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Department/Faculty	Mechatronics and electrical engineering/
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ResearchGate:	https://www.webofscience.com/wos/author/re cord/AIA-1472-2022

### **EDUCATION:**

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

National Aerospace University "Kharkiv Aviation Institute", Automation and computer-integrated technologies, Computerized Management System and Automation, 2018

### **Postgraduate/Doctoral studies:**

Postgraduate study at the National Aerospace University "Kharkiv Aviation Institute", Kharkiv

### Additional training, certification programs:

International scientific-practicalconference «Quality,StandardizationandMetrologicalEquipment» (6 Academic hours/ 0,2 ECTS Credits) Kharkiv, Ukraine, 14-15 March 2023

#### **WORK EXPERIENCE:**

## **Professional Career (Workplace, Years, Position):**

[2019-2021] – Assistant of the Department Mechatronics and electrical engineering at National Aerospace University "Kharkiv Aviation Institute".

[2022-2025] — Assistant of the Department Mechatronics and electrical engineering at National Aerospace University "Kharkiv Aviation Institute".

# **Teaching Experience:**

5 years

## **Experience in International or National Projects:**

National Scientific Research Work:

[01.01.2021– 31.12.23] Algorithmic support of intelligent caravan systems with dynamic objects (0121U111612)

### **RESEARCH ACTIVITIES:**

#### **Main Research Areas:**

Optimal and adaptive control systems, unmanned systems and autonomous control and guidance







systems, automation of dynamic object control processes, monitoring of environmental parameters

## **Number of Publications (Scopus, WoS, others):**

more than 10

# Monographs, Textbooks:

1. Kochuk, S. B., Nikitin, A. O., Gegera I. B. Design of small unmanned aerial vehicles: Textbook. – Kharkiv: National Aerospace University named after N. E. Zhukovsky (KhAI), 2024. – 101 p.

## **Participation in Scientific Conferences:**

- 1. AUTOMATION OF DESIGN OF UNMANNED AIRCRAFT / S.B. Kochuk, A.O. Nikitin // Quality, standardization and metrological support: [materials of the II international scientific and practical conference, Kharkiv March 14-15, 2023] / edited by Dr. of Engineering, Prof. R. M. Trishcha, Ph.D., Assoc. Prof. G. S. Grinchenko. Ukrainian Engineering and Pedagogical Academy. Kharkiv: UIPA, 2023. C. 86-87
- 2. METHODS OF MEASURING UAV FLIGHT PARAMETERS / S.B. Kochuk, A.O. Nikitin// Quality, standardization and metrological support: [materials of the II international scientific and practical conference, Kharkiv March 14-15, 2023] / under the general editorship of Dr. of Engineering, Prof. R. M. Trishcha, Ph.D., Assoc. Prof. G. S. Grinchenko. Ukrainian Engineering and Pedagogical Academy. Kharkiv: UIPA, 2023. P. 96-97
- 3. Application of neural network algorithms in problems of identification and modeling of automatic control systems of unmanned aerial vehicles [Text] / S. B. Kochuk, A. O. Nikitin Current information and communication technologies in transport, industry and education: Abstracts XIV International Scientific and Practical Conference (Dnipro, April 15-16, 2020). D.: DIIT, 2020. P. 93.
- 4. Methods for identifying small-sized unmanned lethal vehicles [Text] / A. O. Nikitin, T. T. Torres The XVII International Scientific and Practical Conference "Multidisciplinary academic notes. Theory, methodology and practice": Additional abstracts. Tokyo, 2022. pp. 1081-1083. DOI 10.46299/ISG.2022.1.17.
- 5. Reliability of drone delivery mission for VTOL concept [Text] / Nikitin A.O., Rafael Trujillo Torres TXXXI International Scientific and Practical Conference "Trends in the development of modern scientific"
- 6. PARAMETER IDTNIFICATION VERTIGO [Text] / Nikitin A.O., Rafael Trujillo Torres TXXXI International Scientific and Practical Conference "Trends in the development of modern scientific": Additional abstracts.
- 7. Mathematical modeling of dynamic processes in heat exchangers [Text] / Litvyak O. M., Nikitin A. O. European congress of scientific achievements. Proceedings of the 10th International scientific and practical conference. Barca Academy Publishing. Barcelona, Spain. 2024. pp. 113-118. URL: <a href="https://sciconf.com.ua/wp-content/uploads/2024/10/EUROPEAN-CONGRESS-OF-SCIENTIFIC-ACHIEVEMENTS-7-9.10.24.pdf">https://sciconf.com.ua/wp-content/uploads/2024/10/EUROPEAN-CONGRESS-OF-SCIENTIFIC-ACHIEVEMENTS-7-9.10.24.pdf</a>

