
- Since 2015 – Editorial Board Member of Bio-Algorithms and Med-Systems
- Since 2015 – Program Council of High Field Magnetic Resonance Laboratory at the ECOTECH-COMPLEX Centre in Lublin, Poland
- Since 2015 – Vice-Chairman of the Commission of Fundamentals and Applications in Chemistry, Physics and Technology, Agriculture and Medicine. Polish Academy of Sciences, Filiale in Lublin, Poland. Chairman of Section of Physics. Member since 2009
- Since 1.03.2009 – Member of National Geographic Society

Maria Curie-Sklodowska University, Institute of Computer Science

ul. Akademicka 9, 20-033 Lublin, Poland

☎ +48 (81) 53-72-940 • 📠 +48 (81) 53-76-262

✉ gmwojcik@umcs.edu.pl • 🌐 gmwojcik.pl • in gmwojcik

🐦 gmwojcik • 🔄 gmwojcik

- 2009-2010 – Chapter Member (area: Science) in the Competition "Promotion of the Achievements of Polish Science". Foundation OIC Poland, Lublin
- Since 8.12.2005 – Member of Polish Numismatic Society. Since 2015 Board Member of Lublin Branch. 11.12.2025 – Certificate from the Lublin Voivode for contributions to the development and promotion of numismatics

Courses

- 25 – 29.07.2022 – Intensive sailing course, Wind Hunter, Gdansk, Poland
- 16 – 17.12.2017 – Introduction to Project Management, Altkom Akademia, Lublin, Poland
- 12.02.2006 – 28.02.2006 – Changing your Mind about the Brain, workshop at Interdisciplinary Center for Neural Computations (ICNC), Hebrew University, Jerusalem, Israel
- 19.08.2002 – 13.09.2002 – EU Advanced Course In Computational Neuroscience. An IBRO Neuroscience School, Obidos, Portugal
- 1999 – Novell NetWare 4.11 Administration Course (NW520)

Licenses & Certificates

- 2022 – Patent of Inland Skipper (No. PU/54986)
- 2022 – 1st Class Certificate of Amateur Radio Operator (No. A-29915). Call Sign: SQ8GMW (DC.WML.5101.1697.2022.2)
- 2021 – Fundamental Neuroscience for Neuroimaging. Coursera. Johns Hopkins University.(coursera.org/verify/KK83ZTXAUM6M)
- 2019 – Shooting Patent: pistol, rifle, shotgun. (No. 61325/PAT/11/2019)
- 2019 – Shooting Sport License: pistol, rifle, shotgun (No. L-69023/12/2025)
- 2015 – Introduction to Programming with MATLAB (with distinction). Coursera. Vanderbilt University.
- 2002 – Cambridge Certificate in Advanced English (CAE), No. 8585438
- 1999 – Certified Novell Administrator (CNA) – intraNetWare, No. 9695185
- 1997 – Cambridge First Certificate in English (FCE), No. 976PL0100060
- 1994 – Driving Licence B-category

Foreign languages

English	Full professional proficiency
Russian	Basic proficiency
Polish	Native

Interests

Numismatics	Swiss shooting thalers and shooting medals
Target shooting	Pistol, rifle, shotgun
Ham radio	SQ8GMW. Yaesu FT-950 + EFHW & DP20, Yaesu FT-65

*Maria Curie-Skłodowska University, Institute of Computer Science
ul. Akademicka 9, 20-033 Lublin, Poland*

☎ +48 (81) 53-72-940 • 📠 +48 (81) 53-76-262
✉ gmwojcik@umcs.edu.pl • 🌐 gmwojcik.pl • in gmwojcik
🐦 gmwojcik • 🔄 gmwojcik

Publications

E. Benedykciuk, M. Denkowski, and G. M. Wójcik, "Differentiable neural architecture search for medical image segmentation: A systematic review and field audit," *Computerized Medical Imaging and Graphics*, p. 102713, 2026.

K. Chlasta, P. Struzik, and G. M. Wójcik, "Enhancing dementia and cognitive decline detection with large language models and speech representation learning," *Frontiers in Neuroinformatics*, vol. 19, p. 1679664, 2025.

F. Postepski, G. M. Wojcik, K. Wrobel, A. Kawiak, K. Zemla, and G. Sedek, "Recurrent and convolutional neural networks in classification of eeg signal for guided imagery and mental workload detection," *Scientific Reports*, vol. 15, no. 1, p. 10521, 2025.

A. Daniluk, B. Daniluk, and G. M. Wójcik, "A python code for simulations of rheed intensity oscillations within the one-dimensional dynamical approximation," *Computer Physics Communications*, vol. 308, p. 109467, 2025.

B. Karpowicz, M. Grzeszczuk, A. Kuzdraliński, M. Kornacka, A. Marozau, W. Stawski, P. Zinevych, G. M. Wójcik, T. Kowalewski, G. Pochwatko, and W. Kopeć, "Immersive technologies in training and healthcare: From space missions to psychophysiological research," in *Digital Interaction and Machine Intelligence* (C. Biele, J. Kacprzyk, W. Kopeć, J. Możaryn, J. W. Owsiański, A. Romanowski, and M. Sikorski, eds.), (Cham), pp. 339–346, Springer Nature Switzerland, 2025.

