



Name	Gennadi Simbirski
Position, Department/Faculty	Associate Professor, Department of Software Engineering/Faculty of Software Engineering and Business
Academic Degree, Academic Title	PhD
Email:	g.simbirski@khai.edu
ORCID iD:	0009-0005-6444-9602
Google Scholar:	https://scholar.google.com/citations?hl=uk&user=w5QQR1IAAAAJ

EDUCATION:

Basic education (university, major, year of graduation):

Masters Diplom of Kharkiv National University of Radio Electronics, Administrative Management in Information Security, 2022

Kharkiv Aviation Institute, 0624 Aircraft Control Systems, 1981.

Postgraduate/Doctoral studies:

Candidate of Technical Sciences, Methods and means of measuring thermal quantities, 1992

WORK EXPERIENCE:

Professional Career (Workplace, Years, Position):

National Aerospace University "Kharkiv Aviation Institute", 2023 – Current, Associate Professor of the Software Engineering Department

Kharkiv National Highway University, 2007 – 2023, Associate Professor of the Informatics Department

National Aerospace University "Kharkiv Aviation Institute", 2000 – 2005, research fellow

Institute of Mechanical Engineering Problems of the Academy of Sciences of the Ukrainian SSR (Kharkiv), 1987 – 1997, postgraduate, research fellow

Electrical Instrumentation Design Bureau (Kharkiv), 1985 – 1987, engineer

Air Force of the Soviet Army (military unit 4922, Sevastopol), 1983 – 1985, Senior Lieutenant



Institute of Mechanical Engineering Problems of the Academy of Sciences of the Ukrainian SSR (Kharkiv), 1980 – 1983, research intern

Teaching Experience:

Teacher of the Software Engineering Department National Aerospace University "Kharkiv Aviation Institute", 2023 – Current, teaching courses: informatics, C++ programming, Basic programming, information systems and technologies, Mathlab, Mathcad

Teacher of the Informatics Department Kharkiv National Highway University, 2007 – 2023, teaching courses: Java programming, object-oriented programming in Java, Android programming, discrete structures, programming of microprocessor systems based on Arduino

RESEARCH ACTIVITIES:

Main Research Areas:

use of information technology to ensure safety in transport, programming of microprocessors, detection of anomalies in the video sequence of surveillance cameras, use of information technology of the Kalman filter when conducting measurements

Number of Publications (Scopus, WoS, others):

78 scientific publications,

Monographs, Textbooks:

author of 2 monographs in the fields of video surveillance systems and reducing road transport accidents

Participation in Scientific Conferences:

Regular participant (more 30) and speaker at international and national scientific conferences in Ukraine, Italy, France and others

TEACHING ACTIVITIES:

Courses Taught:

- Informatics,
- C++ programming,
- Visual Basic programming,
- Information systems and technologies,
- Java programming,
- Object-oriented programming in Java,
- Programming of microprocessor systems based on Arduino

Author Courses, Academic Programs:

- Informatics,
- C++ programming,
- Visual Basic programming,
- Information systems and technologies,
- Java programming,
- Object-oriented programming in Java,
- Programming of microprocessor systems based on Arduino





Methodological Materials, Textbooks:

co-author of 10 textbooks in the fields of Methodological of programming and information technologies

PROFESSIONAL ACHIEVEMENTS AND AWARDS:

Honorary Titles:

Certificate from the rector of Khmelnytskyi National University, Prof. Serhiy Matyukh "For the high level of preparation of students for participation in the II round of the All-Ukrainian competition of student scientific works in the specialty "Information Systems and Technologies" and active participation in the work of the jury of the competition. 2021

Certificate of gratitude from the rector of Kharkiv National Highway University for many years of conscientious work

Membership in Professional Associations:

Ukrainian Scientific and Educational IT Society, 2020 - present

SELECTED PUBLICATIONS:

Key Articles (Scopus, WoS, others):

Symbirski G. D., Plekhova G. A., Kostikova M. V., Ocheretenko S. V. Application of information technologies and microprocessor technology for measurements in vehicles // G. D. Symbirsky, G. A. Plekhova, M. V. Kostikova, S. V. Ocheretenko / Systems of control, navigation and communication, 2024, No. 2 (76), pp. 28 – 33. DOI: <https://doi.org/10.26906/SUNZ.2024.2.028> URL:

