

## CURRICULUM VITAE

**Ganna KUDRYAVTSEVA**

### **Personal information:**

- born on March, 15, 1975, in Kyiv, Ukraine.
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- Phone: (+38044)259-05-17 (office); (+38067)387-67-18 (mobile).
- Languages: Russian, Ukrainian, English, Slovenian.

### **Education and degrees:**

- 1991–1996 — student, Kyiv Taras Shevchenko University, Department of Mechanics and Mathematics.
- 1996 — **MSc in Mathematics** (with Honour), Kyiv Taras Shevchenko University.
- 1996–2000 — graduate student, Kyiv Taras Shevchenko University, Department of Mechanics and Mathematics.
- March, 2001 — **PhD in Mathematics and Physics**. Defended thesis "Nilpotent Subsemigroups of Transformation Semigroups" (advisor - Prof. O.G. Ganyushkin).

### **Employment History:**

- Since June, 2006 — **Associate Professor** in Algebra, Kyiv Taras Shevchenko University, Department of Mechanics and Mathematics.
- October, 2000 - May, 2006 — **Assistant Professor** in Algebra, Kyiv Taras Shevchenko University, Department of Mechanics and Mathematics.

### *Part-time positions:*

- 2000–2001 — Assistant Professor in Mathematics of Kyiv Economics and Law University "Krok";
- 2002–2004 — Teacher of mathematics and statistics, the British International School (lectures in English), Kyiv;
- 2005, 2006, 2007 — Member of Jury of Ukraine-wide Olympiad for high school students — members of Small Academy of Sciences of Ukraine;

- since 2007 — reviewer for Math Reviews.

### Awards and grants

- Diploma of Second Degree at the Ukraine-wide Olympiad of Young Mathematicians for high school students (Vinnitsa, 1991).
- Winner of the competition "Zadachnik "Kvanta" (1991) (this is a prestigious competition held by the central Russian mathematical journal for high school students).
- Soros Student Grant, International Soros Science Education Program, GSU051312 (1995).
- Grant of Kyiv University for an individual student scientific research "Subsemigroup Structure and Combinatorial Properties for the Semigroups  $\mathcal{IS}_n$  and  $\mathcal{PAut}_q(V_n)$ " (1996).
- Teaching Assistantship Grants, Kyiv University, 1996-2000, during the graduate study.
- NATO ASI Grant for participation at the summer school on structural theory of automata, semigroups and universal algebra, Montreal, Canada, Université de Montréal (July, 7-18, 2003).
- EMS Grant for participation in CANT 2006, Liège, Belgium (May, 8-19, 2006).
- Grant of the Ministry of Education of Ukraine for the joint Ukrainian-Slovenian research project "Matrix problems and semigroups of matrices", 2007-08.

### Research visits:

- research visits to the Department of Mathematics, Uppsala University (Sweden) in April - May, 2002; September-October, 2004; November, 2005; October, 2006; February, 2007; September, 2007;
- a research visit to the Department of Mathematics, University of Ljubljana (Slovenia), June, 2007;
- a research visit to the Department of Mathematics, University of Essex (United Kingdom), August, 2007.

### Participation in conferences and schools:

#### Invited talks

- International Conference  $(AC)^2$  - Algebraic Combinatorics on The Adriatic Coast III, University of Primorska, Koper, Slovenia (May 16 - 17, 2008).

- The Fifth Linear Algebra Workshop LAW'08, Kranjska Gora, Slovenia (May 27 - June 5, 2008).

