

Jan Vysoký

CONTACT INFORMATION	phone: +420 224358352 e-mail: jan.vysoky@jfifi.cvut.cz mailing address: FJFI ČVUT v Praze, Břehová 7, 11519 Praha 1, Czech Republic
RESEARCH INTERESTS	Geometrical methods in theoretical physics, graded manifolds, generalized & Poisson geometry.
CURRENT AFFILIATION	Teaching Assistant Czech Technical University in Prague , Czech Republic Faculty of Nuclear Sciences and Physical Engineering Department of Physics
PROFESSIONAL EXPERIENCE	Institute of Mathematics Czech Academy of Sciences , Prague <i>Postdoctoral Fellow</i> January 2016 – June 2018
	Max Planck Institute for Mathematics , Bonn <i>Postdoctoral Fellow</i> July 2016 – December 2016
	Mathematical Sciences Institute Australian National University , Australia <i>Postdoctoral Fellow</i> September 2015 – December 2015
	Jacobs University Bremen , Germany <i>Research Associate</i> May 2013 – November 2013 <i>Member of research training group Models of Gravity</i> May 2013 – August 2015
	Czech Technical University in Prague , Czech Republic <i>Teaching Assistant</i> September 2009 – present Lecturing graduate courses in geometrical and cohomological methods in physics. Exercise sessions for various undergraduate courses.
EDUCATION	Czech Technical University in Prague , Czech Republic Faculty of Nuclear Sciences and Physical Engineering Jacobs University Bremen , Germany <i>Doctor of Philosophy (Ph.D.), co-directed CTU-JUB</i> June 2011 – August 2015 <ul style="list-style-type: none">• Graduated with distinction in Bremen: 15 July 2015,• Graduated in Prague: 10 August 2015,• Advisors: Branislav Jurčo, FMP, Charles University in Prague, Peter Schupp, JUB.• Thesis topic: Geometry of Membrane Sigma Models (download)
	Czech Technical University in Prague , Czech Republic Faculty of Nuclear Sciences and Physical Engineering <i>Master of Science (Ing.)</i> September 2009 – June 2011 <ul style="list-style-type: none">• Graduated with honours: 2011• Advisor: Ladislav Hlavatý, FNSPE, CTU in Prague• Thesis topic: Poisson structures on Lie groups (download)
	<i>Bachelor of Science (Bc.)</i> September 2006 – September 2009 <ul style="list-style-type: none">• Graduated with honours: 2009• Advisor: Ladislav Hlavatý, FNSPE, CTU in Prague• Thesis topic: Supersymmetry, Lie superalgebras, Manin supertriples (download)

Jan Vysoký:

“Global Theory of Graded Manifolds” ([eprint](#)),

Jan Vysoký:

“Hitchhiker’s guide to Courant algebroid relations” ([eprint](#)),

J.Geom.Phys. 151 (2020) 103635.

Branislav Jurčo, Jan Vysoký:

“Effective Actions for σ -Models of Poisson–Lie Type” ([eprint](#)),

LMS/EPSRC Durham Symposium on Higher Structures in M-Theory,
Fortschritte der Physik 67 (8-9), 1910024.

Branislav Jurčo, Jan Vysoký:

“Poisson–Lie T-duality of String Effective Actions: A New Approach to the Dilaton Puzzle” ([eprint](#)),

J.Geom.Phys. 130 (2018) 1-26.

Jan Vysoký:

“Kaluza–Klein Reduction of Low-Energy Effective Actions: Geometrical Approach” ([eprint](#)),

JHEP 1708 (2017) 143 .

Branislav Jurčo, Jan Vysoký:

“Courant Algebroid Connections and String Effective Actions” ([eprint](#)),

Proceedings of Tohoku Forum for Creativity,
Special volume: Noncommutative Geometry and Physics IV.

Branislav Jurčo, Jan Vysoký:

“Heterotic reduction of Courant algebroid connections and Einstein–Hilbert actions” ([eprint](#)),

*Nucl.Phys. B*909 (2016) 86-121.

Branislav Jurčo, Jan Vysoký:

“Leibniz algebroids, generalized Bismut connections and Einstein–Hilbert actions” ([eprint](#)),

J.Geom.Phys. 97 (2015) 25-33.