Symbirski G.D. Software complex for the system of improving the safety of transport vehicles. The development of technical, agricultural and applied sciences as the main factor in improving life: collective monograph / Trembitska O., Zhuravel S., Stoliar S., Bilotserkivska L. – etc. – International Science Group. – Boston : Primedia eLaunch, 2024. 354 p. (P. 219-229). Available at : DOI – 10.46299/ISG.2024.MONO.TECH.2. URL: <https://isg-konf.com/the-development-of-technical-agricultural-and-applied-sciences-as-the-main-factor-in-improving-life/>

Symbirski G.D. Analysis of methods for detecting anomalies in the video sequence of video surveillance cameras on transport. / Bulletin of the Ukrainian Academy of Sciences, collection of scientific works. Kharkiv, Ukrainian Academy of Sciences. 2022, No. 98. P. 26-36.
<https://doi.org/10.30977/BUL.2219-5548.2022.98.0.26>
<http://bulletin.khadi.kharkov.ua/article/view/269575>

Symbirski G.D., Kulyk O.M. Information system for conducting career guidance work in schools of Ukraine / Bulletin of the Ukrainian Academy of Sciences: collection of scientific works. 2021. – No. 94. P. 225-231.
<https://doi.org/10.30977/BUL.2219-5548.2021.94.0.225>,
<http://bulletin.khadi.kharkov.ua/article/view/245824>

Simbirski G.D., Kushnir D.E. Application of information technologies and microprocessor technology to reduce accidents on highways. /Automobile and electronics. Modern technologies: sb. scientific. tr.



2020. – No. 18. P.65-75.

<http://veit.khadi.kharkov.ua/article/view/218832>

<https://doi.org/10.30977/VEIT.2020.18.65>

<http://journals.nupp.edu.ua/sunz/issue/view/117/64>

Simbirski G.D., Kushnir D.E. Application of information technologies and microprocessor technology to reduce accidents on highways. /Automobile and electronics. Modern technologies: sb. scientific. tr. 2020. – No. 18. P.65-75.

<http://veit.khadi.kharkov.ua/article/view/218832>

<https://doi.org/10.30977/VEIT.2020.18.65>

Simbirski G.D. Information technology for remote forced speed limit of vehicles to improve road safety. /Automobile and electronics. Modern technologies: sb. scientific. tr. 2020. – No. 17, p. 54-61. <https://dSPACE.khadi.kharkov.ua/items/dbd152ac-3f3b-4f39-8552-b879d65cd724>

Simbirski G.D. Modern information technologies in thermophysical measurements. Computer technologies and mechatronics: collection of scientific papers based on the materials of the II international scientific and practical conference (Kharkiv, May 28, 2020). Kharkiv, 2020, pp. 295-298. <https://api.dSPACE.khadi.kharkov.ua/server/api/core/bitstreams/02296f7f-7069-48a0-a922-e6b445c1a746/content>

Simbirski G.D. The use of microprocessor systems in teaching programming in a transport university. Materials of the All-Ukrainian scientific and methodological internet conference "Information technologies in the educational process of higher education institutions" November 13, 2020. - Kharkiv, KhNADU, 2020. pp. 124-134.

<https://api.dSPACE.khadi.kharkov.ua/server/api/core/bitstreams/c5d72eb8-3f0e-43a7-bea7-24ae7dfc233b/content>

Symbirski G.D. Application of information technologies and microprocessor technology to reduce accidents on highways / Materials of the VII International Scientific and Technical Internet Conference "Automobile and Electronics. Modern Technologies", (Kharkiv, November 23-24, 2020) - Kh.: KhNADU, 2020.

Hyperlink to the collection of abstracts

Symbirski G.D. Some aspects of teaching the discipline "Programming" in higher educational institutions of the transport direction / Collection of Sciences. Proceedings of the XXV International Scientific and Practical Conference "Innovative trends of science and practice, tasks and ways to solve them" (Athens, Greece, June 28, 2022). P. 501-504.

<https://isg-konf.com/innovative-trends-of-science-and-practice-tasks-and-ways-to-solve-them-two/>

Simbirski G.D. Information technology of forced remote speed limit of cars as a way to accident-free traffic / Collection of scientific works based on the materials of the XXV International Scientific and Practical Conference "Innovative trends of science and practice, tasks and ways to solve them" (Athens, Greece, June 28, 2022). P. 505-509.

<https://isg-konf.com/innovative-trends-of-science-and-practice-tasks-and-ways-to-solve-them-two/>

Simbirski G.D. Systems for detecting anomalies in the video sequence of video surveillance cameras / Collection of scientific works based on the materials of the V International Scientific and Practical Conference "Modern and global methods of the development of scientific thought", October 25-28, 2022, Florence, Italy, pp. 602-609.





