

# Program of International Algebraic Conference dedicated to the 100th anniversary of D. K. Faddeev

September 24–29, 2007

St. Petersburg Department of V. A. Steklov Mathematical Institute  
Fontanka, 27, St. Petersburg

## **MONDAY, 24.09**

9.00–10.00: Registration of participants

10.00–10.15: Opening of the conference

10.15–10.45: Yakovlev, A. V. (St. Petersburg, Russia) *D. K. Faddeev's contribution into science*

11.00–12.00: Popov, V. L. (Moscow, Russia) *Finite linear groups, lattices, and products of elliptic curves*

Coffee break

12.30–13.30: Plotkin, B. I. (Jerusalem, Israel) *Logically separable algebras in varieties*

Lunch break

15.30–17.05: Section talks (sections 1, 2, 3, 4, 5)

Coffee break

17.30–18.15: Section talks (sections 1, 2, 3, 4, 5)

18.20–19.20: D. K. Faddeev memorial evening

19.20: WELCOME PARTY

## **TUESDAY, 25.09**

10.00–11.00: Ershov, Yu. L. (Novosibirsk, Russia) *Class field theory (new vision)*

Coffee break

11.30–12.30: Ringel, C. M. (Bielefeld, Germany) *Some minimal representation-infinite algebras*

12.40–13.40: Voskresenski, V. E. (Samara, Russia) *Galois lattices of algebraic tori*

Lunch break

15.30–17.05: Section talks (sections 1, 2, 3, 4, 5)

Coffee break

17.30–19.30: Section talks (sections 1, 2, 3, 4, 5)

**WEDNESDAY, 26.09**

10.00–11.00: Drozd, Yu. A. (Kiev, Ukraine) *Derived tame and derived wild algebras*

Coffee break

11.30–12.30: Karoubi, M. (Paris, France) *Twisted K-theory*

12.40–13.40: Platonov, V. P. (Moscow, Russia) *Linear representations of finitely generated groups*

Lunch break

15.30–17.00: Section talks (sections 1, 2, 4)

Coffee break

17.15–18.00: Section talks (sections 1, 2, 4)

19.00: CONFERENCE PARTY

**THURSDAY, 27.09**

10.00–11.00: Bokut, L. A. (Novosibirsk, Russia) *Relative Gröbner-Shirshov Bases for Algebras and Groups*

Coffee break

11.30–12.30: Kulikov, V. S. (Moscow, Russia) *Chisini's Conjecture for generic projections of the surfaces and applications*

12.40–13.40: Durov, N. (St. Petersburg, Russia) *Classification of flat algebras over arbitrary commutative generalized rings*

Lunch break

BOAT TRIP

**FRIDAY, 28.09**

10.00–11.00: Bondal, A. I. (Moscow, Russia) *Algebraic version of Hilbert's thirteen problem*

Coffee break

11.30–12.30: Bondarko, M. V. (St. Petersburg, Russia) *Weights for cohomology: weight structures, filtrations, spectral sequences, and weight complexes (for motives and spectra)*

12.40–13.40: Vsemirnov, M. A. (St. Petersburg, Russia) *On (2,3)-generation of small-rank matrix groups*

Lunch break

15.10–16.45: Section talks (sections 1, 2, 3, 4, 5)

Coffee break

17.00–18.35: Section talks (sections 1, 2, 3, 4, 5)

**SATURDAY, 29.09**

10.00–11.40: Section talks (sections 1, 2, 4, 5)

Coffee break

12.10–14.40: Section talks (sections 1, 2, 5)

SECTION 1. ALGEBRAIC GEOMETRY AND ALGEBRAIC NUMBER THEORY

**Monday, 24.09**

1. Nguyen Quang Do, T. (Besançon, France) *Universal norms and Greenberg's conjecture*
2. Venkov, B. B. (St. Petersburg, Russia) *Perfect forms of Voronoi and spherical design*
3. Lettl, Günter (Graz, Austria) *Parametrized families of Thue equations – On the structure of their sets of solutions*