B. Karpowicz, T. Kowalewski, P. Zinevych, A. Kuzdraliński, G. M. Wójcik, and W. Kopeć, "Towards effective human performance in xr space framework based on real-time eye tracking biofeedback," in *Digital Interaction and Machine Intelligence* (C. Biele, J. Kacprzyk, W. Kopeć, J. Możaryn, J. W. Owsiański, A. Romanowski, and M. Sikorski, eds.), (Cham), pp. 289–296, Springer Nature Switzerland, 2025.

M. Grzeszczuk, K. Skorupska, and G. M. Wójcik, "Bridging the digital divide: Approach to documenting early computing artifacts using established standards for cross-collection knowledge integration ontology," in *Digital Interaction and Machine Intelligence* (C. Biele, J. Kacprzyk, W. Kopeć, J. Możaryn, J. W. Owsiański, A. Romanowski, and M. Sikorski, eds.), (Cham), pp. 273–280, Springer Nature Switzerland, 2025.

F. Postępski, B. Vanrumste, and G. M. Wójcik, *Selected Topics in Applied Computer Science, Jarosław Bylina and Aneta Wróblewska ed.*, vol. 3, ch. Application of Convolutional Neural Networks to Classification of Introversion and Extraversion Biomarkers in Dense-Array EEG Signal, pp. 85–92. Maria Curie-Skłodowska University Press, 2024.

P. Schneider, B. Vanrumste, and G. M. Wójcik, *Selected Topics in Applied Computer Science, Jarosław Bylina and Aneta Wróblewska ed.*, vol. 3, ch. Logistic Regression Model for the Credibility Evaluation Dense-Array EEG Signal Classification, pp. 77–84. Maria Curie-Skłodowska University Press, 2024.

Maria Curie-Skłodowska University, Institute of Computer Science

ul. Akademicka 9, 20-033 Lublin, Poland

☎ +48 (81) 53-72-940 • 📠 +48 (81) 53-76-262

✉ gmwojcik@umcs.edu.pl • 🌐 gmwojcik.pl • in gmwojcik

🐦 gmwojcik • 🔄 gmwojcik

A. Gajos-Balińska, B. Vanrumste, and G. M. Wójcik, *Selected Topics in Applied Computer Science, Jarosław Bylina and Aneta Wróblewska ed.*, vol. 3, ch. Application of Temporal Convolutional Networks for Precise Detection of Artifacts in the EEG Signal Based on ICA Components, pp. 65–75. Maria Curie-Skłodowska University Press, 2024.

A. Gajos-Balińska, G. M. Wójcik, and P. Stpiczyński, "Hybrid implementation of the fastica algorithm for high-density eeg using the capabilities of the intel architecture and cuda programming," *Computer Science*, vol. 24, no. 4, p. 455–472, 2023.

A. Kawala-Sterniuk, G. M. Wójcik, and W. Bauer, "Biomedical data in human-machine interaction," *Sensors*, vol. 23, no. 18, p. 7983, 2023.

K. Zemla, G. Sedek, K. Wróbel, F. Postepski, and G. M. Wojcik, "Investigating the impact of guided imagery on stress, brain functions, and attention: A randomized trial," *Sensors*, vol. 23, no. 16, p. 6210, 2023.

K. Zemla, G. M. Wojcik, F. Postepski, K. Wróbel, A. Kawiak, and G. Sedek, "Modeling of brain cortical activity during relaxation and mental workload tasks based on eeg signal collection," *Applied Sciences*, vol. 13, no. 7, p. 4472, 2023.

K. Chlasta, P. Sochaczewski, G. M. Wójcik, and I. Krejtz, "Neural simulation pipeline: Enabling container-based simulations on-premise and in public clouds," *Frontiers in Neuroinformatics*, 2023.

G. M. Wojcik, O. Shriki, L. Kwasniewicz, A. Kawiak, Y. Ben-Horin, S. Furman, K. Wróbel, B. Bartosik, and E. Panas, "Investigating brain cortical activity in patients with post-covid-19 brain fog," *Frontiers in Neuroscience*, vol. 17, 2023.

K. Zemła, G. M. Wójcik, F. Postępski, Łukasz Kwaśniewicz, and A. Kawiak, *Selected Topics in Applied Computer Science, Jarosław Bylina, ed.*, vol. 2, ch. Investigating the Influence of Guided Imagery Relaxation on the Selected Electrophysiological Parameters of Human Body, pp. 21–37. Maria Curie-Skłodowska University Press, 2023.

E. Mikołajewska, P. Prokopowicz, Y. Chow, J. Masiak, D. Mikołajewski, G. M. Wójcik, B. Wallace, A. R. Eugene, and M. Olajossy, "From neuroimaging to computational modeling of burnout: The traditional versus the fuzzy approach—a review," *Applied Sciences*, vol. 12, no. 22, p. 11524, 2022.

A. Kawala-Sterniuk, M. Pelc, R. Martinek, and G. M. Wójcik, "Currents in biomedical signals processing—methods and applications," *Frontiers in Neuroscience*, vol. 16, 2022.

P. Schneider, G. M. Wójcik, A. Kawiak, L. Kwasniewicz, and A. Wierzbicki, "Modeling and comparing brain processes in message and earned source credibility evaluation," *Frontiers in Human Neuroscience*, vol. 16, 2022.