<https://isg-konf.com/modern-and-global-methods-of-the-development-of-scientific-thought/>

Simbirski G.D. Using video analytics to detect anomalies in the video sequence / Collection of scientific works Proceedings of the V International Scientific and Practical Conference "Modern and global methods of the development of scientific thought", October 25-28, 2022, Florence, Italy, pp. 609-615

<https://isg-konf.com/modern-and-global-methods-of-the-development-of-scientific-thought/>

Symbirski G.D. Application of video analytics in anomaly detection systems in video sequences / Collection of scientific papers based on the materials of the All-Ukrainian Scientific and Practical Internet Conference "Modeling and Information Technologies in Science, Engineering, Cybersecurity and Education" November 15-16, 2022, Kharkiv, Ukraine, pp. 30-34.

<https://dspace.khadi.kharkov.ua/handle/123456789/18914>

Simbirski G.D. Application of information technologies to improve road safety. Scientific foundations in research in Engineering: collective monograph / Korniylo I., Gnyp O. – etc. – International Science Group. – Boston : Primedia eLaunch, 2022. 709 p. Available at : DOI-10.46299/ISG.2022.

MONO.TECH.2, pp. 369-382,

<https://isg-konf.com/uk/scientific-foundations-in-research-in-engineering/>

Simbirski G.D. Application of information technology for detecting anomalies in video sequences to improve vehicle safety. /Collective monograph. Electronic resource: Technical and agricultural sciences in modern realities: problems, prospects and solutions: collective monograph / Hladyshev D., Brodskiy M., Lisnykh L. – etc. – International Science Group. - Boston: Primedia eLaunch, 2023. 461. Available at: DOI - 10.46299/ISG.2023. MONO.TECH.2, p. 550-555,

<https://isg-konf.com/uk/technical-and-agricultural-sciences-in-modern-realities-problems-prospects-and-solutions/>

Simbirski G., Oksenich V. // Organization of microservices interaction in web-application development tasks// XV International Scientific and Practical Conference “Complexities of education of modern youth and students”, Paris, France, December 10 – 13, 2024. DOI – 10.46299/ISG.2024.2.15, R. 33-37

<https://isg-konf.com/complexities-of-education-of-modern-youth-and-students/>

Simbirski G., Overchenko V.// XV International Scientific and Practical Conference “Complexities of education of modern youth and students”, Paris, France, December 10 – 13, 2024. DOI – 10.46299/ISG.2024.2.15, R. 38-40,

<https://isg-konf.com/complexities-of-education-of-modern-youth-and-students/>

Books, Chapters in Collective Monographs:

Simbirski G. 5.3 Neural networks as a necessary component for modern methods of searching for anomalies in video sequences. TECHNICAL, AGRICULTURAL AND MATHEMATICAL SCIENCES: SCIENTIFIC TRENDS, PROBLEMS AND WAYS OF THEIR DEVELOPMENT, International Science Group. – Boston : Primedia eLaunch, 2025. 453 p. (P. 184-226). Available at: DOI:

10.46299/ISG.2025.MONO.TECH.2.5.3

<https://isg-konf.com/technical-agricultural-and-mathematical-sciences-scientific-trends-problems-and-ways-of-their-development/>



Simbirski G. 5.4 Software development road safety system. TECHNICAL, AGRICULTURAL AND MATHEMATICAL SCIENCES: SCIENTIFIC TRENDS, PROBLEMS AND WAYS OF THEIR DEVELOPMENT, International Science Group. – Boston : Primedia eLaunch, 2025. 453 p. (P. 184-226). Available at: DOI: 10.46299/ISG.2025.MONO.TECH.2.5.3
<https://isg-konf.com/technical-agricultural-and-mathematical-sciences-scientific-trends-problems-and-ways-of-their-development/>

Levterov A.I., Simbirski G. D., Timonin V.A. C++ Programming. Textbook. Kharkiv: KhNADU, 2020. - 240 p.

Links to Citation Database Profiles:

ADDITIONAL INFORMATION:

Language Proficiency:

Ukrainian — Native, English — Intermediate

IT Skills:

Productivity Tools: Microsoft Office (Word, Excel, Access, PowerPoint), Google Drive

Development Tools: Microsoft Visual Studio, Java Development Kit

Educational Platforms: Google Classroom, Moodle

Communication & Collaboration: Zoom, Google Meet

Social and Community Activities:

Charitable assistance to pets - shelter in your own home