**Tuesday, 25.09** (Hall 311)

1. Prohorov, Yu. G. (Moscow, Russia) *Degeneration of del Pezzo surfaces and local structure of del Pezzo fibrations*
2. Bulat, M., Zgureanu, A., Ciobanu, I., Bivol, L. (Chisinau, Moldova) *Generating of prime numbers based on the multidimensional matrices*
3. Belova, L. A. (Samara, Russia) *Cohomological Birational Invariants of Algebraic Tori*
4. Krutikov, Yu. Yu. (Samara, Russia) *Affine representations of three-dimensional algebraic tori*
5. Laurincikas, A. (Vilnius, Lithuania), Macaitiene, R. (Siauliai, Lithuania) *The Lerch zeta-function with algebraic irrational parameter*

**Wednesday, 26.09**

1. Campillo, A. (Valladolid, Spain) *Recent applications of Hamburger-Noether expansions*
2. Polotovskii, G. M. (Nizhni Novgorod, Russia) *On the topology of real decomposable 7th degree curves*
3. Sletsjøe, Arne B. (Oslo, Norway) *Non-commutative plane curves*

**Friday, 28.09**

1. Yanchevski, V. I. (Minsk, Belarus) *Prescribed properties and imbedding problems for central simple algebras under central field extensions*
2. Haran, M. Shai (Haifa, Israel) *Non-additive geometry*
3. Gille, S. To be announced
4. Bashkin, M. A. (Yaroslavl, Russia) *Nonsplit homogeneous supermanifolds having  $\mathbb{C}P_{k_1 k_2 11}^{1|4}$  as a retract ( $k_1 > k_2 \geq 2$ )*

**Saturday, 29.09**

1. Zhukov, I. B. (St. Petersburg, Russia) *On a relation between Euler numbers of surfaces in positive characteristic*
2. Kaledin, D. B. (Moscow, Russia) *Frobenius map in noncommutative geometry*

SECTION 2. ALGEBRAIC GROUPS, REPRESENTATION THEORY AND ALGEBRAIC K-THEORY

**Monday, 24.09**

1. Panin, I. A. (St. Petersburg, Russia) *A purity theorem for Pfister forms*
2. Kopeiko, V. I. (Elista, Russia) *Transfer in unitary K-theory*
3. Panov, A. N. (Samara, Russia) *Reduction of quantum Schubert cells*

**Tuesday, 25.09** (Room 203)

1. Arzhantsev, I. V. (Moscow, Russia) *Projective embeddings of homogeneous spaces with small boundary*
2. Timashev, D. A., Katsylo, P. I. (Moscow, Russia) *Natural differential operations on manifolds and algebraic groups*
3. Koibaev, V. A. (Vladikavkaz, Russia) *On a hypothesis in finite topologies theory*
4. Redchuk, I. K. (Kiev, Ukraine) *Separating functions and spectra of starlike graphs*

**Wednesday, 26.09**

1. Suprunenko, I. D. (Minsk, Belarus) *On the behavior of unipotent elements from subsystem subgroups in modular representations of the classical algebraic groups with large highest weights*
2. Hołubowski, W. M. (Gliwice, Poland) *Subgroups of unitriangular groups of infinite matrices*
3. Voskresenskaya, G. V. (Samara, Russia) *Modular forms with multiplicative coefficients and group representations*

**Friday, 28.09**

1. Vavilov, N. A. (St. Petersburg, Russia) *Computations in exceptional groups*
2. Gordeev, N. L. (St. Petersburg, Russia) *Sums and products of orbits of algebraic groups*
3. Semenov, N. (München, Germany) *J-invariant and the higher Tits indices of algebraic groups*
4. Lopatin A. A. (Omsk, Russia) *Invariants of classical linear groups*