B. Bartosik and G. M. Wójcik, *Selected Topics in Applied Computer Science, Jarosław Bylina, ed.*, vol. 1, ch. Assessment of Attractiveness and Trust in Relation to

Maria Curie-Skłodowska University, Institute of Computer Science

ul. Akademicka 9, 20-033 Lublin, Poland

☎ +48 (81) 53-72-940 • 📠 +48 (81) 53-76-262

✉ gmwojcik@umcs.edu.pl • 🌐 gmwojcik.pl • in gmwojcik

🐦 gmwojcik • 🔄 gmwojcik

Personality Traits — Literature Review and Research Proposal, pp. 223–232. Maria Curie-Skłodowska University Press, 2021.

K. Chlasta and G. M. Wójcik, *Selected Topics in Applied Computer Science, Jarosław Bylina, ed.*, vol. 1, ch. Liquid state machines for real-time neural simulations, pp. 233–246. Maria Curie-Skłodowska University Press, 2021.

A. Kobus, I. Codello, W. Kuniszyk-Józkowiak, and G. M. Wójcik, *Selected Topics in Applied Computer Science, Jarosław Bylina, ed.*, vol. 1, ch. Automatic Syllable Repetition Detection Methods in Continuous Speech, pp. 43–58. Maria Curie-Skłodowska University Press, 2021.

D. Mikołajewski, J. Masiak, E. Mikołajewska, and G. M. Wójcik, “Modelowanie obliczeniowe występowania objawów wypalenia zawodowego u informatyków i fizjoterapeutów - wyniki wstępne,” *Studia i Materiały Informatyki Stosowanej*, vol. 13, no. 3, pp. 29–35, 2021.

D. Mikołajewski, J. Masiak, E. Mikołajewska, and G. M. Wójcik, “Objawy wypalenia zawodowego jako podstawa modelu obliczeniowego,” *Studia i Materiały Informatyki Stosowanej*, vol. 13, no. 3, pp. 22–28, 2021.

D. Mikołajewski, J. Masiak, E. Mikołajewska, G. M. Wójcik, and J. Kopowski, “Związane z pracą niekorzystne zmiany zdrowotne w grupie zawodowej informatyków – narracyjny przegląd literatury,” *Studia i Materiały Informatyki Stosowanej*, vol. 13, no. 3, pp. 13–21, 2021.

L. Kwasniewicz, G. M. Wojcik, P. Schneider, A. Kawiak, and A. Wierzbicki, “What to believe? impact of knowledge and message length on neural activity in message credibility evaluation,” *Frontiers in Human Neuroscience*, vol. 15, p. 659243, 2021.

B. Bartosik, G. M. Wojcik, A. Brzezicka, and A. Kawiak, “Are you able to trust me? analysis of the relationships between personality traits and the assessment of attractiveness and trust,” *Frontiers in Human Neuroscience*, p. 389, 2021.

A. Kawiak, G. M. Wojcik, P. Schneider, L. Kwasniewicz, and A. Wierzbicki, “Whom to believe? understanding and modeling brain activity in source credibility evaluation,” *Frontiers in neuroinformatics*, vol. 14, p. 607853, 2020.

G. M. Wójcik, A. Kobus, J. Rogala, and U. Malinowska, “Influence of artefact removal on machine learning classification results in memory task eeg signal processing,” *Bio-Algorithms and Med-Systems*, vol. 17, no. 2, p. eA30, 2021.

K. Chlasta, G. M. Wójcik, and K. Wołk, “Liquid state machines in parallel simulations of mammalian visual system on raspberry pi.,” *Bio-Algorithms and Med-Systems*, vol. 17, no. 2, p. aA36, 2021.

A. Krajka, I. Panasiuk, A. Misiura, and G. M. Wójcik, “On the mutation model used in the fingerprinting dna,” *Bio-Algorithms and Med-Systems*, vol. 16, no. 4, 2020.

T. Krajka, A. Misiura, and G. M. Wojcik, “Simulation of the south-eastern polish subpopulations behaviour,” in *2020 IEEE Conference on Computational Intelligence in Bioinformatics and Computational Biology (CIBCB)*, pp. 1–8, IEEE, 2020.

Maria Curie-Skłodowska University, Institute of Computer Science

ul. Akademicka 9, 20-033 Lublin, Poland

☎ +48 (81) 53-72-940 • 📠 +48 (81) 53-76-262

✉ gmwojcik@umcs.edu.pl • 🌐 gmwojcik.pl • in gmwojcik

🐦 gmwojcik • 🔄 gmwojcik

P. Schneider, G. M. Wojcik, A. Kawiak, L. Kwasniewicz, and A. Wierzbicki, "True or false: How does our brain decide about truth?," in *2020 IEEE Conference on Computational Intelligence in Bioinformatics and Computational Biology (CIBCB)*, pp. 1–9, IEEE, 2020.

A. Gajos-Balińska, G. M. Wójcik, and P. Stpicyński, "Cooperation of cuda and intel multi-core architecture in the independent component analysis algorithm for eeg data," *Bio-Algorithms and Med-Systems*, vol. 16, no. 3, 2020.

A. Kawiak, G. M. Wójcik, L. Kwasniewicz, P. Schneider, and A. Wierzbicki, "Look who's talking: Modeling decision making based on source credibility," in *International Conference on Computational Science*, pp. 327–341, Springer, 2020.

Ł. Kwaśniewicz, G. M. Wójcik, A. Kawiak, P. Schneider, and A. Wierzbicki, "How you say or what you say? neural activity in message credibility evaluation," in *International Conference on Computational Science*, pp. 312–326, Springer, 2020.

