V. Chernousov

Curriculum Vitae

Full name: Vladimir Chernousov

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Position: Canada Research Chair T1 in algebra

Education

1978 - Master Degree (with honors),
        Byelorussian State University (Minsk, Belarus).
        Thesis title: Commutators in central simple
        algebras over local fields.
        Supervisor: V. Platonov

1983 - Candidate Degree (first Ph.D. in the former USSR),
        Institute of Mathematics (Minsk, Belarus).
        Thesis title: Birational properties of linear
        algebraic groups.
        Supervisor: V. Platonov.

1991 - Doctorate Degree (second Ph.D. in the former USSR,
        equivalent to Habilitation in Germany),
        Institute of Mathematics (Minsk, Belarus)
        Thesis title: Local-global principles in the theory of
        linear algebraic groups.

Academic Positions Held

2003 -	Professor, Department of Mathematical Sciences, University of Alberta
2003	Visiting Professor, Münster University (Germany)
2002	Visiting Professor, EPFL (Lausanne, Switzerland)
2001- 2002	Visiting Professor, ETH (Zürich, Switzerland)
1998 - 2000	Research Fellow, SFB 343 "Diskrete Strukturen in der Mathematik", Bielefeld University (Bielefeld, Germany)
1996 - 1998	Research Fellow of the Alexander von Humboldt Foundation, Bielefeld University, (Germany)
1992 - 1998	Leading Research Fellow, Institute of Mathematics (Minsk, Belarus)
1988 - 1992	Senior Research Fellow, Institute of Mathematics (Minsk, Belarus)
1986 - 1987	Research Fellow, Institute of Mathematics (Minsk, Belarus)
1978 - 1985	Junior Research Fellow, Institute of Mathematics (Minsk, Belarus)

Awards and Distinctions

2004 - Canada Research Chair T1 in algebra.

1996 - Research Grant from Alexander von Humboldt Foundation.

1990 - Prize of the Department of Mathematics of the Academy Sciences of the USSR for the proof of the Hasse principle for groups of type E_8.

Research Interests

Some topics I have worked on are the following:

- R-equivalence and birational properties of algebraic group varieties;

- Description of normal subgroups in the groups of rational points of algebraic groups;

- Arithmetic subgroups and lattices; classification of minimal nonuniform lattices of higher real rank;

- Galois cohomology of linear algebraic groups and the Hasse principle;

- Cohomological invariants;

- The weak approximation property;

- Varieties of representations of finitely generated groups;

- G-torsors;

- Motives of projective homogeneous varieties;

- Zero cycles on projective homogeneous varieties;

- Essential dimensions of algebraic groups.

Current Research Grants

- PIMS Collaborative Research Grant $2005 - 2008$

- Canada Research Chair $2004 - 2018$

- NSERC $2007 - 2017$

Thesis Supervised

U. Yahorau	Ph.D.	Conjugacy Problems for Cartan subalgebras in infinite dimensional Lie algebras	2014
A. Babic	Ph.D.	Lower bounds for essential dimensions of algebraic groups in the characteristic 2 case.	2013
A. Ondrus	Ph.D.	Classification of minimal anisotropic groups of higher real rank.	2010
L. Timoshenko	Ph.D.	R-equivalence and rationality of algebraic groups	1999
A. Ryzjkov	Ph.D.	Classification of maximal arithmetic subgroups	1997

Posdoctoral Fellows

V. Petrov	Bielefeld	2007–2009
S. Cai (PIMS Posdoctoral Fellow)	UCLA	2006–2007
B. Calmes	University Paris 7	2005–2006

Publications

[50] V. Chernousov, P. Gille, A. Pianzola, Generalized Onsager Algebras and Grothendieck's dessins dènfants, to appear in Mathematical Research Letters.

[49] V. Chernousov, P. Gille, A. Pianzola, Conjugacy theorems for loop reductive group schemes and Lie algebras, Bulletin of Mathematical Science, 4 (2014), 281-324.

[48] V. Chernousov, P. Gille, A. Pianzola, Whitehead Groups of Loop Group Schemes of Nullity one, Journal of the Ramanujan Mathematical Society, 29 (2014), no. 1, 1–26.

