



Name	Sergii Gubin
Position, Department/Faculty	Dean of the Faculty of Rocket and Space Engineering
Academic Degree, Academic Title	Candidate of Technical Sciences (Ph.D.) professor
Email:	s.gubin@khai.edu
Scopus Author ID:	57197463049
Web of Science ResearcherID:	OAJ-6050-2025
ORCID iD:	0000-0003-3182-1840
Google Scholar:	Xz3XspgAAAAJ
ResearchGate:	https://www.researchgate.net/profile/Sergii-Gubin?ev=hdr_xprf

EDUCATION:

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

Graduated from “Kharkov Aviation Institute named by N.E. Zhukovsky” on specialty “Aircraft instrument-making” [1984]

Postgraduate/Doctoral studies:

Candidate of Technical Science (PhD) [1998]

Associate Professor [2002]

Professor Kharkiv Aviation Institute [2015]

Additional training, certification programs:

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WORK EXPERIENCE:

Professional Career (Workplace, Years, Position):

National Aerospace University – Kharkiv Aviation Institute [2019-Current], Dean of the Faculty of Rocket and Space Engineering, Professor of the Department Thrusters and Power Supply Systems

National Aerospace University – Kharkiv Aviation Institute [2011-2014] Head of the department «Space Technology and Renewable Energy»;

National Aerospace University – Kharkiv Aviation Institute [2006-2011], Deputy Head of Department of Rocket and Space Engines and Power Plants of Aircraft

National Aerospace University – Kharkiv Aviation Institute [2000-2006], Head of the Department Thrusters and Power Supply Systems

National Aerospace University – Kharkiv Aviation Institute [1999-2000], Assistant Professor of the Department of Thrusters and Power Supply Systems

National Aerospace University – Kharkiv Aviation Institute [1994-1999], Senior Lecturer of the Department of Thrusters and Power Supply Systems

National Aerospace University – Kharkiv Aviation Institute [1991-1994], Senior Research Worker, Head of the Physical Simulation Department of Power Engineering Branch of Interindustrial Scientific and Technical Center of Space Power Engineering and Engines Attached to “KhAI”

National Aerospace University – Kharkiv Aviation Institute [1988-1991], Graduate student at

“Kharkov Aviation Institute”, Research Worker of the Department of Thrusters and Power Supply Systems

National Aerospace University – Kharkiv Aviation Institute [1984-1988], Engineer of the Department of Thrusters and Power Supply Systems

Teaching Experience:

Teacher of the Department of Thrusters and Power Supply Systems, National Aerospace University – Kharkiv Aviation Institute [1994-Current]

Experience in International or National Projects:

By request of Central Specialized Design Office, [1984-1986], Analysis and development of solar battery simulator of great power for power supply system (PSS) of spacecraft, [1986-1989] Development of equipment and cyclical tests of chemical accumulators for spacecraft PSS of great power;

By request of Research-and-Production Complex “Saturn”, [1988-1989] Solar battery simulators for optimizing control analysis of spacecraft PSS, [1989-1990] Tests and characteristics analysis of high-voltage solar batteries for spacecraft PSS, [1990-1991] Development of equipment for tests of nickel hydrogen chemical accumulators of spacecraft PSS of great power;

By request of Design Office Department of Production Association “Kharkov electrical equipment plant”, [1991-1992] Heat measurements, determination of thermal balance and simulation of the thermal processes of control and monitoring equipment of spacecraft high-powered PSS, [1992-1993] Measurements and analysis of dynamic processes of joint work of solar battery and time-proportional control power regulator of solar battery, [1993-1994] Physical modeling of work of solar battery sampled-data regulator for commercial spacecraft “Start”;

By request of State Design Office “Yuzhnoye”, [1994-1996] Development of tools and methodologies for metrological certification of photoelectric transducers and the batteries on their basis for application on spacecraft “Microsputnik”, [1996-1998] Analog-physical modeling of control and monitoring equipment of “Microsputnik” spacecraft PSS for electrochemical accumulator battery life test realization, [1998-2000] Life test realization for test sample of chemical battery of spacecraft “Microsputnik” using accumulators leveling device;

By request of the Ministry of Education and Science of Ukraine, [2004-2007] Development of tools and methods for electrochemical battery life tests for guaranteed power supply systems of space missile complex, [2008-2011] Creation of scientific and technical bases to ensure a long service life and guaranteed power supply aerospace engineering and land transport, [2014-2019] Test space electric propulsion system.