G. M. Wojcik, *Simulations in Medicine, Irena Roterman-Konieczna, ed.*, ch. 3 Selected methods of quantitative analysis in electroencephalography, pp. 35–54. de Gruyter, 2020.

G. M. Wójcik, J. Masiak, A. T. Kawiak, L. K. Kwasniewicz, P. Schneider, F. Postepski, and A. Gajos-Balinska, "Analysis of decision-making process using methods of quantitative electroencephalography and machine learning tools," *Frontiers in Neuroinformatics*, vol. 13, p. 73, 2019.

G. M. Wójcik, A. Kawiak, L. Kwasniewicz, P. Schneider, and J. Masiak, "Azure machine learning tools efficiency in the electroencephalographic signal p300 standard and target responses classification," *Bio-Algorithms and Med-Systems*, vol. 15, no. 3, 2019.

W. K. Ozga, D. Zapała, P. Wierzgała, P. Augustynowicz, R. Porzak, and G. M. Wójcik, "Acoustic neurofeedback increases beta erd during mental rotation task," *Applied Psychophysiology and Biofeedback*, pp. 1–13, 2018.

P. Wierzgała, D. Zapała, G. M. Wójcik, and J. Masiak, "Most popular signal processing methods in motor-imagery bci: A review and meta-analysis," *Frontiers in Neuroinformatics*, vol. 12, p. 78, 2018.

Ł. Kwaśniewicz, P. Schneider, A. Kawiak, and G. M. Wójcik, "Comparison of mne selected functions parallelisation performance in source localisation algorithms for brain cortex activity quantitative analysis," in *Proceedings of Cracow Grid Workshop 2018*, pp. 49–51, 2018.

G. M. Wojcik, J. Masiak, A. Kawiak, L. Kwasniewicz, P. Schneider, N. Polak, and A. Gajos-Balinska, "Mapping the human brain in frequency band analysis of brain cortex electroencephalographic activity for selected psychiatric disorders," *Frontiers in Neuroinformatics*, vol. 12, p. 73, 2018.

Maria Curie-Skłodowska University, Institute of Computer Science

ul. Akademicka 9, 20-033 Lublin, Poland

☎ +48 (81) 53-72-940 • 📠 +48 (81) 53-76-262

✉ gmwojcik@umcs.edu.pl • 🌐 gmwojcik.pl • in gmwojcik

🐦 gmwojcik • 🔄 gmwojcik

A. Gajos-Balinska, G. M. Wojcik, and P. Stpiczynski, "Performance comparison of parallel fastica algorithm in the plgrid structures," in *ITM Web of Conferences*, vol. 21, p. 00026, EDP Sciences, 2018.

G. M. Wójcik, J. Masiak, A. Kawiak, P. Schneider, L. Kwasniewicz, N. Polak, and A. Gajos-Balinska, "New protocol for quantitative analysis of brain cortex electroencephalographic activity in patients with psychiatric disorders," *Frontiers in Neuroinformatics*, vol. 12, p. 27, 2018.

D. S. Kufel and G. M. Wojcik, "Analytical modelling of temperature effects on an ampa-type synapse," *Journal of Computational Neuroscience*, vol. 44, no. 3, pp. 379–391, 2018.

A. Gajos-Balińska, G. M. Wójcik, and P. Stpiczyński, "High performance optimization of independent component analysis algorithm for eeg data," in *International Conference on Parallel Processing and Applied Mathematics*, pp. 495–504, Springer, 2017.

Y. Chow, J. Masiak, E. Mikołajewska, D. Mikołajewski, G. M. Wójcik, B. Wallace, A. Eugene, and M. Olajosy, "Limbic brain structures and burnout—a systematic review," *Advances in medical sciences*, vol. 63, no. 1, pp. 192–198, 2018.

D. Mikołajewski, P. Prokopowicz, E. Mikołajewska, G. M. Wójcik, and J. Masiak, "Traditional versus mechatronic toys in children with autism spectrum disorders," *Acta Mechatronica - International Scientific Journal about Mechatronics*, vol. 2, no. 1, pp. 11–17, 2017.

E. Mikołajewska, J. Masiak, D. Mikołajewski, G. M. Wójcik, and B. Augustyńska, "Neurorehabilitacja oparta na dowodach naukowych - wyzwania i zagrożenia," *Niepełnosprawność i Rehabilitacja*, no. 4, pp. 227–241, 2017.

A. Gajos, G. M. Wojcik, and P. Stpiczyński, "Parallel independent component analysis algorithm – performance comparison for eeg signal," in *Proceedings of Cracow Grid Workshop 2017*, pp. 33–34, 2017.

S. Kotyra and G. M. Wojcik, "The station for neurofeedback phenomenon research," in *Recent Developments and Achievements in Biocybernetics and Biomedical Engineering: Proceedings of the 20th Polish Conference on Biocybernetics and Biomedical Engineering, Kraków, Poland, September 20-22, 2017*, pp. 32–43, Springer, 2018.

S. Kotyra and G. M. Wojcik, "Steady state visually evoked potentials and their analysis with graphical and acoustic transformation," in *Recent Developments and Achievements in Biocybernetics and Biomedical Engineering: Proceedings of the 20th Polish Conference on Biocybernetics and Biomedical Engineering, Kraków, Poland, September 20-22, 2017*, pp. 22–31, Springer, 2018.