### **Contributed talks**

- Second Ukraine-wide Conference of Young Scientists, Kyiv (May, 1995);
- Ukraine-wide Scientific Conference “Developing and Applying of Mathematical Methods in Scientific and Technical Researches”, devoted to Professor P.S. Kasimirsky, Lviv, Ukraine (October, 1995);
- Fifth International Conference devoted to the memory of Accad. Kravchuk, Kyiv, Ukraine (May, 1996);
- International Algebraic Conference devoted to the memory of Prof. L.M. Gluskin, Slov'yansk, Ukraine (August, 1997);
- Conference of Young Algebraists, devoted to 40th anniversary of the Division of Algebra of Kyiv Taras Shevchenko University, Kyiv (September, 1999);
- Third International Algebraic Conference in Ukraine, Sumy, (July, 2001);
- International Algebraic Conference devoted to the 100th anniversary since beginning of work of prof. D. Grave in Kiyv University, Kiyv, Ukraine (June, 2002);
- NATO ASI summer school on structural theory of automata, semigroups and universal algebra, Montreal, Canada, Université de Montréal (July, 7-18, 2003);
- Fifth International Algebraic Conference in Ukraine, Odessa, (July, 20-27, 2005);
- International Algebraic Conference dedicated to 100 years from the birth of prof. P.G. Kontorovych and to the 70th birthday of Prof. L.N. Shevrin, Ekaterinburg, Russia (August, 29 - September, 3, 2005).
- CANT 2006, Liège, Belgium (May, 8-19, 2006).
- International conference dedicated to the 60-th birthday of Prof. V.I. Suschanski, Kyiv, Ukraine (December, 27-29, 2006).

### **Teaching Experience:**

#### **University of Nova Gorica (Slovenia):**

2007/2008 academic year: — “Mathematics” for the undergraduate students of the School of Environmental Sciences, lecture course; “Linear algebra” for the undergraduate students of the School of Engineering Physics, lecture course.

2008/2009 academic year: — “Mathematics” for the undergraduate students of the School of Environmental Sciences, lecture course; “Linear algebra” for the undergraduate students of the School of Engineering Physics, lecture course.

**Kyiv Taras Shevchenko University (Ukraine):**

2007/2008 academic year: — “Highest Algebra” for 1st year students, majoring in Mechanics, lecture and practical courses; “Combinatorial Applications of Semigroups”, lecture course for 2nd year Master Students.

2006/2007 academic year: — “Mathematical Logics” for 3rd year students, practical course; “Combinatorial Semigroup Theory”, lecture Course for 5th year students; “Automata and Languages”, lecture course for 4th year students; “Discrete Mathematics”, practical course for 1st year students, “Varieties of Semigroups”, scientific seminar for 4th Year Students, “Linear Algebra”, lecture and practical courses for correspondent studies students of 2nd and 3rd years of Study.

2005/2006 academic year: — “Algebra and Number Theory” for 2nd year students, practical course; “Combinatorics on Words”, lecture course for 6th year students; “Semigroup Theory”, lecture course for 4th year students; “Introduction to Algebra”, lecture course for 3rd year students; “Discrete Mathematics”, practical course for 1st year students;

2004/2005 academic year: — “Algebra and Number Theory” for 2nd year students, lecture and practical courses; “Profinite Groups”, lecture course for 6th year students; “Group Theory”, lecture course for 3rd year students; “Transformation Semigroups”, scientific seminar for 5th year students; “Groups Acting on Trees”, scientific seminar for 4th year students.

2003/2004 academic year: — “Linear Algebra” for 1st year students, lecture and practical courses; “Discrete Mathematics”, practical course for 1st year students; “Profinite Groups” for 4th year students, lecture course;

2002/2003 academic year: — “Linear Algebra” for 1st year students, majoring in mechanics, lecture and practical courses; “Algebra and Number Theory” for 2nd year students, practical course; “Introduction to Algebra” for 3rd year students, lecture course;

2001/2002 academic year: — “Linear Algebra” for 1st year students, practical course; “Algebra and Number Theory” for 2nd year students, practical course; “Mathematical Logics” for 3rd year students, practical course; “Semigroup Theory” for 4th year students, lecture course; “Transformation Semigroups”, lecture course for 5th year students; “Algebra and Number Theory”, review lectures;

2000/2001 academic year: — “Linear Algebra” for 1st year students, practical course; “Algebra and Number Theory” for 2nd year students, practical course.

2004, 2005, 2006 — Advisor in Pedagogical Practice for Bachelor and Master Program students;

2004, 2005, 2006, 2007 — Advisor in Regular Course Thesis, in total 13 students.

2004, 2005, 2006, 2007 — Advisor in Bachelor and Master Thesis, in total 5 Bachelor students and 1 Master student.

