

QUALIFICATION SUMMARY

- **Planetary astronomer with 17 years of experience in academic, international and non-profit scientific institutions. Conducted multiple research projects in a wide range of areas.**
 - Instrumentation for ground-based telescopes with emphasis on adaptive optics (AO) systems
 - Data-processing and analysis of astronomical and fluorescence microscopy images by deconvolution
 - Research studies including search for moons around asteroids and planets around other stars using a wide variety of instruments leading to 75 publications in major journals including Nature and Icarus
- **Science communicator with 12 years of experience. Provided scientific leadership needed to give visibility to technological projects by conducting a coherent and modern outreach and public affairs program.**
 - Strong communication and collaboration skills. Led international groups of researchers, optimized use of facilities, produced peer-reviewed publications and successfully completed competitive grant proposals
 - Use of modern tools, including blogging, social media, press releases, and web sites to communicate with the public about the excitement of science and technological development
 - Instructed numerous students, organized and taught classes, gave professional and public conference presentations
 - Consultant and interviewee for several science documentaries for the Science channel, BBC, ARTE and news media in English, French and Spanish.

EDUCATION

- **Astrophysics, PhD**, Université Paul Sabatier, France, 2000
Dissertation: “High angular resolution imaging of small structures in the solar system: Monitoring of Io volcanic activity”
- **Planetary Science, MS**, Université Paul Sabatier, France, 1996
- **Physical Science, B.Sc.**, Université Paul Sabatier, France, 1995

RESEARCH PROFESSIONAL EXPERIENCE

- **IRIS AO**, Senior AO Application scientist (Mar. 2013 –Present)
Conduct coherent outreach program and study scientific applications (laser beaming) of IRIS AO MEM technology.
- **SETI Institute**, Science Outreach Manager of the Carl Sagan Center (Dec. 2013-Present)
Promote the work of 70 Sagan Center scientists through articles, press releases, and modern social media tools. Spokesperson on behalf the CSC at scientific meetings and conferences.
- **SETI Institute**, Senior Research Scientist at the Carl Sagan Center (Nov. 2012-Present)
Conduct instrumentation projects to search and characterize exoplanets using ground-based telescopes, including the Gemini South and Subaru telescopes. Development of science cases and technological infusion path for the Origami Nano-satellites constellation. Science committee for future ground-based instruments, including giant telescopes.
- **SETI Institute**, Research Scientist at the Carl Sagan Center (Jul. 2007-Nov. 2012)
Conduct international programs to search and characterize satellites of asteroids using space and ground telescopes including the Keck and VLT telescopes. Science cases and requirements for future adaptive optics in development for ground-based telescopes. First MCAO observations of Jupiter with the VLT.
- **UC Berkeley**, Assistant Research Astronomer at the Astronomy Department (Jun. 2003-Jun. 2011)
Deconvolution algorithm (AIDA, MISTRAL) for adaptive optics observations of planetary target. Study and publication of the most energetic eruption ever witnessed on Io, and the discovery of the first triple asteroid.
- **UC Berkeley**, Postdoctoral Fellow at the Astronomy Department (Nov. 2000-May 2003)
Data-processing and analysis of W.M. Keck telescope adaptive optics observations of Io, Titan & Saturn.

- **European Southern Observatory, Chile**, Ph.D student (Nov. 1998-Sep. 2000)
Analysis and peer-reviewed publication of the first adaptive optics observations of Io and Kleopatra with the adaptive optics of the 3.6m telescope at ESO-La Silla, Chile
- **European Southern Observatory, Chile**, French national service (Jun. 1997-Oct. 1998)
200 nights as a support astronomer at 3.6m telescope of ESO and its AO system, the first offered to the community.
- **University College London, UK**, Lab Assistant (Jun. 1997-Oct. 1998)
Data processing and analysis of Jupiter near-infrared images collected with IRTF
- **UNAM, Mexico**, Research Assistant (Jul. 1996-Jan. 1997)
Study of image quality for large segmented mirror telescopes.

SELECTED PUBLICATIONS

Peer-reviewed articles

- F. Marchis, et al. 2014. The puzzling mutual orbit of the binary Trojan asteroid (624) Hektor. *Ap.J Letter*, in press
- F. Marchis et al., 2012. Multiple Asteroid Systems: Dimensions and Thermal Properties from Spitzer Space Telescope and Ground-Based Observations, *Icarus* 221, 2, 1130-1161
- F. Marchis et al. 2007. Outstanding Questions and Future Explorations, Chapter for “Io After Galileo” book
- F. Marchis et al. 2006. A low density of 0.8 g cm⁻³ for the Trojan binary asteroid 617 Patroclus, *Nature*, 439, 7076, 565-567
- F. Marchis, et al. 2005. Discovery of the Triple Asteroidal System: 87 Sylvia, *Nature*, 436, 822-824.

Invited articles and talks

- F. Marchis, et al. Origami NanoSat Telescopes: Planetary Astronomy's Future unfolds EPSC, London, UK, Sep. 8-13 2013
- F. Marchis, et al. Quantitative solar system science with AO systems, Adaptive Optics Systems III. Proceedings of the SPIE, Volume 8447, id. 84470C-84470C-11, Amsterdam, Netherlands, Sep 2012
- F. Marchis, Binary and Multiple Asteroids, McGraw Hill Encyclopedia of Science and Technology, 11th Edition, 2011.
- F. Marchis, Our Solar System through the eyes of Adaptive Optics, Chapter for “Postcards from the Edge of the Universe” book, Editors: L. Pullen & M. Barrosa, 2010
- F. Marchis, Planetary science in the Eyes of the Giant Telescopes, Feeding the Giants Workshop, Ischia, Italy, August 29- September 2 2011

COMMITTEES

- Thirty-Meter Telescope International Science Definition Team for Solar System since Oct. 2013
- PLOS ONE Journal editor board member since Feb. 2013
- Member of several ground-based instrumentation science teams, including ERIS, the ESO next generation AO system since 2011, NGAO the Keck next generation AO since 2006 and Gemini Planet Imager since 2003
- Session convener at the AGU Fall Meeting on *asteroids and comets' interior and fate of habitability* since 2011

HONORS AND AWARDS

- Recipient of the 2004 Grants in Honor of Professor Henri Chretien
- Asteroid (6639) named Marchis in honor of his discovery of the first triple asteroid system in 2007
- Affiliated Astronomer at Observatoire de Paris since 2003

AFFILIATIONS AND ORGANIZATIONS

- Division for planetary sciences of the American Astrophysical Society since 2000
- American Geophysical Union since 2003
- American Astronomical Society since 2009