S. Kotyra and G. M. Wojcik, *20-th Polish Conference on Biocybernetics and Biomedical Engineering*, ch. The Station for Neurofeedback Phenomenon Research, p. 29. Kraków, 2017.

Maria Curie-Skłodowska University, Institute of Computer Science

ul. Akademicka 9, 20-033 Lublin, Poland

☎ +48 (81) 53-72-940 • 📠 +48 (81) 53-76-262

✉ gmwojcik@umcs.edu.pl • 🌐 gmwojcik.pl • in gmwojcik

🐦 gmwojcik • 🔄 gmwojcik

S. Kotyra and G. M. Wojcik, *20-th Polish Conference on Biocybernetics and Biomedical Engineering*, ch. Steady State Visually Evoked Potentials and their analysis with graphical and acoustic transformation, p. 28. Kraków, 2017.

G. M. Wojcik, *Proceedings of the International Scientific Conference Humboldt-Kolleg of Societas Humboldtiana Polonorum*, ch. Artificial Brain – An Non- Biological Intelligence Evolution Hypothesis, pp. 50–51. Kraków, 2017.

E. Mikołajewska, D. Mikołajewski, G. M. Wójcik, B. Augustyńska, and J. Masiak, "Analiza wielkich zbiorów danych w rehabilitacji osób niepełnosprawnych," *Niepełnosprawność i Rehabilitacja*, no. 3, pp. 180–188, 2017.

G. M. Wójcik, E. Mikołajewska, D. Mikołajewski, P. Wierzgała, A. Gajos, and M. Smolira, "Wykorzystanie egi's geodesic eeg system jako narzędzia do badań możliwości interfejsów mózg-komputer - doniesienie wstępne," *Niepełnosprawność i Rehabilitacja*, no. 2, pp. 166–181, 2016.

Ł. Kwaśniewicz, W. Kuniszyk-Józkowiak, G. M. Wójcik, and J. Masiak, "Adaptation of the humanoid robot to speech disfluency therapy," *Bio-Algorithms and Med-Systems*, vol. 12, no. 4, pp. 169–177, 2016.

D. Kufel and G. M. Wójcik, "Parallel computing of local field potentials in biological neural networks using lfpv," in *Proceedings of Cracow Grid Workshop 2016*, pp. 79–80, 2016.

J. Masiak, G. M. Wójcik, A. Gajos, A. Kawiak, N. Polak, S. Kotyra, and Łukasz Kwaśniewicz, *Światowe innowacje łączące medycynę, inżynierię oraz technologię w diagnozowaniu i terapii autyzmu – Książka abstraktów*, ch. Zastosowanie elektroencefalografów gęstej matrycy do oceny podejmowania decyzji u młodzieży z diagnozą autyzmu i zespołu Aspergera, pp. 49–50. Rzeszów, 2016.

A. Gajos and G. M. Wójcik, "Independent component analysis of eeg data for egi system," *Bio-Algorithms and Med-Systems*, vol. 12, no. 2, pp. 67–72, 2016.

G. M. Wójcik, *Osnovy nejrokibernetiki. Pod redakcją profesora Ryszarda Tadeusewicha*, ch. Zhidokostnye vychislenija v modelovanii mozga, pp. 196–211. Goriachaja linija - Telekom. Moskwa, 2015.

G. M. Wójcik, P. Wierzgała, and A. Gajos, "Evaluation of emotiv eeg neuroheadset," *Bio-Algorithms and Med-Systems*, vol. 11, no. 4, pp. 211–215, 2015.

A. Gajos, G. M. Wojcik, and P. Stpiczyński, "Concept of independent component analysis algorithm parallelisation," in *Proceedings of Cracow Grid Workshop 2015*, pp. 55–56, 2015.

G. M. Wójcik, *XLIII Zjazd Fizyków Polskich – Program i streszczenia*, ch. Badania złożoności mózgu homo sapiens: aspekty funkcjonalne i morfologiczne, p. 179. Oddział Kielecki Polskiego Towarzystwa Fizycznego, 2015.

G. M. Wojcik and M. Ważny, "Bray-curtis metrics as measure of liquid state machine separation ability in function of connections density," *Procedia Computer Science*, vol. 51, pp. 2948–2951, 2015.