**Saturday, 29.09**

1. Rukolaine, A. V. (St. Petersburg, Russia) *Computation of complex representations of certain finite groups*
2. Sevostjanova, V. V. (Samara, Russia) *Adjoint orbits of the unitriangular group*
3. Ignatiev, M. V. (Samara, Russia) *Exact formulas for subregular characters of the unitriangular group*
4. Shalashov, V. K. (Yaroslavl, Russia) *The set of all reducible braids*
5. Shchigolev, V. V. (Moscow, Russia) *Rectangular low level case of modular branching problem for  $GL_n(K)$ ★*
6. Zyubin, S. A. (Tomsk, Russia) *Groups acting flag-transitively on projective spaces*
7. Alamian, V. & Salemkar, A. R. (Sari, Iran) *Schur multiplier and pair of groups*

## SECTION 3. GALOIS THEORY AND HOMOLOGICAL ALGEBRA

### Monday, 24.09

1. Onishchik, A. L. (Yaroslavl, Russia) *On certain aspects of the non-abelian cohomology theory*
2. Antipov, M. A. (St. Petersburg, Russia) *Derived equivalences and flips on CW-complexes*
3. Kachalova, M. A. (St. Petersburg, Russia) *Multiplicative structure of Hochschild cohomology of Möbius algebras*

### Tuesday, 25.09 (Room 402)

1. Generalov, A. I. (St. Petersburg, Russia) *Cohomology of algebras with small complexity*
2. Byott, Nigel (Exeter, United Kingdom) *Counting Hopf-Galois Structures on Field Extensions*
3. Ladoshkin M. V. (Saransk, Russia) *Hochschild cohomology and extended  $A_\infty$ -algebra and  $A_\infty$ -module structures*
4. Lapin S. V. (Saransk, Russia) *Steenrod operations in spectral sequences of  $D_\infty$ -differential  $E_\infty$ -algebras*

### Friday, 28.09

1. Volkov Yu. V., Generalov A. I. (St. Petersburg, Russia) *Hochschild cohomology for a family of self-injective algebras of tree class  $D_n$*
2. Ivanov A. A., Generalov A. I., Ivanov S. O. (St. Petersburg, Russia) *On Hochschild cohomology of algebras of quaternion type with two vertices*
3. Dolguntseva I. A. (Novosibirsk, Russia) *Triviality of the second cohomology group for the conformal Weyl algebra*
4. Sergeev A. E. (Krasnodar, Russia) *The inverse problem for the Galois spectra of cubic polynomials over fields of even characteristic*
5. Reshetnikov D. V. (Nizhny Novgorod, Russia) *Lie algebra cohomology for  $B_n$  and  $C_n$*

## SECTION 4. GROUP THEORY

### Monday, 24.09

1. Makhnev, A. A. (Ekaterinburg, Russia) *On locally grassmannian graphs*
2. Vasil'ev, A. V. (Novosibirsk, Russia) *On the recognition by spectrum of finite simple groups*
3. Mazurov, V. D. (Novosibirsk, Russia) *Finite groups with prescribed spectrum*
4. Lytkina, D. V. (Novosibirsk, Russia) *Recognizability by spectrum of the finite simple group  $L_2(7)$  (with A. A. Kuznetsov)*
5. Buturlakin, A. A. (Novosibirsk, Russia) *The spectra of the finite simple classical groups*

**Tuesday, 25.09** (Marble Hall)

1. Kazarin, L. S. (Yaroslavl, Russia), Yanishevsky, V. V. *On simply reducible groups*
2. Plotkin, E. B. (Tel Aviv, Israel) *On the solvable radical of a finite group and around*
3. Galkin, V. M. (Nizhny Novgorod, Russia) *Transitivity problem for translation group of certain groupoid class*
4. Trofimov, V. I. (Ekaterinburg, Russia) *On a minimal exit time for a subset in the oriented graph*
5. Dashkova, O. Yu. (Kiev, Ukraine) *Soluble linear groups with restrictions on the non-abelian subgroups of infinite abelian sectional rank*

**Wednesday, 26.09**

1. Kondrat'ev, A. S. (Ekaterinburg, Russia) *On amount of maximal 2-signalizer in finite simple groups of symplectic and orthogonal type*
2. Revin, D. O. (Novosibirsk, Russia) *Groups with the property  $D_\pi$*
3. Nuzhin, Ya. N. (Krasnoyarsk, Russia) *On the  $(2 \times 2, 2)$ -generation of the group  $PSL_n(\mathbb{Z} + i\mathbb{Z})$*

