

Dr. Matthias Gritschneider

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Curriculum Vitae

Experienced and dedicated scientist and astro-physicist. Skilled at performing and analyzing large-scale numerical simulations on supercomputers. Prepared to apply my skills to big data and data science.

Udemy Courses: Data Science: Deep Learning in Python, Logistic Regression in Python, Linear Regression in Python, Complete Python Bootcamp

Work Experience

Seit 10/2014 **Joint Position (50/50): Assistant in the priority program 1573 of the DFG / Research Fellow, University Observatory, Munich.**

- Organisation of conferences (up to 200 participants)
- Visitor program (30 international visitors per year)
- Meet-ups (1-2 Workshops, 1-2 Schools per year)
- Researching the formation and evolution of filaments
- Adaptive Mesh Refinement: Fortran, Visualisation: Python

10/2013 – **Feodor-Lynen Return Stipend of the Humboldt Foundation,**
09/2014 *University Observatory, Munich.*

- Origin of ionized proto-planetary disks
- Direct solution of simple differential equations in IDL

10/2011 – **Feodor-Lynen Stipend of the Humboldt Foundation, Universi-**
09/2013 *ty of California, Santa Cruz, USA.*

- Dwarf galaxies and dark matter
- Direct summation of gravitational forces with trees

10/2009 – **Kavli Postdoctoral Fellow, Kavli Institute for Astronomy and**
09/2011 *Astrophysics at Peking University, Beijing, China.*

- Origin of our Solar System
- Tracer-particles in a static 2D-grid, visualisation: VISIT

06/2009 – **Research Fellow, University Observatory, Munich.**
09/2009

- Formation of pillars in HII-regions
- Parameter study, 20 times 2M particles with turbulent seeds

Education

- 06/2004 – **PhD (summa cum laude) in astrophysics**, *Ludwig-Maximilians University*, Munich.
- “Ionization and Triggered Star Formation in Turbulent Molecular Clouds”, supervisor: Prof. Dr. Andreas Burkert.
 - Implementation of massively parallel sorting of 2M particles in different rays to calculate the ionization in Fortran90.
- 10/2001 – **Diplom (very good) in physics**, *Ludwig-Maximilians University*, Munich, supervisor Master thesis: Prof. Dr. Harald Lesch.
- 05/2004
- 10/1998 – **Vordiplom (very good) in physics**, *University Regensburg*, Regensburg.
- 09/2001
- 09/1988 – **Abitur (1.5)**, *Humanistisches Wilhelmsgymnasium*, Munich.
- 06/1997

Awards and Grants

- 2010 **National Science Foundation of China Grant**, ($\approx 26\,000$ €).
- 2009 “**Universe PhD Thesis 2009 (Theory)**”, *of the cluster of excellence “Origin and Structure of the Universe”* (4 000 €).

Skills

Languages	Expert	German (native), English
	Intermediate	Spanish
	Basic	Chinese (Mandarin), Italian
IT	Expert	Fortran90, Python, IDL
	Intermediate	C/C++, OpenMP
	Basic	Java, HTML, scikit-learn, SQL

Further Qualifications

- Presentations** 42 talks at conferences and institutes, 5 posters
- Publication** 8 papers as first author (293 citations) and 9 papers as co-author (207 citations) in international journals
- Supervision** since 2008 co-supervision of Master and PhD-students
Two time participant and supervisor of PhD students at the “International Summer Institute for Modelling in Astrophysics”