[47] V. Chernousov, V. Egorov, P. Gille, A. Pianzola, A cohomological proof of Peterson-Kac's theorem on conjugacy of Cartan subalgebras for affine Kac-Moody Lie algebras, Journal of Algebra, 399 (2014), 55-78.

[46] V. Chernousov, A. Merkurjev, Essential dimension of Spinor and Clifford groups, Algebra and Number Theory, 8 (2014), 457–472.

[45] V. Chernousov, A. Eldique, M.-A. Knus, J.-P. Tignol, Algebraic groups of type D_4, triality and composition algebras, Documenta Mathematica, 18 (2013), 413–468.

[44] V. Chernousov, A. Rapinchuk, I. Rapinchuk, The genus of a division algebra and the unramified Brauer group, Bulletin of Mathematical Sciences, 3 (2013), no. 2, 211–240.

[43] V. Chernousov, A. Merkurjev, Essential p-dimension of split simple groups of type A_n, Math. Annalen 357 (2013), no. 1, 1–10.

[42] V. Chernousov, I. Panin, Purity of F_4-torsors with trivial g_3 invariant, Journal für die reine und angewandte Mathematik 685 (2013), 99–104.

[41] V. Chernousov, P. Gille, A. Pianzola, Torsors over the punctured affine line, American Journal of Mathematics 134 (2012), no. 6, 1541–1583.

[40] V. Chernousov, M. Knus, J.-P. Tignol, Conjugacy classes of trialitarian automorphisms and symmetric compositions, Journal of the Ramanujan Mathematical Society, 27 (2012), no. 4, 479–508.

[39] V. Chernousov, A. Rapinchuk, I. Rapinchuk, On the genus of a division algebra, C. R. Acad. Sci. Paris, Ser. I, 350 (2012), 807–812.

[38] V. Chernousov, Variations on a theme of groups splitting by a quadratic extension and Grothendieck–Serre conjecture for group schemes F_4 with trivial g_3 invariant, Documenta Mathematica, extra volume: Andrei A. Suslin's Sixtieth Birthday (2010), 147–169.

[37] V. Chernousov, L. Lifschitz, D. Witte Morris, Almost minimal nonuniform lattices of higher rank, Michigan Math. J. 56 (2008), **no 2**, 453–478.

[36] V. Chernousov V, P. Gille, Z. Reichstein, Reduction of structure for torsors over semilocal rings, Manuscripta Math. 126 (2008), **no 4**, 465–480.

[35] V. Chernousov, I. Panin, Purity for G_2-torsors, C. R. Acad. Sci. Paris, Ser. I, 345 (2007), **no 6**, 307–312.

[34] V. Chernousov, A. Merkurjev, Connectedness of classes of fields and zero cycles on projective homogeneous varieties, Compositio Mathematica, 142 (2006), 1522–1548.

[33] V. Chernousov, J.-P. Serre, Lower bounds for essential dimensions via orthogonal representations, Journal of Algebra, 305 (2006), 1055–1070.

[32] V. Chernousov, A. Merkurjev, Motivic decomposition of projective homogeneous varieties and the Krull–Schmidt theorem, Transformation Groups, 11 (2006), **no 3**, 1–16.

[31] V. Chernousov, Another proof of Totaro's theorem on E_8-torsors, Canad. Math. Bull., 49 (2006), **no 2**, 196–202.

[30] V. Chernousov, P. Gille, Z. Reichstein, Resolving G-torsors by abelian base extensions, Journal of Algebra, 296 (2006), **no 2**, 561–581.

[29] V. Chernousov, S. Gille, A. Merkurjev, Motivic Decomposition of Isotropic Homogeneous Varieties, Duke Math. Journal, 126 (2005), **no 1**, 137–159.

[28] V. Chernousov, The kernel of the Rost invariant, Serre's Conjecture II and the Hasse principle for quasi-split groups $^{3,6}D_4, E_6, E_7$, Math. Annalen, 326 (2003), 297–330.

[27] V. Chernousov, V. Guletskiĭ, 2-torsion of the Brauer group of an elliptic curve: generators and relations, Doc. Math. J. DMV, 2001, 85–120.