**Friday, 28.09**

**Subsection 4A. Abelian groups**

1. Kompantseva, E. I. (Moscow, Russia) *Semisimple rings on abelian groups without torsion*
2. Farukshin, V. H. (Moscow, Russia) *The category of  $p$ -local torsion free finite rank abelian groups*
3. Sebel'din, A. M. (Nizhny Novgorod, Russia) *On abelian groups which centers of the endomorphism rings are isomorphic*
4. Tsarev, A. V. (Moscow, Russia) *Pseudorational rank of a quotient divisible group*
5. Blagoveshchenskaya, E. A. (St. Petersburg, Russia) *On endomorphism rings of a class of torsion-free abelian groups*

**Subsection 4B. Finite groups**

1. Timofeenko, A. V. (Krasnoyarsk, Russia) *Finite groups and convex polyhedra with regular faces*
2. Savel'eva, N. V. (Vitebsk, Belarus) *On  $\pi$ -normal Fitting classes*
3. Vorob'ev, N. N., Tsarev, A. A. (Vitebsk, Belarus) *Generated Fischer formations*
4. Vorob'ev, N. N., Mekhovich, A. P. (Vitebsk, Belarus)  *$\tau$ -closed local formations defined by Hall subgroups*
5. Zahurski, V. N. (Vitebsk, Belarus) *Permutable Fitting classes*

**Saturday, 29.09**

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SECTION 5. RING THEORY

**Monday, 24.09**

1. Fialowski, Alice (Budapest, Hungary) *Versal deformations of Lie algebras*
2. Kuznetsov, M. I. (Nizhny Novgorod, Russia) *Graded Lie algebras containing transitive subalgebra of depth one*
3. Kuznetsov, M. I., Mulyar, O. A. (Nizhny Novgorod, Russia) *Maximal torus in exceptional simple  $p$ -Lie algebras*
4. Bondal, A. I., Zhdanovsky, I. Yu. (Moscow, Russia) *Orthogonal decompositions of the Lie algebra  $sl(n)$  and harmonic analysis on graphs*

**Tuesday, 25.09** (Room 106)

1. Amberg, Bernhard (Mainz, Germany) *Triply factorized groups and nearrings*
2. France-Jackson, Halina (Port Elizabeth, South Africa) *On generalized prime essential rings and special and nonspecial radicals*
3. Piontkovsky, D. I. (Moscow, Russia) *One-relator algebras and noncommutative geometry*
4. Horeva, N. A. (Nizhny Novgorod, Russia) *Graded Lie algebras of small rank and characteristic*
5. Ladilova, A. A. (Nizhny Novgorod, Russia) *Filtered deformation Lie algebras of Family  $\mathcal{R}$*

**Friday, 28.09**

1. Kaigorodov I. B. (Novosibirsk, Russia)  *$\delta$ -derivations on simple finite dimensional superalgebras*
2. Daniyarova E. Yu. (Omsk, Russia) *Algebraic geometry over Lie algebras*
3. Yilmaz, D. (Izmir, Turkey) *Modules in which every maximal submodule is a supplement*
4. Goncharov, M. E. (Novosibirsk, Russia) *Alternative  $D$ -bialgebras. Matrix Cayley-Dickson algebra as alternative  $D$ -bialgebra*
5. Onskul, I. V. (Omsk, Russia) *Linear equations over the free anticommutative algebra*

**Saturday, 29.09**

1. López Melendez, José María (Las Palmas de Gran Canaria, Spain) *Local cohomology, ideal modules and torsion-free modules*
2. Rodríguez Mielgo, César (Las Palmas de Gran Canaria, Spain) *Cohen-Macaulay modules of infinite projective dimension*
3. Ievstafiev, R. Yu. (Kiev, Ukraine) *Artinian rings with supersolvable adjoint group*
4. Ștefănescu, F. Mirela (Constanta, Romania) *On idempotents in generalized rings*