### **TEACHING ACTIVITIES:**

#### **Courses Taught:**

Computer information technologies in energy, Computer technologies for computing and modelling, Computer technologies for design, Mathematical modelling of electrical power and electromechanical systems, Microprocessor control systems based on Arduino platforms, Ground-based unmanned systems, Design of small-sized UAVs, Modern unmanned systems







## **Author Courses, Academic Programs:**

Computer-integrated technological processes and production (bachelor's educational program), Computer-integrated management in energy (bachelor's educational program), Computer-integrated automation and control systems (bachelor's educational program)

# **Methodological Materials, Textbooks:**

Syllabi for the courses: Computer information technologies in energy, Computer technologies for design, Mathematical modelling of electrical power and electromechanical systems, Microprocessor control systems based on Arduino platforms, Ground-based unmanned systems, Design of small-sized UAVs

Textbooks:

- 1. Kochuk, S. B., Nikitin, A. O., Lutay, K. N. Identification of automation objects: Textbook. Kharkiv: National Aerospace University named after N. E. Zhukovsky (KhAI), 2021. 45 p.
- 2. Kochuk, S. B., Nikitin, A. O. Practical study of automation objects: Textbook. Kharkiv: National Aerospace University named after N. E. Zhukovsky (KhAI), 2021. 61 p.

#### **SELECTED PUBLICATIONS:**

# **Key Articles (Scopus, WoS, others):**

- 1. Algorithmic Support of the System of Automatic Control of Longitudinal Movement of the Small Unmanned Aerial Vehicle Vertigo [Τεκcτ] / Artem Nikitin, Sergii Kochuk, Sergii Firsov Springer Nature Switzerland AG 2020 M. Nechyporuk et al. (Eds.): Integrated Computer Technologies in Mechanical Engineering, AISC 1113, pp. 1–12, 2020. https://doi.org/10.1007/978-3-030-37618-5\_8. (Scopus)
- 2. Algorithmic provision of contours guidance of unmanned systems / Seghii Kochuk, Roman Trishch, Artem Nikitin, Ivan Zhezhera, Olena Cherniak, Eduard Khomiak // In: Lytvynov, O., Pavlikov, V., Krytskyi, D. (eds) Integrated Computer Technologies in Mechanical Engineering 2024. ICTM 2024. Lecture Notes in Networks and Systems, vol 1473. Synergetic Engineering, vol 1, 2025, Springer, pp 16-25 https://doi.org/10.1007/978-3-031-94845-9\_2 (Scopus Q4).
- 3. APPLICATION OF GENETIC ALGORITHM FOR MODELING AND IDENTIFICATION OF UNMANNED AERIAL VEHICLE MOTION / Anton Panda, Roman Trishch, Artem Nikitin, Rafael TrujiIlo Torres, // MM SCIENCE JOURNAL 2025(3) I SEPTEMBER, p. 8546-8553 <a href="http://doi.org/10.17973/MMSJ.2025\_09\_2025040">http://doi.org/10.17973/MMSJ.2025\_09\_2025040</a> (Scopus Q3).
- 4. Fedorovich, O., Lutai, L., Trishch, R., Zabolotnyi, O., Khomiak, E., Nikitin, A. (2024). Models for Reducing the Duration and Cost of the Aviation Equipment Diagnostics Process Using the Decomposition of the Component Architecture of a Complex Product. In: Faure, E., et al. Information Technology for Education, Science, and Technics. ITEST 2024. Lecture Notes on Data Engineering and Communications Technologies, vol 221. P. 108-125. Springer, Cham.

# https://doi.org/10.1007/978-3-031-71801-4\_9

5. IDENTIFICATION OF UAV MODEL PARAMETERS FROM FLIGHT AND COMPUTER EXPERIMENT DATA[Text] / S. KOCHUK, NGUYEN DINH DONG, ARTEM NIKITIN, Rafael TrujiIlo Torres // Aerospace Technic and Technology,  $N^0$  4 (172), pp. 71 – 82, 2021. DOI:10.32620/aktt.2021.6.02

### **Links to Citation Database Profiles:**

https://orcid.org/0000-0001-6830-0710





https://scholar.google.co.uk/citations?hl=en&user=m\_PYcycAAAAJ https://www.scopus.com/authid/detail.uri?authorId=57214218609 https://www.webofscience.com/wos/author/record/AIA-1472-2022

# **ADDITIONAL INFORMATION:**

# **Language Proficiency:**

Ukrainian

#### **IT Skills:**

Modeling of dynamic objects (SolidWorks, MatLab), work in customization environments (Mishin Planer) and programming of controllers (C/C++) of UAVs