[26] V. Chernousov, A. Merkurjev, R-equivalence in Spinor groups, J. Amer. Math. Soc. 14 (2001), 509–534.

[25] V. Chernousov, E. Ellers, N. Gordeev, Gauss decomposition with prescribed semisimple part: short proof, Journal of Algebra 229 (2000), **1**, 314–332.

[24] V. Chernousov, L. Timoshenko, On the group of R-equivalence classes of semisimple groups over arithmetic fields, Algebra and Analis, 11 (1999), **6**, 191–221.

[23] V. Chernousov, An alternative proof of Scheiderer's theorem on the Hasse principle for principal homogeneous spaces, Doc. Math. J. DMV, 3 (1998), 135–148.

[22] V. Chernousov, A. Merkurjev, R-equivalence and special unitary groups, Journal of Algebra, 209 (1998), 175–198.

[21] V. Chernousov, V. Platonov, The rationality problem for semisimple group varieties, J. Reiner Angew. Math., 504 (1998), 1–28.

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[20] V. Chernousov, V. Platonov, On rationality problem of group varieties, Dokl. Russian Akad. Nauk, 56 (1997), **3**, 873–876.

[19] V. Chernousov, A. Ryjkov, On the classification of maximal arithmetic groups in simply connected groups I, Math. Sbornik, 188 (1997), **9**, 127–156.

[18] V. Benyash-Krivetz, V. Chernousov, Representation varieties of the fundamental groups of compact non-orientable surfaces, Math. Sbornik, 188 (1997), **7**, 47–92.

[17] V. Benyash-Krivetz, V. Chernousov, Representation varieties of the fundamental groups of compact non-orientable surfaces, Dokl. Russian Akad. Nauk, 355 (1997), **4**, 439–442.

[16] V. Chernousov, V. Platonov, Rationality problem for group varieties. C. R. Acad. Sci., 322 (1996), 245–250.

[15] V. Chernousov, A. Ryjkov, Criterion of maximality of arithmetic groups, Dokl. Akad. Nauk Belarus, 40 (1996), **4**, 24–28.

[14] V. Benyash-Krivetz, V. Chernousov, Representation varieties of the fundamental group of Klein's bottle, Dokl. Akad. Nauk Belarus, 40 (1996), **2**, 9–13.

[13] V. Benyash-Krivetz, V. Chernousov, On varieties of two-dimensional representations of the fundamental groups of surfaces. Dokl. Akad. Nauk Belarus, vol. 40 (1996), **3**, 5–10.

[12] V. Benyash-Krivetz, V. Chernousov and A. Rapinchuk, Representation varieties of the fundamental groups of compact orientable surfaces, Israel Journal of Mathematics, 93 (1996), 29–71.

[11] V. Chernousov, Galois cohomology and a weak approximation property for factor varieties A^n/G, Trudy Math. Institute

Russian Akad. Nauk, 208 (1995), 335–350.

[10] V. Chernousov, Remark on (mod 5)-Serre's invariant for groups of type E_8, Math. Zametki, 56 (1994), **1**, 116–121.

[9] V. Chernousov, The group of similarity factors of the canonical quadratic form and stably rationality of the variety PSO. Math. Zametki, 55 (1994), **1**, 114–119.

[8] V. Chernousov, Normal structure of groups of rational points of algebraic groups over nonclosed fields. Voprosy Algebry, 4 (1989), 76–83.

[7] V. Chernousov, On the projective simplicity of groups of rational points of some algebraic groups over algebraic number fields, Izvestiya Akad. Nauk SSSR, Ser. Math., 53 (1989), **2**, 398–410.

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[5] V. Chernousov, On the structure of groups of rational points of algebraic groups of type D_l, Dokl. Akad. Nauk BSSR, 31 (1987), **7**, 593–596.

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[2] V. Chernousov, On the rationality of spinor varieties over the field of rational numbers, Dokl. Akad. Nauk BSSR, 25 (1981), **4**, 293–296.

[1] V. Chernousov, V. Platonov, On the rationality of canonical spinor varieties. Dokl. Akad. Nauk SSSR, 252 (1980), **5**, 796–800.