

Curriculum Vitae

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Education.

Diploma de Licență, 1990, Bucharest University (Romania), Mathematics
Specialization year, 1991, Bucharest University, Algebraic Geometry
Ph.D. June 1996, University of Utah, Mathematics (advisor Aaron Bertram)

Employment History.

2004–present Associate Professor (tenured), University of Minnesota
2000–2004 Assistant Professor, University of Minnesota
1998–2000 Ralph P. Boas Assistant Professor, Northwestern University
1997–1998 Visiting Assistant Professor, Oklahoma State University
1996–1997 Postdoctoral Fellow, Institut Mittag-Leffler, The Royal
Academy of Sciences, Stockholm, Sweden
1992–1996 Teaching Fellow, Department of Mathematics, University of Utah
1991–1992 Instructor, Department of Mathematics, Polytechnic Institute,
Bucharest, Romania

Visiting Positions.

Senior Researcher, Fields Institute, Toronto, Canada, 09/2004 – 01/2005
Visiting Professor, SISSA, Trieste, Italy, 06/2006
Visiting Researcher, KIAS, Seoul, Korea, 08/2006

Publications.

1. *Quantum cohomology of flag varieties*, Internat. Math. Res. Notices, No. 6, 263–277, (1995).
2. *Conifold transitions and mirror symmetry for Calabi-Yau complete intersections in Grassmannians* (with Victor V. Batyrev, Bumsig Kim, and Duco van Straten), Nuclear Physics B. **514** [PM] (1998) 640–666
3. *Quantum double Schubert polynomials* (with William Fulton), Appendix J in the book ”*Schubert Varieties and Degeneracy Loci* “ by W. Fulton and P. Pragacz, Lecture Notes in Mathematics **1689** (1998), 134–138.
4. *The quantum cohomology ring of flag varieties*, Transactions Amer. Math. Soc. **351**(7) (1999), 2695–2729.
5. *On quantum cohomology rings of partial flag varieties*, Duke Math. Journal **98**(3) (1999), 485–524.
6. *Quantum multiplication of Schur polynomials* (with Aaron Bertram and William Fulton), Journal of Algebra **219** (1999), 728–746.
7. *Mirror symmetry and toric degenerations of partial flag manifolds* (with Victor V. Batyrev, Bumsig Kim, and Duco van Straten), Acta Mathematica **184**(1) (2000), 1–39.
8. *Derived Quot schemes* (with Mikhail Kapranov), Ann. Sci. École Norm. Sup. **34** (2001), 403–440
9. *Derived Hilbert schemes* (with Mikhail Kapranov), Journal Amer. Math. Soc. **15**(4) (2002), 787–815
10. *Two proofs of a conjecture of Hori and Vafa* (with Aaron Bertram and Bumsig Kim), Duke Math. Journal **126**(1) (2005), 101–136.
11. *Gromov-Witten invariants for abelian and nonabelian quotients* (with Aaron Bertram and Bumsig Kim), to appear in Journal of Algebraic Geometry, math.AG/0407254.

Preprints.

1. *Virtual fundamental classes via dg-manifolds* (with Mikhail Kapranov), 23 pages, submitted, math.AG/0703214
2. *The abelian/nonabelian correspondence and Frobenius manifolds* (with Bumsig Kim and Claude Sabbah), 35 pages, submitted, math.AG/0610265.

Awards and Grants.

University of Utah Research Fellowship, 1995-1996.

KIAS Scholar 2007-2009, Korean Institute for Advanced Studies, Seoul, Korea.

Post-doctoral Associate on NSF Grant DMS 9801257, 1998-2000 *Enumerative geometry of moduli spaces of curves* (Principal Investigator: Carel Faber)
Principal Investigator, NSF Grant DMS 0070654 *Derived moduli spaces and applications*, 6/2000–6/2003

Principal Investigator, NSF Grant DMS 0303614 *Three problems on Gromov-Witten invariants of algebraic varieties*, 6/2003-6/2007.

Graduate Students.

Kaisa Taipale (current, expected graduation 2009)

Selected talks.

Seminar talks (other than at my then current institution):

Northwestern University (1998), University of Wisconsin–Madison (1998), University of Chicago (1998), University of Notre Dame (1999), University of Oslo, Norway (1999), Purdue University (2000), Michigan State University (2000), University of Arizona (2000), University of Toronto (2000 and 2002), University of Illinois, Urbana (2002), University of Utah (2003 and 2004), University of California, Berkeley (2003), University of Bologna, Italy (2003), Columbia University (2003), University of Michigan (2004), Fields Institute, Toronto (2004), SISSA, Trieste, Italy (2006), Yale University (2007), Rutgers University (2007).

Colloquium talks: Oklahoma State University (2000), University of Missouri (2000), Postech, Korea (2003), Yale University (2004).

Lectures at conferences, workshops etc. (all invited):

Oberwolfach conference on "Schubert Calculus" (1997),

Algebraic Geometry workshop, Washington University, St. Louis (1997),

Summer School "Initial Ideals, Gröbner Bases and Toric Degenerations",
Nordfjordeid, Norway, (five lectures, August 1999),

IAS/Park City Mathematics Institute (2001),

Conference on "Homological Algebra, Deformation Theory, and Quantum
Field Theory ", Kyoto University, Japan (2002),

Conference on "Moduli, Lie Theory, Interactions with Physics", Cortona,
Italy (2003),

Algebraic Geometry Conference, NTSC Hsinchu, Taiwan (2004),

"12th Geometry/Topology Gokova Conference", Gokova, Turkey (2005),

AMS Summer Institute in Algebraic Geometry, Seattle, (2005)

Other.

Referee for:

Annals of Math., Journal of the AMS, Duke Math. Journal, Transactions
of the AMS, Journal of Algebraic Geometry, Advances in Math., Journal of
Algebraic Combinatorics

Grant reviewer for NSF, NSA, and NSERC.