Maria Curie-Skłodowska University, Institute of Computer Science

ul. Akademicka 9, 20-033 Lublin, Poland

☎ +48 (81) 53-72-940 • 📠 +48 (81) 53-76-262

✉ gmwojcik@umcs.edu.pl • 🌐 gmwojcik.pl • in gmwojcik

🐦 gmwojcik • 🔄 gmwojcik

- A. Gajos and G. M. Wójcik, "Independent component analysis of eeg data for egi system," *Bio-Algorithms and Med-Systems*, vol. 11, no. 2, p. eA23, 2015.
- P. H. Wójcik and G. M. Wójcik, "Application of levenberg–marquardt algorithm for engagement detection in electroencephalographic time-series," *Bio-Algorithms and Med-Systems*, vol. 11, no. 2, p. eA23, 2015.
- A. Gajos and G. M. Wójcik, "Electroencephalographic detection of synesthesia," *Annales Universitatis Mariae Curie-Sklodowska, sectio AI-Informatica*, vol. 14, no. 3, pp. 43–52, 2014.
- R. Cebryk and G. M. Wójcik, "Liquid computing and analysis of sound signals," *Annales Universitatis Mariae Curie-Sklodowska, sectio AI-Informatica*, vol. 14, no. 3, pp. 33–42, 2014.
- S. Kotyra, G. M. Wójcik, and M. Smolira, "Synchronous ssvep data acquisition system," *Annales Universitatis Mariae Curie-Sklodowska. Sectio AI, Informatica*, vol. 14, no. 3, 2014.
- G. M. Wojcik and M. Ważny, "Bray-curtis dissimilarity in liquid simulations of cortical hyper-column," in *Proceedings of Cracow Grid Workshop 2014*, pp. 127–128, 2014.
- M. Ważny and G. M. Wojcik, "Shifting spatial attention—numerical model of posner experiment," *Neurocomputing*, vol. 135, pp. 139–144, 2014.
- G. M. Wójcik, E. Mikołajewska, D. Mikołajewski, P. Wierzgała, A. Gajos, and M. Smolira, "Usefulness of egi eeg system in brain computer interfaces research," *Bio-Algorithms and Med-Systems*, vol. 9, no. 2, pp. 73–79, 2013.
- K. Dobosz, D. Mikołajewski, G. M. Wójcik, and W. Duch, "Simple cyclic movements as a distinct autism feature – computational approach," *Computer Science*, vol. 14, no. 3, pp. 475–489, 2013.
- E. Mikołajewska, G. M. Wójcik, D. Mikołajewski, P. Wierzgała, and A. Gajos, "Interfejsy mózg - komputer oparte na p300 w neurorehabilitacji," *Praktyczna Fizjoterapia i Rehabilitacja*, vol. 35, pp. 30–34, 2013.
- P. Wierzgała, G. M. Wojcik, and M. Smolira, "Finding the best efficiency in actionscript based web applications on example of fft algorithm," *Bio-Algorithms and Med-Systems*, vol. 8, no. 4, pp. 373–385, 2012.
- G. M. Wójcik, *Modelowanie i eksploracja sieci neuronów biologicznych w GENESIS*. Lublin: Instytut Informatyki UMCS, 2012.
- W. Duch, W. Nowak, J. Meller, G. Osinski, K. Dobosz, D. Mikołajewski, and G. M. Wójcik, "Computational approach to understanding autism spectrum disorders," *Computer Science*, vol. 13, no. 2, pp. 47–61, 2012.
- G. M. Wojcik, "Electrical parameters influence on the dynamics of the hodgkin-huxley liquid state machine," *Neurocomputing*, vol. 79, pp. 68–78, 2012.

Maria Curie-Sklodowska University, Institute of Computer Science

ul. Akademicka 9, 20-033 Lublin, Poland

☎ +48 (81) 53-72-940 • 📠 +48 (81) 53-76-262

✉ gmwojcik@umcs.edu.pl • 🌐 gmwojcik.pl • in gmwojcik

🐦 gmwojcik • 🔄 gmwojcik

- G. M. Wojcik, "Self-organising criticality in the simulated models of the rat cortical microcircuits," *Neurocomputing*, vol. 79, pp. 61–67, 2012.
- G. M. Wójcik, "Obserwacja samolotów na wysokościach przelotowych," *Zeszyty Naukowe WSEI – Transport i Informatyka*, vol. 1, no. 1, pp. 23–28, 2011.
- G. M. Wójcik and S. Kotyra, *Środowisko programisty*. Lublin: Instytut Informatyki UMCS, 2011.
- G. M. Wójcik, *Obliczenia płynowe w modelowaniu mózgu*. Warszawa: Akademicka Oficyna Wydawnicza Exit, 2011.
- W. Duch, W. Nowak, J. Meller, G. Osinski, K. Dobosz, D. Mikołajewski, and G. M. Wójcik, "Consciousness and attention in autism spectrum disorders," in *Proceedings of Cracow Grid Workshop 2010*, pp. 202–211, 2011.
- P. Wierzgala and G. M. Wojcik, "Signal visualisation software for mindset ms-1000 electroencephalograph," *Bio-Algorithms and Med-Systems*, vol. 7, no. 13, pp. 83–88, 2011.
- G. M. Wójcik, *Neurocybernetyka teoretyczna pod redakcją naukową Ryszarda Tadeusiewicza*, ch. Obliczenia płynowe w modelowaniu mózgu, pp. 173–187. Wydawnictwo Uniwersytetu Warszawskiego, 2010.
- M. Zukowski, W. A. Kaminski, D. Stanislawek, J. J. Ruthe, G. M. Wojcik, and M. Falski, "Modelling eutheria's visual cortex using snnml language," *Bio-Algorithms and Med-Systems, Supplement*, vol. 10, no. 6, p. 233, 2010.
- S. Kotyra and G. M. Wojcik, "Test signal generators for mindset ms-1000 electroencephalograph with data acquisition system for linux os," *Bio-Algorithms and Med-Systems*, vol. 7, no. 13, pp. 77–82, 2011.
- S. Kotyra and G. M. Wojcik, "Test signal generators for mindset ms-1000 electroencephalograph with data acquisition system for linux os," *Bio-Algorithms and Med-Systems, Supplement*, vol. 10, no. 6, pp. 93–94, 2010.
- K. Dmitruk and G. M. Wojcik, "Modelling simple 3d scene based on rapid face tracking and objects recognition," *Annales Universitatis Mariae Curie-Skłodowska, Sectio AI: Informatica*, vol. 10, no. 2, pp. 63–68, 2010.
- G. M. Wojcik and J. A. Garcia-Lazaro, "Analysis of the neural hypercolumn in parallel pcsim simulations," *Procedia Computer Science*, vol. 1, no. 1, pp. 845–854, 2010.
- S. Kotyra and G. M. Wojcik, "Developing brain electric activity acquisition software for linux," *Annales Universitatis Mariae Curie-Skłodowska, Sectio AI: Informatica*, vol. 10, no. 1, pp. 7–14, 2011.
- G. M. Wojcik and J. A. Garcia-Lazaro, "Investigating dynamics of mammalian cortical hypercolumn in parallel pcsim simulations," in *Proceedings of Cracow Grid Workshop 2009*, pp. 246–254, 2010.