By request the National Space Agency of Ukraine, [2012-2014] Creation of Ukrainian Youth Microsatellite;

By request of Institute of Semiconductor Physics of National Academy of Sciences, [1999-2002] Development of tools and bench tests realization of photovoltaic array sample of spacecraft “Microsputnik” MC-1;

By request of Research Technological Institute of Instrument, [2001-2003] Development of tools and methodologies for metrological certification of photoelectric transducers for space application.

Participation in projects TEMPUS / TACIS:

- JEP 27201-TEMPUS-2006 Introducing EU-compatible MSc Degree in Engines and Aircraft Power Systems;

- JPCR 144681-TEMPUS-2008-DE-JPCR Technical University of Berlin, ILR CRIST (Curricula Reform in Space Technology in KZ,RU,UA);

- 516911-DE-JPCR REGENLAW Development of Regional Interdisciplinary Post-Graduate Energy and Environmental Law Studies

RESEARCH ACTIVITIES:

Main Research Areas:

aerospace engineering
propulsion and power plants
solar energy
energy storage

Number of Publications (Scopus, WoS, others):

105 scientific papers; 8 articles in Scopus; 3 articles in Web of Science journals.

Monographs, Textbooks:

Solar batteries for automatic spacecraft (layout on spacecraft, component design, design calculations) / K. V. Bezruchko, V. F. Gaidukov, V. I. Dranovsky, Ya. S. Karpov, I. B. Turkin. // Textbook for technical universities... - Kharkiv: KhAI, 2002. 276 p.

Participation in Scientific Conferences:

International conference "Space Technologies: Present And Future"
The international youth scientific and practical conference "Human and Space"
International Scientific and Technical Conference "Information and Computer Technologies in Mechanical Engineering"

TEACHING ACTIVITIES:

Courses Taught:

Functional systems of plasma accelerators and power plants
Functional systems of renewable energy sources
Design of solar and thermal non-traditional power plants
Design of micro and pico satellites
Scientific and technical problems of designing and constructing autonomous power plants
Specifics of theoretical and experimental research of plasma engines and power plants
Energy storage
Intelligent power supply systems for small spacecraft
Pre-diploma course on the design of solar power plants for spacecraft

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Author Courses, Academic Programs:

Design of solar and thermal non-traditional power plants
Design of micro and pico satellites
Energy storage
Functional systems of plasma accelerators and power plants

Methodological Materials, Textbooks:

24 papers

GRANTS AND PROJECTS:

Participation in International and National Projects:

3 Participation in projects TEMPUS / TACIS:

Grants, Scholarships, Academic Mobility Programs:

- JEP 27201-TEMPUS-2006 Introducing EU-compatible MSc Degree in Engines and Aircraft Power Systems;
- JPCR 144681-TEMPUS-2008-DE-JPCR Technical University of Berlin, ILR CRIST (Curricula Reform in Space Technology in KZ,RU,UA);
- 516911-DE-JPCR REGENLAW Development of Regional Interdisciplinary Post-Graduate Energy and Environmental Law Studies

PROFESSIONAL ACHIEVEMENTS AND AWARDS:

Honorary Titles:

Professor KhAI

Distinctions, Awards, Prizes:

- Certificate from the Verkhovna Rada of Ukraine
- Certificate of Honor from the Kharkiv Regional State Administration
- Letter of appreciation from the Head of the Kharkiv Regional State Administration
- Certificate of Honor from the Kharkiv City Council
- Medal of Yuzhnoye Design Office "For Merits to Yuzhnoye Design Office"
- Decoration of Yuzhnoye Design Office "For personal contribution to space exploration"
- Medal commemorating 75 years of the O. M. Makarov State Enterprise VO PMZ
- A. M. Pidgorny Gold Medal from the Engineering Academy of Ukraine

Membership in Professional Associations:

- Cosmos Association
- Ukrainian Solar Energy Association

INTERNATIONAL ACTIVITIES:

Internships:

- Participation in international scientific conferences (Italy, Germany, Belgium, Holland, Sweden, France, Spain, Georgia, Czech Republic, Kazakhstan, South Korea, China).
- Internships: Germany, TUB, 2010; Sweden, KTI, 2013.

