

# Curriculum Vitae: Carlos De Breuck

## Personal information

Work Address: European Southern Observatory, Karl Schwarzschild Straße 2,  
85748 Garching bei München, Germany  
Home Address: Rotwandweg 24, 85748 Garching bei München, Germany  
Email: cdebreuc@eso.org  
Telephone: +49-89-32006613 (work)  
Date of Birth: 3 February 1973  
Nationality: Belgian  
Marital Status: Married to Dr. Myha Vuong with son Fenno (2005) and daughter Emmi (2007)

## Employment

May 2006 - present ESO staff: ESO APEX Project Scientist, Garching, Germany.  
Sep 2003 - Apr 2006 Fellow at the European Southern Observatory, Garching, Germany.  
Oct 2000 - Aug 2003 Marie Curie Fellow at the Institut d'Astrophysique de Paris, France.  
Apr 1996 - May 1999 Graduate Exchange Student at Institute of Geophysics and Planetary Physics,  
Lawrence Livermore National Laboratory, Livermore, California, USA.  
Jan 1996 - Sep 2000 Onderzoeker in Opleiding, Leiden University, Leiden, The Netherlands.

## Education

1996 - 2000 PhD in Astronomy at IGPP/LLNL, CA, USA and Leiden Observatory, The Netherlands.  
1991 - 1995 Undergraduate studies in Astronomy at Leiden Observatory, The Netherlands.  
1986 - 1991 High school studies "Latin-Mathematics", Sint-Jozef Klein Seminarie, Sint-Niklaas, Belgium.

## Professional trainings

2016 Managing difficult conversations  
2015 Time management  
2015 Effectively managing harassment  
2015 Manager's session on awareness of fair treatment, courtesy and respect  
2009 Time management  
2008 Project management

## Research experience

Sep 2017 to present Full astronomer, ESO, Garching  
May 2006 to Aug 2017 Associate astronomer, ESO, Garching  
Sep 2003 to Apr 2006 ESO fellow, Garching  
Dec 2000 to Aug 2003 Marie Curie fellow at the Institut d'Astrophysique de Paris  
Apr 1996 to May 1999 Exchange graduate student at IGPP/LLNL, Livermore, California.  
Jan 1996 to Nov 2000 Thesis research at Leiden Observatory

## PhD thesis supervision

Start-End	PhD Student	University	Subject
2006 – 2010	Audrey Galametz	Strasbourg	near-IR observations of high- $z$ galaxy clusters
2010 – 2013	Guillaume Drouart	Paris	mid-IR SEDs of high- $z$ radio galaxies
2011 – 2014	Dominika Wylezalek	LMU	<i>Spitzer</i> observations of high- $z$ galaxy clusters
2012 – 2015	Bitten Gullberg	LMU	dusty star-forming & radio galaxies with APEX & ALMA
2014 – 2017	Gaël Noirot	Paris	<i>HST</i> observations of high- $z$ galaxy clusters
2015 – 2018	Theresa Falkendal	Paris	haloes around high- $z$ radio galaxies with ALMA & MUSE
2016 – 2019	Sthabile Kolwa	LMU	haloes around high- $z$ radio galaxies with MUSE & ALMA

## Observing experience

- APEX: 250+ days of observing 2005-2018
- ALMA: 7 accepted proposals as PI + 70 accepted as coI in Cycles 0 to 5.
- ESO: 37 accepted proposals P68-P101 using FORS, SINFONI, HAWK-I, ISAAC, X-shooter, SOFI, EMMI, EFOSC2, LABOCA, SABOCA, SEPIA, Zspec + 220 accepted as coI
- Keck (LRIS, NIRC), AAT, WHT, Lick
- VLA, ATCA, WSRT, GMRT
- IRAM 30m and PdBI
- *Spitzer*, *Herschel*, *HST*

## Functional and science duties at ESO

- **Support Astronomer and ESO APEX project scientist (since November 2005).**
- 2015-now: Member of ESO submm single-dish scientific strategy working group + AtLAST site selection
- 2014-now: Coordination of the ESO large programmes on the Arizona Radio Observatory
- 2012-now: Member of working group on science case for the ALMA Band 2+3
- 2006-2012: Organizer of Lunch Talks at ESO Garching.
- 2004-2006: Editor of the European ALMA Newsletter (<http://www.eso.org/projects/alma/newsletter/>).
- 2004-2005: Tester of ALMA offline software AIPS++ and the ALMA Observing Tool.

## Refereeing & committee work

- Referee for A&A, AJ, Nature, ApJ, MNRAS, Science
- Referee of 10 PhD theses (mostly in Paris).
- Member of the selection committee for funding proposals for the Agence Nationale pour la Recherche 2012-2014 (100 to 800 kEUR each).
- ESO Fellow Selection Committee (2016, 2017).

## Conference organisation

- SOC member of conference “At the Edge of the Universe” (Sintra, October 2006).
- LOC co-chair of conference “Obscured AGN Across Cosmic Time” (Seon, June 2007).
- LOC co-chair of “ALMA Community Days” and “Surveys for ALMA” (Garching, September 2007).
- LOC co-chair of “3D2008” (Garching, June 2008) .
- LOC co-chair of “Multiwavelength views of the ISM in high-redshift galaxies (Santiago, June 2011).
- LOC co-chair of “Astronomy, radio sources and society” (Leiden, June 2013).
- LOC co-chair of “3D2014” (Garching, March 2014) .
- SOC member of conference “Back at the Edge of the Universe” (Sintra, March 2015).
- LOC chair of “Getting Ready for ALMA Band 5 - Synergy with APEX/SEPIA” (Garching, February 2017).
- SOC member of conference “Galaxy Evolution Across Time” (Paris, June 2017)
- SOC member of “Early stages of Galaxy Cluster Formation (GCF) 2017” (Garching, July 2017)
- SOC member of “Centimetre-Sub-Millimetre Q&U (and V) European Southern Observatory Workshop” (Garching, October 2017)
- LOC chair of “Submillimetre Single-dish Data Reduction and Array Combination Techniques” (Garching, March 2018)
- SOC member of proposal preparation coordination workshop (Garching, June 2018)

## Languages

- English: near native.
- French: near native.
- Dutch: native.
- German: good knowledge.
- Spanish: basic knowledge.
- Chinese (Teochew): basic conversation.

