Murad Mahmoud Bashabsheh

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❖ Education

- **Ph.D. of Electrical Engineering / Automation of Information Systems** **2010 – 2014**
  Engineering Sciences: System Analysis, Information Management and Processing
  Tver State Technical University, Russia
- **Research and Teaching Assistant of Automation of Technical Processes / BME** **2010 – 2014**
  Thesis Title: Combined Simulation Model of the Spatial Distribution of Dynamic Systems Based on Stochastic Compartment of Model and Probabilistic Cellular Automaton, (GPA): All Exams were Excellent, Tver State Technical University, Russia
- **B.Sc. of Electrical Engineering / Biotechnical and Medical Apparatus and Systems** **2005 – 2010**
  Overall Grade Point Average (GPA): 4.4/5.0, Tver State Technical University, Russian
- **Preparation Year** **2004 – 2005**
  Tver State Technical University, Russian

❖ Professional Experience

- **2023 – Present: Assistant professor – Full Time,** Faculty of Science and Information Technology, Department of Robotics and artificial intelligence, Jadara University, Irbid, Jordan.
- **2022 – 2023: Lecturer –Part-time,** Al-Huson University College, Department of Electrical Engineering Al- Balqa' Applied University (BAU), Irbid, Jordan.
- **2018 – 2022: Lecturer – Full Time,** Granada College, Department of Medical Professions Al- Balqa' Applied University (BAU), Irbid, Jordan.
- **2017 – 2018: Lecturer – Part-time,** Faculty of Engineering Technology, Department of Mechatronics Engineering, Al- Balqa' Applied University (BAU), Amman, Jordan.
- **2016 – 2017: Lecturer,** Basmalah for Training and Development, Jadara University, Irbid, Jordan
- **2012 – 2014: Lecturer and Lab Instructor,** Faculty of Engineering, Department of Automation of Technical Processes/ Biomedical Engineering, Tver State Technical University (TSTU), Russia.
- **2010 – 2012: Teaching Assistant,** Faculty of Engineering, Department of Automation of Technical Processes/ Biomedical Engineering, Tver State Technical University (TSTU), Russia**.**
  - Graded home works and exams.
  - Held office hours to assist students.
- **2010 – 2014: Graduate Research Assistant,** Faculty of Engineering, Department of Automation of Technical Processes/ Biomedical Engineering, Tver State Technical University, Russia
  - Conducted a comparative analysis of deterministic and stochastic models of epidemics.
  - Developed the algorithm and designed combined simulation model based on stochastic compartment of model and probabilistic cellular automata of epidemics (Cholera, Influenza).
  - Applied and obtained results of the software in collaboration with the Department of Infectious Diseases in research practice of "Tver State Medical University".

❖ Research Interests

Automation of Information Systems, Introduction to Biomedical Engineering, Medical Equipment, Medical Imaging, Bioinformatics, Medical Electronics, Measuring Devices, Electrical Circuits, Signals and Systems, Biomedical Instrumentation, Computer Applications and Simulation and Modeling, Decision Support System, Cellular Automata, Computer Skills (introduction to ICDL).

❖ Courses Taught

- Actuators
- Medical Equipment
- Medical Laboratories Equipment
- Medical Imaging Equipment
- Medical Treatment Equipment
- Medical Treatment Equipment Workshop
- Medical Imaging Equipment Workshop
- Industrial Measurements
- Microprocessors
- Electrical and Electronic Circuits
- Fundamentals of Electricity and Electronics
- Electronic Devices and Circuits
- Introduction to information technology
- Programming language (1)
- Digital logic design
- Healthcare
- Anatomy
- Medical Records 1
- Medical Records 2
- First Aids
- Biostatistics
- Computer Skills
- Medical Physics
- Medical Sociology
- Health Legislation
- Office and Secretarial Work
- Occupational Safety and Health

❖ Membership

- Member of the Jordanian Engineers Association (JEA)
- Member of the Scientific Electronic Russian Library
- Member of the committee that wrote the annual comprehensive exam “Shamel Exam” for the winter session of 2018 that took place in Al- Balqa’ Applied University

