

DAVID GOBRECHT

PERSONAL DATA

Place and Date of Birth Baden (CH) | 08 December 1985
Nationality Swiss | German
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PROFESSIONAL EXPERIENCE

- Feb 2024 - now** Patent expert at the Swiss Federal [Institute of Intellectual property \(IPI\)](#) in Bern, Switzerland
- Jan 2022 - Nov 2023** Researcher (postdoc), funded by fellowship “[The Origin and Fate of Dust in Our Universe](#)” at [GU](#) in Gothenburg, Sweden
Head of group: Prof. Gunnar Nyman
- Jun 2017 - Dec 2021** Researcher (postdoc), funded by ERC fellowship “[Aerosol: Astrochemistry of old stars: direct probing of unique chemical laboratories](#)” at [KU Leuven](#) in Leuven, Belgium
Head of group: Prof. Leen Decin
- May 2015 - Apr 2017** Researcher (postdoc), funded by fellowship “[Advances in AGB modelling](#)” at [INAF-OACTe](#) in Teramo, Italy
Head of group: Dr. Sergio Cristallo
- May 2010 - Feb 2015** Scientific assistant and tutor at the [University of Basel](#)
Tutor in Mechanics, Thermodynamics, Astronomy and Experimental Physics, including administration and lecture representation for Prof. F.-K. Thielemann
- Aug 2010 - Feb 2011** Math teacher at Bezirksschule [Schöftland](#) and [Wettingen](#), Switzerland
Teaching Mathematics for 11-16 years old pupils
- Jun 2006 - Jul 2007** Scientific work at [PSI](#) in Villigen, Switzerland
Interpretation of satellite data and analysis of Gamma Ray Bursts (GRB's)
- Jun 2005 - Apr 2010** Part-time job at [Denner AG](#) in Brugg & Basel, Switzerland
Working as cashier, at the stock, and in the warehouse

EDUCATION

- Feb 2011 - Feb 2015** PhD studies “[Dust synthesis in evolved oxygen-rich AGB stars](#)” in the subject Theoretical Physics
Physics department, University of Basel, Switzerland
Thesis advisor: PD Dr Isabelle Cherchneff

- Sep 2008 - Dec 2010 Master studies in Theoretical Physics
Physics department, University of Basel, Switzerland
Advisors: Prof Friedrich-Karl Thielemann & PD Dr Ahmad A. Hujeirat
- Sep 2005 - Sep 2008 Bachelor studies in Physics
Physics department, University of Basel, Switzerland
- May 2005 Abitur: grade 1.8 (12/15 points)

LANGUAGES

- German** Native, mother-tongue
- English** excellent knowledge in reading, writing and speaking
deepened by multiple language studies in England: Paignton (2001) and Malta: Gzira (2003)
- French** excellent knowledge in reading, writing and speaking
deepened by multiple language studies in France: La Rochelle (2004) and Blois (2002, 2003)
- Italian** advanced level in reading, writing and speaking
intensified during my professional two-year fellowship in Teramo, Italy
- Dutch** beginner level in reading and speaking
intensified during my professional fellowship in Leuven, Belgium

→ communication competence paired with international experience

IT SKILLS

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|-------------------------|---|
| Operating systems | Linux (all distributions), Windows, Mac OSX |
| Programming languages | Fortran, bash, python, perl, Matlab, html |
| Data/Text processing | L ^A T _E X, gnuplot, Excel, Word, PowerPoint |
| Computational chemistry | Gaussian, GULP, GMIN, LAMMPS |

→ ability to analyze, model and solve complex problems with efficient and accurate computational methods. Check also my [github](#) repository.

GRANTS, AWARDS AND DISTINCTIONS

- 2018 - 2024 Supervision of four PhD students Jels Boulangier (2019), [J. P. Sindel \(2023\)](#), Helena Lecoq-Molinos (2024), and Sven Kiefer (2024).
- 2015 - 2023 Several grants for machine time ($>10^6$ core hours) on the HPC supercomputing clusters at [CINECA](#) in Italy, and at [BSC](#) in Spain
- 2013 - 2024 Co-investigator of several astronomical observing programmes including [JWST](#), [ATOMIUM](#) (ALMA large programme), [NASA-IRTF](#), [OSO](#), and [IRAM](#)
- 2020 [Junior member](#) of the International Astronomical Union (IAU)

Author of several [peer-reviewed papers](#) in high-impact scientific journals and invited speaker at [international conferences](#)