

# Curriculum Vitae

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## Personal

Born on October 12th, 1979 in Vienna.

Austrian citizen.

I am married and have one daughter.

## Positions

Fall 2007 - present. Assistant (in the chair of Geometric Analysis, Prof. T. Ratiu) at the EPF Lausanne.

Summer 2005 - Summer 2007. Post-doc at the University of Vienna supported by FWF-funds.

Fall 2002 - Spring 2005. During my doctorate studies I was supported by the FWF.

## Education

April 2005. Graduated (Dr. rer. nat.) with distinction.

Fall 2002 - Spring 2005. Doctorate studies in mathematics at the University of Vienna.

August 2002. Diploma in mathematics (Mag. rer. nat.) with distinction.

The winter term 2001/02 I spent at the University of Santiago de Compostela, supported by an Erasmus scholarship.

Fall 1999 - Spring 2002. Undergraduate studies in mathematics at the University of Vienna.

Fall 1998 - Spring 2000. Began undergraduate studies in physics at the University of Vienna but stopped these after the "1. Studienabschnitt".

## Publications

### *Journal Articles*

*Stochastic Chaplygin systems*, to appear in Rep. Math. Phys.

*Chaplygin systems associated to Cartan decompositions of semi-simple Lie groups*, Diff. Geom. App. **28** No. 4 (2010), pp. 436-453.

*G-Chaplygin systems with internal symmetries, truncation, and an (almost) symplectic view of Chaplygin's ball*, with Luis Garcia-Naranjo, J. Geom. Mech. **1**, Nr. 1 (2009), pp. 35-53.

*Singular Poisson reduction of cotangent bundles*, with Armin Rainer, Rev. Mat. Complut. **19**, no. 2 (2006), 431-466.

*Singular cotangent bundle reduction & spin Calogero-Moser systems*, Diff. Geom. Appl., Vol. **26**, Issue 2 (2008), Pages 169-192.

### Work in progress

*The geometry of non-holonomic diffusions* with T. Ratiu, in preparation.

*Symmetry reduction of Brownian motion and Quantum Calogero-Moser models*, in preparation.

*Spinning particles in a Yang-Mills field*, arXiv:math.SG/0602062.

### Theses

Doctorate thesis: *Singular cotangent bundle reduction & spin Calogero-Moser systems*, University of Vienna, 2005. Adviser: P. Michor (Vienna); Referees: M. Audin (Strasbourg) and A. Kriegl (Vienna).

Diploma thesis: *Pseudo-holomorphic curves. Transversality and a Gromov-Witten invariant*, University of Vienna, 2002. Adviser: P. Michor.

## Conferences

### Research stays

March 2007. Ecole Polytechnique Federale de Lausanne. Talk: *Applicability of the mechanical connection*.

February 2006. Department of Theoretical Physics, RMKI, Budapest. Talk on *Spinning particles in a Yang-Mills field*.

September 2004. Centre Bernoulli, Lausanne. Talk on *Singular cotangent bundle reduction & Spin Calogero-Moser systems*.

### Conference activities

Workshop on Geometric and topological methods in control and robotics, La Cristalera, Madrid, Spain, October, 4-6, 2010.

RatiuFest 2010. Geometry, Mechanics, and Dynamics, CIRM, Luminy, France, July 12-16, 2010.

4th Summer School on Geometry, Mechanics and Control, GMC, Santiago de Compostela, 2010.

AIMS 2010, Dresden.

Central European Seminar, Special edition dedicated to Peter Michor. Organized by Eduard Cech Center. May 29 - 30, Mikulov, Czech Republic.

III International Summer School on *Geometry, Mechanics, and Control*, L'Ametlla de Mar, Catalonia, Spain 22-27 June 2009.

Poisson 2008. EPF Lausanne, July 7-11, 2008.

The 23rd, 24th, 25th, 26th and 27th Winter School of Geometry and Physics at Srni, January, 2003, 2004, 2005, 2006, and 2007.

AlanFest. Symplectic Geometry at ESI, Vienna, August 4-8, 2003.

### *Selected seminars*

*Stochastic non-holonomic systems*, La Cristalera, Madrid, October 2010.

*The geometry of non-holonomic diffusions*, AIMS 2010, Dresden.

*Stochastic Chaplygin systems*, March 2010, EPFL.

*Chaplygin systems associated to semi-simple Lie groups and cases of Hamiltonization*. Central European Seminar, May 2009, Mikulov, Czech Republic.

*An (almost) symplectic view of Chaplygin's ball*, Nov. 2008, EPFL.

*Applicability of the mechanical connection*. March 2007, EPF Lausanne.

*The mechanical connection, Wong's equations, and dynamical  $r$ -matrices*. The 27th Winter School of Geometry and Physics at Srni, January 13-20, 2007.

*Spinning particles in a Yang-Mills field*. February 2006, Department of Theoretical Physics, RMKI, Budapest.

*Spinning particles in a Yang-Mills field*. The 26th Winter School of Geometry and Physics at Srni, January 14-21, 2006.

*Cotangent bundle reduction with singularities*. The 25th Winter School of Geometry and Physics at Srni, January 15-22, 2005.

*Singular cotangent bundle reduction & Spin Calogero-Moser systems*. September 2004. Centre Bernoulli, Lausanne.