❖ Certifications

- ECDL Foundation – International Computer Driving Licence (ICDL) 2016
- Certificate of state registration of the computer program for predicting the spatial and temporal spreadof epidemics using the cellular automaton method (Patent RU № 2015611537, 2015)

❖ Skills

- **Professional Skills**
  - Research and analysis skills
  - Excellent Interpersonal and Communication Skills.
  - Ability to work under pressure and meet deadlines
  - The Ability to Self-Development and Follow all ways so.
- **Computer and Programming Skills**
  - Computer and Internet Skills (ICDL)
  - Computer technical support, software and hardware troubleshooting
  - Computer-Aided Design using P-CAD, PCB, Lab VIEW
  - Programming and Simulation using Gnumeric spreadsheet, Any Logic, Assembly Language, C++

❖ Languages

- Arabic Language: (Mother Tongue); Excellent in Reading, Writing, and Conversation.
- Russian Language: Excellent in Reading, Writing, and Conversation.
- English Language: Good in Reading, Writing, and Conversation.

❖ Publications

1. **Bashabsheh M.** Mathematical model of the spread of COVID-19 using any logic system. **AIP Conference Proceedings 2023 Nov 10** (Vol. 2930, No. 1). AIP Publishing. https://doi.org/10.1063/5.0175416
2. **Bashabsheh, M.** Modeling the process of spreading an epidemic using dynamic cellular automata systems. [Electronic resource] **// Electronic periodical scientific journal "SCI-ARTICLE.RU". 2023.** No. 122 (October) 2023. p. 19-31. URL: https://sci-article.ru/number/10_2023.pdf
3. **Bashabsheh M.,** Al-Salaimah B. APPLICATION OF AN AGENT APPROACH TO SIMULATION MODELING OF THE PROCESS OF EPIDEMIC SPREAD**. Deutsche Internationale Zeitschrift Für Zeitgenössische Wissenschaft**, **2023**, 65, 36–38. https://doi.org/10.5281/zenodo.8414870
4. **Bashabsheh M.** Modeling the spatial distribution of dynamic systems using probabilistic cellular automata. **Journal of Chemical, Biological and Physical Sciences (JCBPS), 2023**, 13(4), 401-411. https: //doi.org/10.24214/jcbps.B.13.4.40111.
5. **Bashabsheh M.** Simulation stochastic model of influenza using cellular automaton // **Modern scientific researches and innovations. 2023**. № 5 [Electronic journal]. URL: https://web.snauka.ru/en/issues/2023/05/100245
6. **Bashabsheh M.M.** Simulation model development of the spread epidemics on the basis of probabilistic cellular automata // **Herald of Computer and Information Technologies. 2015.** №1, 6–9. https: //doi.org/10.14489/vkit.2015.01.pp.006-009
7. **M.M. Bashabsheh.** Improving the quality and accuracy of anti-epidemic situation using a combination of simulation model based on stochastic model of compartmental and cellular automaton // **Engineering Journal of Don – 2014** – №1. [Electronic scientific journal]. http://www.ivdon.ru/en/magazine/archive/n1y2014/2273
8. **Bashabsheh M.M.** Application of a deterministic and stochastic model for predictive assessment of the spread of epidemics // Electronic periodic scientific journal **«SCI-ARTICLE.RU»**. **– 2014.** – №7. – pp. 9-16. [Electronicresource] URL: https://sci-article.ru/number/03_2014.pdf#page=9
9. **Bashabsheh M.M.** Compartmental models based on deterministic and stochastic variants in modeling the spread of epidemics // Electronic scientific journal **"Computer Engineering and Software" 2014.** Issue 1 January-April. pp. 10-16.
10. **Bashabshekh M.M.,** Skvortsov A.V., Maslennikov B.I. Study of Spatially Extended Dynamical Systems in Simulation of Epidemic Diseases Spread by Methods of Probabilistic Cellular Automaton // **SCIENCE PROSPECTS**. № 5(44). **2013**. pp. 60-63.
11. **Murad Bashabsheh.** Boris Maslinkov. Simulation modeling of the spatial spread of epidemics (cholera for example) using the method of cellular automata using the Anylogic // **Journal Naukovedenie. 2013** №6 (19) [Electronic resource]. - M. 2013. - Access: http://naukovedenie.ru/PDF/135TVN613.pdf
12. **Bashabsheh M. M.** Maslinkov Boris Ivanovich, Skvortsov Andrei Viktorovich. Combined simulation model of space-venous spread cholera epidemic diseases on the basis of probabilistic cellular automation// **Journal Naukovedenie. 2013** №3 (16) [Electronic resource]. - M. 2013. - Access: http://naukovedenie.ru/PDF/42tvn313.pdf
13. **Bashabsheh M.M.** Using environment Anylogic for modeling distribution of epidemic // **Modern scientific researches and innovations**. **2013**. № 4 [Electronic journal]. URL: http://web.snauka.ru/en/issues/2013/04/23264
14. **M.M. Bashabsheh,** A.V. Skvortsov, B.I. Maslinkov. Application of dynamic systems using probabilistic cellular automation to the simulation modeling the spread of cholera. №4 (April) **2013**. Курск. URL:http://jurnal.org/articles/2013/inf5.html

