

# **CURRICULUM VITAE**

## **Aliaksandr Hryn (Alexander Alexandrovich Grin)**

Dr. Sc. (habilitation), Professor,  
Head of Department of Mathematical Analysis, Differential  
Equations and Algebra,  
Yanka Kupala State University of Grodno

### **Personal details**

Date of birth: June 7, 1973  
Gender: male  
Place of birth: Grodno  
Marital status: married, two daughters  
Citizenship: Belarus  
Country of residence: Belarus

#### **Contacts**

Postal Address (University): Ozheshko str. 22 - 221, 230023, Grodno, Belarus  
Phone (Home): +375-152-78-87-98  
Mobile: +375-29-618-84-81  
Fax (University): +375-152-73-19-10  
E-mail: [grin@grsu.by](mailto:grin@grsu.by)

### **Education and honors:**

- 1980 – 1990** attended school №1 in Grodno and was awarded with a silver medal
- 1988 – 1990** attended lyceum education studying mathematics on the advanced level
- 1990 – 1995** studied at the Faculty of Mathematics at Yanka Kupala State University of Grodno majoring in “Mathematics” with the additional speciality “Physics”
- 1994 – 1995** received student scholarship of George Soros Fund
- 1996 – 2000** studied in post-graduate course “Differential Equations” at Yanka Kupala State University of Grodno
- 2000** was awarded diploma of candidate of mathematical sciences (Differential Equations) – PhD in Mathematics
- 2005** obtained diploma of associate professor of Mathematics
- 2016** was defended doctoral dissertation (habilitation) «Estimation of limit cycles number and localization for autonomous systems of the second order» in the Institute of Mathematics of National Academy of Sciences of Belarus
- 2017** was awarded diploma of doctor (habilitation) of mathematical sciences (Differential Equations, Dynamical Systems and Optimal Control)
- 2021** obtained diploma of professor of Mathematics

### **Work experience:**

- 1995–1997** lecturer, Department of Algebra, Geometry and Methodics of Teaching Mathematics, Yanka Kupala State University of Grodno
- 1997–2000** senior lecturer, Department of Algebra, Geometry and Methodics of Teaching Mathematics, Yanka Kupala State University of Grodno
- 2000–2015** associate professor, Department of Algebra, Geometry and Methodics of Teaching Mathematics, Yanka Kupala State University of Grodno
- 2015–2017** associate professor, Department of Mathematical Analysis, Differential Equations and Algebra, Yanka Kupala State University of Grodno
- 2017–present** part-time professor, Department of Mathematical and Information Support of Economic Systems, Yanka Kupala State University of Grodno
- 2008–2015** Head of Department of Algebra, Geometry and Methodics of Teaching Mathematics, Yanka Kupala State University of Grodno
- 2015–present** Head of Department of Mathematical Analysis, Differential Equations and Algebra, Yanka Kupala State University of Grodno

### **Research fields and scientific interests:**

Qualitative theory and bifurcations theory of planar autonomous systems of differential equations including its applications. Analytic methods and numerical approaches to estimate limit cycles number and localization as well as to control some bifurcations of limit cycles in autonomous systems and their software realization.

### **Research experience and scientific activity:**

- 2001–2003** grant for young scientists of the Belarussian Republican Foundation for Fundamental Research
- 2002** fellowship from German Academic Exchange Service (DAAD) to conduct research project in Weierstrass Institute for Applied Analysis and Stochastics in Berlin, Germany
- 2003–present** a reviewer of Zentralblatt Math (Berlin, Germany)
- 2004** grant from Weierstrass Institute for Applied Analysis and Stochastics in Berlin, Germany to conduct research project
- 2004–present** a reviewer of Mathematical Reviews of the American Mathematical Society
- 2005–2007** grant for young scientists of the Belarussian Republican Foundation for Fundamental Research
- 2006** fellowship from DAAD to conduct research project in Weierstrass Institute for Applied Analysis and Stochastics in Berlin, Germany
- 2006** grant from International Mathematical Union to participate in the XXV International Congress of Mathematicians in Madrid, Spain
- 2007–2009** grant for young scientists of the Belarussian Republican Foundation for Fundamental Research

**2008** grant from Organizing Committee to participate in the European Congress of Mathematics in Amsterdam

**2008** grant from Humboldt University in Berlin, Germany to conduct research project

**2010** fellowship from DAAD to conduct research project in Humboldt University in Berlin, Germany

**2011–2015** a collaborator of research work "Analytical and qualitative characteristics of the nonlinear differential equations and dynamical systems modeling practical problems of mathematical physics and other fields of natural sciences" within the framework of the state program "Convergence"

**2011** grant from Autonomous University of Barcelona, Spain to participate as an invited speaker in the international conference «Advances in qualitative theory of differential equations» in Castro Urdiales, Spain

**2011** grant from Humboldt University in Berlin, Germany to conduct research project

**2012** grant from Erasmus Mundus Action 2 BMU-MID (Mobilities for Innovations and Development) to conduct research project in Humboldt University in Berlin, Germany

**2013** organization of the Summer school «Modern problems of function theory and differential equations: Advances and Applications» in Yanka Kupala State University of Grodno with support of DAAD

**2013** grant from Ministry of Education of Republic of Belarus for internship in the Center for Applied Mathematics and Theoretical Physics, University of Maribor, Slovenia

**2014** fellowship from DAAD to conduct research project in Humboldt University in Berlin, Germany

**2014** grant from Organizing Committee to participate in the XXVII International Congress of Mathematicians in Seoul, Korea

