



<b>Name</b>	Oleksii Hurtovyi
<b>Position, Department/Faculty</b>	Assistant of the Department of Aircraft Control Systems
<b>Academic Degree, Academic Title</b>	PhD Student
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<b>ResearchGate:</b>	<a href="https://www.researchgate.net/profile/Oleksii-Hurtovyi">https://www.researchgate.net/profile/Oleksii-Hurtovyi</a>

## EDUCATION:

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

Bachelor's degree in "Avionics"

National Aerospace University – "Kharkiv Aviation Institute" [01/09/2015 — 30/06/2019]

Master's degree in "Aviation transport"

National Aerospace University – "Kharkiv Aviation Institute" [01/09/2019 — 31/12/2020]

### Postgraduate/Doctoral studies:

PhD student in the specialty "Avionics"

National Aerospace University – "Kharkiv Aviation Institute" [01/09/2021 — Current]

## WORK EXPERIENCE:

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

Engineer

LTD RPI HARTRON-ARKOS, Kharkiv, Ukraine [02/07/2019 — 28/03/2024]

Assistant of the Department of Aircraft Control Systems

National Aerospace University – "Kharkiv Aviation Institute" [01/10/2024 — Current]

### Teaching Experience:

Teacher of the Department of Aircraft Control Systems

**National Aerospace University – “Kharkiv Aviation Institute”** [01/10/2024 — Current]  
teaching courses: “Avionics”, “Algorithmization and programming”, “Testing and certification of avionics systems”, “Geographic information systems in navigation”

## RESEARCH ACTIVITIES:

### Main Research Areas:

Visual data processing systems; Advanced statistical data analysis; 3D models and simulation tests; development and improvement of navigation and guidance systems for unmanned vehicles; game and interactive learning methods in higher education

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

Over 10 scientific publications, including indexed articles in Scopus and Web of Science data bases; multiple conference proceedings and applied research outputs.

### Participation in Scientific Conferences:

Regular participant and speaker at international and national scientific conferences in the field of algorithmization and autonomous UAV navigation and guidance systems

## SELECTED PUBLICATIONS:

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

Dergachov K., Hurtovyi O., Hashimov E. Adaptive algorithm for visual positioning of UAVs in the local environment //Proceedings of the International Workshop on Computational Methods in Systems Engineering (CMSE 2025) Kyiv, Ukraine. <https://ceur-ws.org>. – 2025. – T. 3981.

Hurtovyi O., Dergachov K., Yaremenko A.: Visual Positioning of the UAV in Conditions of Impossibility of Using External Navigation Signals. INTERNATIONAL WORKSHOP ON ADVANCES IN CIVIL AVIATION SYSTEMS DEVELOPMENT, 2025, Springer. DOI: [https://doi.org/10.1007/978-3-031-91992-3\\_36](https://doi.org/10.1007/978-3-031-91992-3_36)

V. Bilozerskyi, K. Dergachov, O. Hurtovyi: «Performance Evaluation of Modified Detection Algorithms within the framework of a Simulation System for Modelling UAV Visual Guidance». International Scientific and Technical Conference, 2024, ICTM. DOI: [https://doi.org/10.1007/978-3-031-94845-9\\_7](https://doi.org/10.1007/978-3-031-94845-9_7)

Hurtovyi O. “Techniques for designing a trajectory for save UAV return using Blender and Python GUI”, in Scientific review of the actual events, achievements and problems (Berlin, Germany), 101-107 pp. URL:<https://doi.org/10.36074/scientia-31.05.2024>

Hurtovyi Oleksii, Supervisor: Dergachov Kostiantyn: Guidance on a moving target and orientation in space of an unmanned aerial vehicle. December 22, 2023; Coventry, UK / 136-142 pp. // V International Scientific and Theoretical Conference «The driving force of science and trends in its development». DOI: <https://doi.org/10.36074/scientia-22.12.2023> URL: <https://previous.scientia.report/index.php/archive/article/view/1504>

Hurtovyi O., Yaremenko A. «Visual positioning of the drone in conditions of impossibility of using external navigation signals». Problems of Informatization: the twelfth international scientific and technical conference 2024. doi: <https://doi.org/10.32620/PI.24.t1>

## ADDITIONAL INFORMATION:



### **Language Proficiency:**

Ukrainian (native), English (intermediate 'B2')

### **IT Skills:**

#### **Soft Skills:**

Communication skills, Teamwork, Critical thinking, Creativity, Adaptability, Time management & planning, Presentation skills, Listening skills, Stress resistance, Motivation to learn, Decision-making skills, Analytical thinking, Self-organization, Ability to work under deadlines, Responsibility

#### **Hard Skills:**

##### **Programming & Scripting:**

**C++:** Visual Studio, QtCreator, Matlab

**Python:** PyCharm (numpy, matplotlib, cv2, os, PIL, openpyxl, etc)

**Web:** HTML / CSS

**Web platform:** OnlineGDB, Draw.io, Miro, Canva, Figma, Mentor, etc

**GIS:** QGIS, SASPlanet, Google Earth, OSM

##### **Creation of 2D, 3D objects and video processing:**

**2D, 3D:** Blender, Marmoset Toolbag, Substance Painter, ZBrush, UVLayout, Adobe Photoshop / Illustrator, TopoGun, Mixamo. SolidWorks

**Video & special effects:** Adobe Premiere Pro, Adobe After Effects, Houdini

##### **Working in game engines and simulators:**

Game Engines: Unity, Unreal Engine

Flight Simulators: Liftoff, DRL, FlightGear and AC3D

##### **Standard software set & platforms:**

Microsoft Office, Excel, Powerpoint, Zoom, Google meet, OBS, PureRef, etc

AI assistants: ChatGPT, Deep Seek, Grok, etc

##### **Social and Community Activities:**

Responsible for organizing, supporting and teaming up with various social and community initiatives. These include: conducting master classes aimed at improving the academic and professional development of university applicants and students; preparing and improving existing teaching materials; providing personal consultations with students; developing and disseminating information on admission to the National Aerospace University "Kharkiv Aviation Institute" among applicants, educational institutions and schools.