15. **Bashabsheh M.M.** Skvortsov A.V., Maslennikov B.I. Research and forecasting of epidemiological diseases based on compartmental models // **Collection of scientific works of undergraduates and graduate students**. Section information technologies in science and education.–Tver: TSTU, 2013 – Issue №3. pp. 6-9.
16. **M.M Bashabsheh,** A.V. Skvortsov, B.I Maslennikov. Application of Cellular Automata for Modeling the Spatial Distribution of Epidemic Diseases. // **Bulletin of the Tver State Technical University**: Scientific journal –Tver: TSTU, **2013**. – №1. – Issue 23. – pp. 9-14.
17. **M.M Bashabsheh,** A.V. Skvortsov, B.I Maslennikov. Modeling Spatial Spread of Epidemics Using Regular Hexagonal Lattice Based Probabilistic Cellular Automata // **Bulletin of the Tver State Technical University**: Scientific journal – Tver: TSTU, **2013**. – №1. – Issue 23. – pp. 28-31.

❖ Conferences

- **Bashabsheh M.M.** Mathematical modeling of the spread of epidemics (on the example of cholera) using deterministic and stochastic compartmental models// Prospects for the development of science and education: collection of scientific papers of the international scientific-practical conference - Tambov, **2014.** pp. 15-16.
- **Bashabsheh M.M.** Skvortsov A.V., Maslennikov B.I. Simulation modeling of spatial distribution dynamic systems using probabilistic cellular automata based on regular hexagonal lattices: Education and science: current state and development prospects: collection of scientific papers on materials. International distance learning scientific and practical conference. 28-February, **2013**: Part 9. Tambov.
- **Bashabsheh M.M.** Using stochastic models for predictive assessment of the spread of the epidemic using cellular automata // intelligent systems and technologies: current state and prospects: collection of scientific papers of the 2nd International Summer School-Seminar on Artificial Intelligence for students, graduate students and young scientists. –Tver: TSTU, **2013**. – pp. 187-190.
- **M.M. Bashabsheh,** A.A. Al-Azazi, A.V. Skvortsov, B.I Maslennikov. Compartmental models of the spread ofdiseases (epidemics). Education Quality Assurance System: Materials of reports of scientific-practical conference.Tver: Publishing house "Kupol", **2012**. pp. 23-27.
- **M.M. Bashabsheh,** A.V. Skvortsov, B.I Maslennikov. Combination of probabilistic cellular automata and compartmental models for predictive assessment of the spatial distribution of epidemiological diseases. Collection of Proceedings of the scientific and practical conference: "Integration of science and education - production, economics" - Tver. 12-December, **2012**, volume 2. pp. 10.