**2015** grant from the Center for Applied Mathematics and Theoretical Physics, University of Maribor, Slovenia to participate as an invited speaker in the international workshop «Theoretical and computational methods in dynamical systems and fractal geometry»

**2016** fellowship from MOST (Mobility Scheme for Targeted People-to-People-Contacts) to conduct research project in Technical University in Berlin, Germany

**2016–present** a member of council on defense of PhD (doctor's) theses at Yanka Kupala State University of Grodno

**2016–2020** a collaborator of research work "Analytical and qualitative properties of solutions of the differential equations and systems" within the framework of the state program "Convergence"

**2018** grant from Erasmus+ to give lectures in University of Maribor, Slovenia

**2018–present** a member of Editorial Board of the science journal "Vesnik of Yanka Kupala State University of Grodno", series 2 "Mathematics. Physics. Informatics, Computer Technology and its Control"

**2018–present** a member of Editorial Board of the science journal “Acta et Commentationes”, series “Exact and Nature Sciences” founded by Tiraspol State University, Republic of Moldova

**2018** Vice-chairman of Organizing Committee of XVIII International Scientific Conference on Differential Equations “Erugin's readings – 2018” which was hold at the Yanka Kupala State University of Grodno, May 15-18, 2018

**2018** grant from Organizing Committee to participate in the XXVIII International Congress of Mathematicians in Rio de Janeiro, Brazil

**2018** grant from A. Razmadze Mathematical Institute of I. Javakhishvili Tbilisi State University, Georgia to participate as an invited speaker in the International Workshop on Qualitative Theory of Differential Equations (QUALITDE-2018 )

**2019** grant from Erasmus+ to give lectures in University of Maribor, Slovenia

**2019** fellowship from MOST (Mobility Scheme for Targeted People-to-People-Contacts) for scientific research in Autonomous University of Barcelona, Spain

**2019** fellowship from DAAD to conduct research project in Technical University in Berlin, Germany

**2019** Vice-chairman of Organizing Committee of IV International Scientific Conference “Mathematical Modeling and Differential Equations” which was hold at the Yanka Kupala State University of Grodno, December 17-20, 2019

**2019–2022** local manager of the project ***Dynamics — H2020-MSCA-RISE-2017-777911*** “***Contributions to codimension  $\kappa$  bifurcations in dynamical systems theory***” funded by Horizon 2020.

**2021–2025** a collaborator of research work "Analytical and qualitative characteristics of nonlinear differential systems" within the framework of the state program "Convergence"

**2021** grant from Horizon 2020 to conduct research project ***Dynamics — H2020-MSCA-RISE-2017-777911*** in Politehnica University Timisoara, Romania

**2022** grant from Horizon 2020 to conduct research project ***Dynamics — H2020-MSCA-RISE-2017-777911*** in Politehnica University Timisoara, Romania

#### **Scientific supervision by dissertations (theses):**

**2013** was defended Andrey Kuzmich's master's thesis “The Dulac-Cherkas function in the problem of estimating the number and localization of limit cycles for a special type of Kukles system”

**2015** was defended Sergey Rudevich's master's thesis “Estimation of the limit cycles number for some autonomous systems with the cylindrical phase space

**2016** was defended Yang Chen's master's thesis “Dulac method for some autonomous polynomial second-order systems and its computer implementation”

**2018** was defended Andrey Kuzmich's PhD thesis “Limit cycles of planar dynamic systems with one and three equilibrium points”

**2020** was defended Sergey Rudevich's PhD thesis “Limit cycles of second kind of autonomous systems with cylindrical phase space”

**Teaching experience:**

I teach various sections of higher mathematics for students of the following specialties:

- Mathematics (Research and Pedagogical Activities),
- Applied Mathematics,
- Information Technology Software,
- Computer Security (mathematical methods and program systems),
- Physics (Scientific and Pedagogical Activities),
- Computer Physics,
- Digital Marketing.

For example, for students of the specialty «Mathematics (Research and Pedagogical Activities)», I taught in different years such disciplines and courses as Analytical Geometry, Differential Geometry, Linear Algebra, Topology, Real Analysis, Differential Equations, "Qualitative Theory of Differential Equations".

The department I head is a graduating department for:

- students (bachelors) of the specialty «Mathematics (Research and Pedagogical Activities)»,
- students (masters) of the specialty «Theory and Methods of Education and Upbringing (in Mathematics),
- students (masters) of the specialty «Theory and Methods of Education and Upbringing (in Informatics),
- PhD students of the specialty «Differential Equations, Dynamical Systems and Optimal Control».

**Teaching experience in English:**

Since 2011 I teach the disciplines "Higher Mathematics" and "Differential Equations" in English for both Belarusian students and foreign students of the specialties "Information Technology Software", "Applied Mathematics" and "Computer Security (mathematical methods and program systems)".

I teach a preparatory course in mathematics in English for foreign students of the pre-university faculty.

In April 2018, as part of the Erasmus + Staff Teaching program, I lectured on the subject of "Differential Equations" for students of the Faculty of Natural Sciences and Mathematics of the University of Maribor in the Republic of Slovenia. In April 2019, as part of the Erasmus + Staff Teaching program, I lectured on the subject "Differential Equations" for students of the Faculty of Electrical Engineering at the same university.

**Knowledge of foreign languages:**

English – C1, German – A2, Polish – B1