

DANIEL H MALZ

Born: July 21, 1992 – Stuttgart, Germany

Education

- 2011 – 2015
Part I A & B
Part II
Part III
- BA Physics, Master of Mathematics; Trinity College, University of Cambridge**
Mathematics, Physics, Computer Science and Chemistry · **1st class honours**
Courses covering a broad area of physics and theoretical physics · **1st class honours**
Master of Mathematics in DAMTP (Department for Applied Mathematics and Theoretical Physics), taking courses including quantum field theory, symmetries, statistical field theory, string theory, gauge theories, solitons, as well as general relativity, cosmology, black holes, differential geometry
- 2008 – 2011
- State School for Highly Gifted Pupils, Schwäbisch Gmünd.**
1.0 · *Abitur* · Main subjects: German, English, Mathematics, Physics, Music

Recent bursaries and honours

- 2014
- Project fund, Trinity College and Academic Visit Stipend, German National Academic Foundation** · Financial support for summer research project in Berkeley
- 2013 and 2014
2013 – present
2011 – present
2012 – 2013
2012
- First Class Honours** · Natural Science Tripos
Senior Scholar · Trinity College
German National Academic Foundation · College fees, living expenses
Chamber Music Award · Award to promote chamber music
Language bursary · Fully funded four week trip to Spain for an immersive Spanish course

Work and Research Experience

- 2014
- Condensed Matter Theory Group, UC Berkeley**
- 12-week summer research internship supervised by Professor Joel Moore
 - Research in Quantum Phase Transitions and strongly-correlated electron systems
 - Started a project to verify Crooks and Jarzynski non-equilibrium relations, which is being carried on by a PhD student at Berkeley and might get published eventually
 - Went to seminars and graduate lectures in areas related to condensed matter theory
- 2013
- Laboratory for Scientific Computing, Cavendish, University of Cambridge**
- Eight-week summer research internship
 - Implemented multi-core numerical solvers of partial differential equations in C++ to simulate the flow of compressible inviscid ideal gas and of shock waves
 - Subsequently examined unsteady flow in an aircraft inlet to propose better shapes
 - Written 5,000 word report about project, and presented it to two professors

- 2010 – 2011 **Teaching**
- Taught supplementary lessons in mathematics and physics to fellow pupils.
- 2010 **German Aerospace Center**
- One week of practical experience. Attended seminars and solved problems.
- 2009 **Carl Zeiss, Oberkochen**
- Helped a PhD student devise an apparatus to 3D image components using a laser rangefinder, written Excel spreadsheet to carry out the calculation and plot the surface. One week.

Skills & Activities

Computer Skills

<i>Advanced</i>	C++, L ^A T _E X, Excel, Linux (Debian)
<i>Intermediate</i>	JAVA, MATLAB, Mathematica
<i>Basic</i>	Unix shell, ML, HTML5 & CSS

Awards

2014	Awarded Half-Blue (university colours for excellence in sports) in Karate
2013	Third prize in the only European chamber music competition for non-music students (Sforzando)
2010	Scholarship for the Chamberfest, Idyllwild Arts Foundation, USA.
2009	Third prize in national music competition in Germany (“Jugend Musiziert”)
2009	First prize in a state mathematics competition

Languages

<i>German</i>	Mother tongue
<i>English</i>	Advanced (in Cambridge since 2011)
<i>Spanish</i>	Proficient (converse fluently, ALTE B2, spent two months in Spain during summers 2012/13)
<i>French</i>	Intermediate (good understanding, six years in school)

Leisure Activities

Clarinet · Reading around physics · Karate · Active member of Trinity College Science Society & Trinity Mathematical Society · Running · Piano