**List of publications:**

- Linear types of linear orders on the set of lines of a finite vector space, Works of young scientists, Kyiv, Mathematics, **1** (1995), 17-24 (in Ukrainian).
- Maximal nilpotent subsemigroups of the semigroup  $IS(N)$ , Bull. of Kyiv University, Physical and Mathematical sciences, **4** (1997), 98-103 (in Ukrainian).

- Maximal nilpotent subsemigroups of the semigroup  $\text{PAut}_q(V_n)$ , *Voprosy Algebra (Questions in Algebra)*, **13** (1998), 69-83 (in Russian).
- Groups of automorphisms of maximal nilpotent subsemigroups of the semigroup  $\text{IS}(M)$ , *Mathematical Studies*, **13** (2000), no.1, 11-22 (in Ukrainian, coauthors O. Ganyushkin, S. Temnikov).
- Lattices of ideals of finite nilpotent semigroups, *Bull. of Kyiv University, physical and mathematical sciences*, **1** (2000), 47-55.
- Automorphisms of the sandwich semigroups of the finite inverse symmetric semigroup, *Bull. of Kyiv University, Physical and Mathematical Sciences*, **14**, 2005, 101–105, (in Ukrainian, coauthor G. Tsyaputa), English translation at arXiv: math.GR/0509678.
- $\mathcal{L}$ - and  $\mathcal{R}$ -cross-sections in the Brauer semigroup, *Semigroup Forum*, **72** (2006), 223–248 (coauthors V. Maltcev and V. Mazorchuk).
- On representations of variants of semigroups, *Bull. Aus. Math. Soc.*, **73** (2006), 273–283 (coauthor V. Maltcev).
- On presentations of Brauer-type monoids, *Cent. Eur. J. Math.*, **4** (2006), no. 3, 413–434 (coauthor V. Mazorchuk).
- The structure of automorphism groups of semigroup inflations, *Algebra and Discrete Math*, **1** (2007), 62–67.
- On conjugation in transformation and Brauer-type semigroups, *Math. Debrecen*, **70** (2007), 19–43 (coauthor V. Mazorchuk).
- On the semigroup of square matrices, *Alg. Colloq.*, **15** (2008), no. 1, 33–52 (coauthor V. Mazorchuk).
- On three approaches to conjugacy in semigroups, *Semigroup Forum* (2008), published online first, DOI 10.1007/s00233-008-9047-7 (coauthor V. Mazorchuk).
- Schur-Weyl dualities for symmetric inverse semigroups, *J. Pure Appl. Algebra*, **212** (2008), 1987–1995 (coauthor V. Mazorchuk).
- Partialization of categories and inverse braid-permutation monoid, *International Journal of Algebra and Computation*, Vol. 18, **6** (2008) 989–1017 (coauthor V. Mazorchuk).

#### List of preprints:

- On Kiselman’s semigroup. Preprint, 26 p., 2005, submitted (coauthor V. Mazorchuk).
- On conjugacy in regular epigroups. Preprint, 12 p., 2005, submitted.
- On the structure of two generalizations of the full inverse symmetric semigroup. Preprint, 44 p., 2006, submitted (coauthor V. Maltcev).

- A presentation for the partial dual inverse symmetric monoid. Preprint, 19 p., 2006 (coauthor V.Maltcev).
- Semitransitive and transitive subsemigroups of the inverse symmetric semigroups, Preprint, 16 p., 2007, submitted (coauthors K. Cvetko-Vah, D. Kokol Bukovšek, T. Košir, Ya. Lavrenyuk and A. Oliynyk).
- Combinatorial Gelfand model for some semigroups and q-rook monoid algebras, Preprint, 14 p., 2007, to appear in Proc. Edinb. Math. Soc. (coauthor V. Mazorchuk).
- Finite semigroups of languages and piecewise testable languages, Preprint, 8p., 2008, submitted.

### **Textbooks**

- Rings. Examples and Problems, solution guide (co-author A. Oliynyk), Kyiv Univ. Press, 2005, 60p., (in Ukrainian).
- Fields. Examples and Problems, solution guide, Kyiv Univ. Press, 2005, 50p., (in Ukrainian).
- Euclidian and unitary spaces. Examples and Problems, solution guide, Kyiv Univ. Press, 2006, 62p., (in Ukrainian).

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