Cooperation with Foreign Universities:

- Technische Universität Berlin
- Otto von Guericke University Magdeburg
- Turin Polytechnic
- University of Würzburg
- Royal Institute of Technology, Sweden
- University Pierre and Marie Curie «Sorbonne»
- KAIST University, South Korea
- Xi'an Jiaotong University

Teaching/Lecturing Abroad:

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SELECTED PUBLICATIONS:



Key Articles (Scopus, WoS, others):

1. Energy Characteristics of Solar Arrays of the University Microsatellite for Remote Sensing of the Earth / Pohudin, A., Gubin, S., Shepetov, Y., Babakova, L., Dzvonytskyi, O. // Lecture Notes in Networks and Systems. — 2024. — 1008 LNNS. — С. 314–326. (Article, Відкритий доступ).
2. METHOD FOR DETERMINING PHASE SHIFT USING TWO-PHASE INTERPOLATION TRANSFORMATION / Gubin, S., Tyshko, S., Bezmenov, S., Dovhyi, I., Chimbanga, E. // Radioelectronic and Computer Systems. — 2024. — 2024(3(111)). — С. 96–107. (Article, Відкритий доступ).
3. Development of an Algorithm for Preparing to Start an Resistojet Propulsion System / Pohudin, A., Gubin, S., Pohudina, O., Sinchenko, S. // Lecture Notes in Networks and Systems. — 2022. — 367 LNNS. — С. 145–156. (Conference Paper, Відкритий доступ).
4. A Mathematical Model of Electric Ohmic Propulsion System Dynamics / Pohudin, A., Gubin, S., Sinchenko, S., Shulga, I., Pohudina, O. // International Scientific and Technical Conference on Computer Sciences and Information Technologies. — 2020. — 1. — С. 411–414, 9322028. (Conference Paper, Відкритий доступ).
5. OSCILLOGRAPHIC METHOD OF MEASUREMENT OF PHASE SHIFT ON THE BASIS OF TWO-SEMIPERIOD CONVERSION | ОСЦИЛЛОГРАФИЧЕСКИЙ МЕТОД ИЗМЕРЕНИЯ ФАЗОВОГО СДВИГА НА БАЗЕ ДВУХПОЛУПЕРИОДНОГО ПРЕОБРАЗОВАНИЯ / Gubin, S., Tyshko, S., Zabula, O., Chernichenko, U. // Radioelectronic and Computer Systems. — 2019. — (4). — С. 47–54. (Article, Відкритий доступ).
6. Combined receiver of solar radiation with holographic planar concentrator / Iurevych, O., Gubin, S., Dudeck, M. // Iop Conference Series Materials Science and Engineering. — 2012. — 29(1). — 012016. (Conference Paper, Відкритий доступ).
7. Plasmachemical method of hydrogen production out of bioproducts and waste water / Gubin, S., Yakovlev, A., Loyan, A., Kharchenko, V., Boyarchuk, A. // 2010 IEEE International Energy Conference and Exhibition Energycon 2010. — 2010. — С. 458–461, 5771724. (Conference Paper, Відкритий доступ).
8. Review and analysis of solar cell array simulators / Bezruchko, K.V., Gubin, S.V. // Elektrotehnika. — 1991. — (3). — С. 52–58. (Article, Відкритий доступ).

Books, Chapters in Collective Monographs:

1. Solar energy systems for spacecraft. Physical and mathematical modeling / K.V. Bezruchko, N.V. Belan, D.G. Belov, S.V. Gubin, V.I. Dranovsky, ... // Kharkiv: KhAI, 2000.—515 p.
2. Autonomous ground-based power plants using renewable energy sources / K.V. Bezruchko, S.V. Gubin // Kharkiv: IC KAI, 2007.
3. Solar batteries for automatic spacecraft (layout on spacecraft, component design, design calculations) / K.V. Bezruchko, V.F. Gaidukov, S.V. Gubin, V.I. Dranovsky, Y.S. Karpov, ... // Kharkiv: KhAI, 2011.
4. Management and marketing of the space industry. Part I. / Gubin C. V., Ivanova T. Yu., Pavlenko T. Yu. // Textbook. Kharkiv: KhAI, 2014. — 131 p.
5. Management and Marketing in the Space Industry. Part II: Marketing in Space Activities / S. V. Gubin, T. Yu. Ivanova, T. Yu. Pavlenko // Kharkiv: KhAI, 2016. — 90 p.

Links to Citation Database Profiles:

Google Scholar profile:

<https://scholar.google.com/citations?user=Xz3XspgAAAAJ&hl=ru>

Scopus profile: <https://www.scopus.com/authid/detail.uri?authorId=57197463049>

Web of Science profile: <https://www.webofscience.com/wos/author/record/OAJ-6050->



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ADDITIONAL INFORMATION:

Language Proficiency:

Ukrainian (native), Russian (native), Deutsch (A2).

IT Skills:

Software applications in electrical engineering and energy

Social and Community Activities:

Participation in the jury of the Junior Academy of Sciences

Reviewer for the journal Space Science and Technology

