

## **Curriculum Vitae of Françoise COMBES**

Prof at College de France (Galaxies & Cosmology)  
Member of Academy of Sciences  
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## **Studies:**

**1980:** PhD Thesis, Univ. Paris VII: "Dynamics and structure of galaxies"  
**1975:** Agregation of Physics (rank 2<sup>nd</sup>)  
**1974-5:** Thesis of 3rd cycle, (Paris VII): Conditions of nucleosynthesis in a symmetric universe of matter-antimatter  
**1971-75:** Ecole Normale Supérieure (Rue d'Ulm), PARIS

## **Expertise:**

- Formation and evolution of galaxies
- Dynamics of galaxies: simulations of spirals, bars, interactions
- Interstellar medium of galaxies, observations of new molecules
- High redshift galaxies, cosmic star formation history
- Molecular absorption lines in front of quasars
- Dark matter in the Universe -- model of dark baryonic matter, and cold molecular gas

## **Professional Experience:**

- \* 2014-: Professor at College de France: Chair Galaxies & Cosmology
- \* 2007-2014: Astronomer (Classe Exceptionnelle) at Paris Observatory (CE2 en 2011)
- \* 1989-2006: Astronomer (2<sup>nd</sup>, then 1<sup>cl</sup>) at Paris Observatory
- \* 1985-1989: Staff-director of the Physics Laboratory in Ecole Normale Supérieure (Ulm), Paris
- \* 1983-1985: Part-time lecturer in Paris 6 (C4 and DEA)
- \* 1975-1985: Assistant then Maître-Assistant in Ecole Normale Supérieure, Paris

## **Committees and Functions:**

- \* 2016-: Chair of Section Universe Sciences of Académie des Sciences
- \* 2009-2016: President of COFUSI
- \* 2003-2018: Scientific Editor of A&A (Astronomy & Astrophysics main European Journal)
- \* 2002-2004: President of SF2A (French National Astrophysical Society)
- \* 2007-2008: Chair of PanelD Astronet Roadmap
- \* 2012-2015: President Division J (Galaxies & Cosmology) of IAU
- \* 2009-2016: Member Committee ERC-Astrophysics (PE9)
- \* 2010-2012: Chair of Committee ANR-Astrophysics
- \* 2011-2014: Chair of the ALMA Program Committee \* 2012-: Chair of ESO-OPC

## **Publications: ~ 1000 (485 in refereed journals), >20 800 citations (hindex=72) from NASA-ADS**

Tremblay, G.R., Oonk, J.B.R., Combes, et al.: 2016, Cold, clumpy accretion onto an active supermassive black hole, *Nature* 534, 218,

Garcia-Burillo, S., Combes, F., Ramos Almeida, C. et al.: 2016, ALMA resolves the torus of NGC 1068: continuum and molecular line emission, *ApJL* 823, L12

El-Zant, A., Freundlich, J., Combes, F.: 2016, From cusps to cores: a stochastic model, *MNRAS* 461, 1745

Salome, Q., Salome, P., Combes, F., Hamer, S., Heywood, I.: 2016, Star formation efficiency along the radio jet in Centaurus A, *A and A* 586, A45

Scharwaechter, J., Combes, F., Salomé, P., Sun, M., Krips, M.: 2016, The over-massive black hole in NGC 1277: New constraints from molecular gas kinematics, *MNRAS*, 457, 4252

**Books :** \* La Matière Noire, clé de l'Univers, 2015, F. Combes, Vuibert

\* La Voie Lactée, 2013, F. Combes & J. Lequeux, EdP-Sciences

\* Galaxies et Cosmologie (2009), F. Combes, M. Haywood, S. Collin, F. Durret, B. Guiderdoni (Ellipses)

\* Mystères de la formation des galaxies (2008), F. Combes (Dunod) | Mysteries .. (2010, Springer)

\* Galaxies et Cosmologie (CNRS, 1991), -- Galaxies and Cosmology (Springer, 1995), avec P. Boissé, A. Mazure et A. Blanchard, ré-édition en 2002