## Publication list: Carlos De Breuck

### Refereed first author papers

1. *Discovery of an Ultra-Steep Spectrum, Highly Polarized Red Quasar at  $z = 1.462$*

**De Breuck, C.**, Brotherton, M. S., Tran, H., van Breugel, W. & Röttgering, H. 1998 AJ, 116, 13

2. *VLT Spectroscopy of the  $z=4.11$  Radio Galaxy TN J1338-1942*

**De Breuck, C.**, van Breugel, W., Minniti, D., Miley, G., Röttgering, H., Stanford, S. A., & Carilli, C. 1999 A&A, 352, L51

3. *A Sample of 669 Ultra Steep Spectrum Radio Sources to Find High Redshift Radio Galaxies*

**De Breuck, C.**, van Breugel, W., Röttgering, H. & Miley, G. 2000 A&AS, 413, 303

4. *A Statistical Study of Emission Lines from High Redshift Radio Galaxies*

**De Breuck, C.**, Röttgering, H., Miley, G., van Breugel, W. & Best, P. 2000 A&A, 362, 519

5. *Spectroscopy of Ultra Steep Spectrum Radio Sources*

**De Breuck, C.**, van Breugel, W., Röttgering, H., Stern, D., Miley, G., de Vries, W., Stanford, S. A., Kurk, J. & Overzier, R. 2001 AJ, 121, 1241

6. *Optical and Near-IR Imaging of Ultra Steep Spectrum Radio Sources - The K-z diagram of radio and optically selected galaxies*

**De Breuck, C.**, van Breugel, W., Stanford, S., Röttgering, H., Miley, G. & Stern, D. 2002 AJ, 123, 637

7. *A Sample of Ultra Steep Spectrum Sources Selected from the Westerbork In the Southern Hemisphere (WISH) survey*

**De Breuck, C.**, Tang, Y., de Bruyn, A. G., Röttgering, H. & van Breugel, W. 2002 A&A, 394, 59

8. *CO Emission and Associated HI Absorption from a Massive Gas Reservoir Surrounding the  $z=3$  Radio Galaxy B3 J2330+3927*

**De Breuck, C.**, Neri, R., Morganti, R., Omont, A., Rocca-Volmerange, B., Stern, D., Reuland, M., van Breugel, W., Röttgering, H., Stanford, S. A., Spinrad, H., Vigotti, M. & Wright, M. 2003 A&A, 401, 911

9. *A search for distant radio galaxies from SUMSS and NVSS: I. Sample definition, radio and K-band imaging*

**De Breuck, C.**, Hunstead, R., Sadler, E., Rocca-Volmerange, B. & Klamer, I. 2004 MNRAS, 347, 837

10. *A multi-wavelength study of the proto-cluster surrounding the  $z = 4.1$  radio galaxy TN J1338-1942*

**De Breuck, C.**, Bertoldi, F., Carilli, C., Omont, A., Venemans, B., Röttgering, H., Overzier, R., Reuland, M., Miley, G., Ivison, R. & van Breugel, W. 2004 A&A, 424, 1

11. *Detection of Two Massive CO Systems in 4C 41.17 at  $z=3.8$*

**De Breuck, C.**, Downes, D., Neri, R., van Breugel, W., Reuland, M., Omont, A. & Ivison, R. 2005 A&A, 430, 1

12. *A search for distant radio galaxies from SUMSS and NVSS: II. Optical Spectroscopy*

**De Breuck, C.**, Klamer, I., Johnston, H., Hunstead, R., Bryant, J., Rocca-Volmerange, B., & Sadler, E. 2006, MNRAS, 366, 58

13. *The Spitzer High-redshift Radio Galaxy Survey*

**De Breuck, C.**, Seymour, N., Stern, D., Willner, S., Eisenhardt, P. Fazio, G., Galametz, A., Lacy, M., Rettura, A., Rocca-Volmerange, B, & Sadler, E. 2010 ApJ, 725, 36

14. *Enhanced [CII] emission in a  $z = 4.76$  submillimetre galaxy*

**De Breuck, C.**, Maiolino, R., Caselli, P., Coppin, K. Hailey-Dunsheath, S. & Nagao, T. 2011 A&A 530, 8

15. *ALMA resolves turbulent, rotating [CII] emission in a young starburst galaxy at  $z = 4.8$*

**De Breuck, C.**, Williams, R., Swinband, M., Caselli, P. Coppin, K., Davis, T., Maiolino, R., Nagao, T., Smail, I., Walter, F., Weiß, A. & Zwaan, M. 2014, A&A 565, 59

16. *When the universe became dusty*

**De Breuck, C.** Science 2016, 352, 1520.

Co-authored publications

- In addition to the above 16 first-author papers, I am also co-author on 162 additional papers.
- 16 of the co-authored papers are led by my students.
- With George Miley, I have written a review on high-redshift radio galaxies (2008, A&ARv, 15, 67).
- Total number of citations = 7575 (March 2018)
- Total number of citations on first author papers = 988
- h-index = 48