Branislav Jurčo, Peter Schupp, Jan Vysoký:

“Extended generalized geometry and a DBI-type effective action for branes ending on branes” ([eprint](#)),

JHEP 1408 (2014) 170 .

Branislav Jurčo, Peter Schupp, Jan Vysoký:

“Nambu–Poisson Gauge Theory” ([eprint](#)),

*Phys.Lett. B*733 (2014) 221-225.

Branislav Jurčo, Peter Schupp, Jan Vysoký:

“On the Generalized Geometry Origin of Noncommutative Gauge Theory” ([eprint](#)),

Journal of High Energy Physics, July 2013, 2013:126.

Branislav Jurčo, Peter Schupp, Jan Vysoký:

“p-Brane Actions and Higher Roytenberg Brackets” ([eprint](#)),

Journal of High Energy Physics, February 2013, 2013:42.

Jan Vysoký, Ladislav Hlavatý:

“Poisson-Lie Sigma Models on Drinfel’d double” ([eprint](#)),

Archivum Mathematicum, vol. 48 (2012), issue 5, pp. 423-447.

Ladislav Hlavatý, Vojtěch Štěpán and Jan Vysoký:

“Drinfel’d superdoubles and Poisson-Lie T-plurality in low dimensions”,

Journal of Mathematical Physics, 51(6): Art. No. 062304, June 2010.

HONOURS AND
AWARDS

Václav Votruba Prize **2015**,
for the best thesis in theoretical physics.

Josef Hlávka Prize **2015**.

Milan Odehnal Prize (organized by Czech Physical Society) **2014**,
Honorable mention for "Applications of geometrical methods in physics".

Contest of University Students in Maths Research (organized by Czech Mathematical Society) **2011**,
1.-2. place in category "Algebra, Topology and Geometry".

SELECTED TALKS

- Higher Structures and Field Theory, ESI Wien, Austria:
Graded Manifolds: Some Issues **September 2020**
- The 40th Winter School on Geometry and Physics, Srní, Czech Republic:
Courant algebroid morphisms revisited **January 2020**
- Workshop on Quantum Geometry, Field Theory and Gravity, Corfu, Greece:
Courant algebroid morphisms revisited **September 2019**
- The 39th Winter School on Geometry and Physics, Srní, Czech Republic:
Supergravity and Poisson-Lie T-duality **January 2019**
- Higher Structures in M-theory, Durham, United Kingdom:
Courant Algebroid Connections: Applications in String Theory **August 2018**
- III. Annual Workshop: Quantum Spacetime '18, Sofia, Bulgaria:
Effective actions in Poisson-Lie T-duality from a new perspective **February 2018**
- The 38th Winter School on Geometry and Physics, Srní, Czech Republic:
Poisson-Lie T-duality revisited: Language of Courant algebroids **January 2018**
- Bayrischzell Workshop 2017:
Quantization, geometry and mathematical physics, Bayrischzell, Germany:
Kaluza-Klein reduction of Supergravity: Geometric approach **May 2017**
- The 37th Winter School on Geometry and Physics, Srní, Czech Republic:
Courant algebroids & non-Abelian Kaluza-Klein reduction **January 2017**
- MPIM Bonn Oberseminar, Bonn, Germany:
From the Levi-Civita connection to Levi-Civita connections: Effective actions **August 2016**
- The 36th Winter School on Geometry and Physics, Srní, Czech Republic:
Courant algebroid connections and Einstein-Hilbert actions **January 2016**
- Bayrischzell Workshop 2015:
Quantization, geometry and mathematical physics, Bayrischzell, Germany:
Courant algebroid connections and Einstein-Hilbert type actions **May 2015**
- RTG Networking Workshop, Bremen, Germany:
Connections and Gravity Actions via Generalized Geometry **March 2015**
- Nordic String Meeting 2015, Gronningen, Netherlands:
Generalized geometry and effective actions for strings and branes **February 2015**
- The 34rd Winter School on Geometry and Physics, Srní, Czech Republic:
Generalized geometry of Kaluza-Klein reduction **January 2014**