Maria Curie-Skłodowska University, Institute of Computer Science

ul. Akademicka 9, 20-033 Lublin, Poland

☎ +48 (81) 53-72-940 • 📠 +48 (81) 53-76-262

✉ gmwojcik@umcs.edu.pl • 🌐 gmwojcik.pl • in gmwojcik

🐦 gmwojcik • 🔄 gmwojcik

- B. J. Grzyb, E. Chinellato, G. M. Wojcik, and W. A. Kaminski, "Facial expression recognition based on liquid state machines built of alternative neuron models," in *2009 International joint conference on neural networks*, pp. 1011–1017, IEEE, 2009.
- B. J. Grzyb, E. Chinellato, G. M. Wojcik, and W. A. Kaminski, "Which model to use for the liquid state machine?," in *2009 International Joint Conference on Neural Networks*, pp. 1018–1024, IEEE, 2009.
- S. Kotyra and G. M. Wojcik, "The system of electric brain activity acquisition from eeg equipment for linux os," *Annales Universitatis Mariae Curie-Sklodowska, Sectio AI: Informatica*, vol. 8, no. 1, pp. 151–155, 2008.
- B. J. Grzyb, G. M. Wojcik, and W. A. Kaminski, "The choice of the model of neuron and its influence on the properties and computational efficiency of liquid state machine," *Polish Journal of Environmental Studies*, vol. 17, no. 3B, pp. 548–552, 2008.
- G. M. Wojcik and W. A. Kaminski, "Self-organised criticality as a function of connections' number in the model of the rat somatosensory cortex," in *Computational Science – ICCS 2008*, vol. 5101 of *Lecture Notes in Computer Science*, pp. 620–629, Springer, 2008.
- G. M. Wojcik and W. A. Kaminski, "Nonlinear behaviour in mpi-parallelised model of the rat somatosensory cortex," *Informatica*, vol. 19, no. 3, pp. 461–470, 2008.
- G. M. Wojcik and W. A. Kaminski, "Liquid computing efficiency as a function of neural cell's electrical parameters," in *Modelling, Identification, and Control*, pp. 78–82, ACTA Press, 2008.
- J. J. Ruthe, G. M. Wojcik, W. A. Kaminski, D. Stanislawek, M. Zukowski, and M. Falski, "Investigating dynamics of mammalian cortical hypercolumn in parallel pcsim simulations," in *Proceedings of Cracow Grid Workshop 2007*, pp. 492–498, 2008.
- G. M. Wojcik, W. A. Kaminski, J. J. Ruthe, D. Stanislawek, M. Zukowski, and M. Falski, "Neural activity and new methods of computational analysis in the model of mammalian brain cortex," *Annales Universitatis Mariae Curie-Sklodowska, Sectio AI: Informatica*, vol. 6, pp. 49–55, 2008.
- G. M. Wojcik, W. A. Kaminski, and P. Matejanka, "Self-organised criticality in a model of the rat somatosensory cortex," in *Parallel Computing Technologies*, vol. 4671 of *Lecture Notes in Computer Science*, pp. 468–475, Springer, 2007.
- G. M. Wojcik and W. A. Kaminski, "Liquid state machine and its separation ability as function of electrical parameters of cell," *Neurocomputing*, vol. 70, no. 13–15, pp. 2593–2697, 2007.
- G. M. Wojcik and W. A. Kaminski, "Pattern separation in the model of mammalian visual system," in *PARELEC 2006*, IEEE Computer Society Press, pp. 309–312, 2006.

Maria Curie-Sklodowska University, Institute of Computer Science

ul. Akademicka 9, 20-033 Lublin, Poland

☎ +48 (81) 53-72-940 • 📠 +48 (81) 53-76-262

✉ gmwojcik@umcs.edu.pl • 🌐 gmwojcik.pl • in gmwojcik

🐦 gmwojcik • 🔄 gmwojcik

G. M. Wojcik and W. A. Kaminski, "Liquid computations and large simulations of the mammalian visual cortex," in *Computational Science – ICCS 2006*, vol. 3992 of *Lecture Notes in Computer Science*, pp. 94–101, Springer, 2006.

G. M. Wojcik and W. A. Kaminski, "Computational ability of Ism ensemble in the model of mammalian visual system," *Annales Universitatis Mariae Curie-Sklodowska, Sectio AI: Informatica*, vol. 5, pp. 309–314, 2006.

G. M. Wojcik and W. A. Kaminski, "Grid-based simulations of mammalian visual system," in *Proceedings of Cracow Grid Workshop 2005*, pp. 384–389, 2006.

G. M. Wojcik, "Large simulations of mammalian visual system," in *Science and Supercomputing in Europe*, pp. 290–295, HPC-Europa Annual Project Directory, 2005.

G. M. Wojcik and W. A. Kaminski, "Large scalable simulations of mammalian visual cortex," in *Parallel Processing and Applied Mathematics*, vol. 3911 of *Lecture Notes in Computer Science*, pp. 399–405, Springer, 2005.

G. M. Wojcik and W. A. Kaminski, "Large parallel simulations of mammalian visual system," in *Varia Informatica*, pp. 101–105, Polskie Towarzystwo Informatyczne, 2005.

G. M. Wojcik and W. A. Kaminski, "Neuronal movement detector in the model of simulated mammalian visual system," *Bio-Algorithms and Med-Systems*, vol. 1, no. 1, pp. 321–324, 2005.

G. M. Wojcik and W. A. Kaminski, *Modelowanie Cybernetyczne Systemów Biologicznych pod redakcją Ireny Roterman-Koniecznej*, ch. Neuronal Movement Detector in the Model of Simulated Mammalian Visual System, p. 63. Księgarnia Akademicka, 2005.

G. M. Wojcik and W. A. Kaminski, "Investigating mammalian visual system with methods of informational theory," *Annales Universitatis Mariae Curie-Sklodowska, Sectio AI: Informatica*, vol. 3, pp. 145–152, 2005.

G. M. Wojcik and W. A. Kaminski, "Liquid state machines and large simulations of mammalian visual system," in *Proceedings of Cracow Grid Workshop 2004*, pp. 439–447, 2005.

G. M. Wojcik and W. A. Kaminski, "Informational theory application for the investigation of simulated mammalian visual system," in *Sztuczna Inteligencja w Inżynierii Biomedycznej*, 2004.

W. A. Kamiński, G. M. Wójcik, R. Hamwi, Łukasz Marianowicz, and J. Klimkiewicz, "Właściwości sztucznych sieci neuronów biologicznych," *Zamojskie Studia i Materiały*, vol. 6, no. 1, pp. 169–188, 2004.

G. M. Wojcik and W. A. Kaminski, "Multidimensional mutual information in biological visual system," *Artificial Intelligence Studies*, vol. 19/04, pp. 13–18, 2004.

Maria Curie-Sklodowska University, Institute of Computer Science

ul. Akademicka 9, 20-033 Lublin, Poland

☎ +48 (81) 53-72-940 • 📠 +48 (81) 53-76-262

✉ gmwojcik@umcs.edu.pl • 🌐 gmwojcik.pl • in gmwojcik

🐦 gmwojcik • 🔄 gmwojcik

- G. M. Wójcik and W. A. Kamiński, "Informacyjna energia wiązania w modelowanym układzie wzrokowym," in *Algorytmy, metody i programy naukowe*, pp. 153–159, Polskie Towarzystwo Informatyczne, 2004.
- G. M. Wojcik and W. A. Kaminski, "Hebbian encoding in biological visual system," *Annales Universitatis Mariae Curie-Sklodowska*, vol. 2, pp. 309–314, 2004.
- W. A. Kaminski and G. M. Wojcik, "Liquid state machine built of hodgkin-huxley neurons," *Informatica*, vol. 15, no. 1, pp. 39–44, 2004.
- W. A. Kamiński and G. M. Wójcik, "Informacja względna w maszynie neuronalnej hhlsm," *Sztuczna Inteligencja – organizacje wirtualne*, vol. 18/03, pp. 29–33, 2003.
- G. M. Wojcik and W. A. Kaminski, "Liquid state machine built of hodgkin-huxley neurons and pattern recognition," in *Computational Neuroscience – Trends in Research*, pp. 245–251, Elsevier, 2004.
- G. M. Wojcik and W. A. Kaminski, "Liquid state machine built of hodgkin-huxley neurons and pattern recognition," *Neurocomputing*, vol. 58–60, pp. 245–251, 2004.
- W. A. Kaminski and G. M. Wojcik, "Liquid state machine built of hodgkin-huxley neurons – pattern recognition and informational entropy," *Annales Universitatis Mariae Curie-Sklodowska, Sectio AI: Informatica*, vol. 1, pp. 107–113, 2003.
- G. M. Wójcik and W. A. Kamiński, "Badania maszyn neuronalnych hhlsm metodami fizyki statystycznej," in *Obliczenia naukowe*, pp. 9–16, Polskie Towarzystwo Informatyczne, 2003.
- W. A. Kaminski and G. M. Wojcik, "Geometrical properties of phase space for the simulated biological-like neural networks," *International Journal of Non-linear Phenomena in Complex Systems*, vol. 5, no. 2, pp. 155–160, 2002.
- W. A. Kamiński and G. M. Wójcik, "Maszyna neuronalna lsm na sztucznych neuronach biologicznych," *Sztuczna Inteligencja*, vol. 17/02, pp. 49–58, 2002.
- W. A. Kamiński and G. M. Wójcik, "Maszyna neuronalna lsm na sztucznych neuronach biologicznych," *Informatyka Stosowana*, vol. S2/02, pp. 131–137, 2002.
- W. A. Kamiński and G. M. Wójcik, "Geometryczne właściwości przestrzeni fazowej symulowanych układów sztucznych neuronów biologicznych," *Sztuczna Inteligencja*, vol. 16/01, pp. 67–75, 2001.
- W. A. Kamiński and G. M. Wójcik, "Właściwości geometryczne przestrzeni fazowej symulowanych układów sztucznych neuronów biologicznych," *Informatyka Stosowana*, vol. S2/01, pp. 102–108, 2001.