

## **TEACHING/TUTORING EXPERIENCE**

### **Graduate student Courses:**

#### ***Academic Year 2013-2014***

Graduate Course at the *University of Granada*, Granada, Spain, “Radiative Transfer in Earth and Planetary Atmospheres” ([http://www.ugr.es/~agcasco/gaia/english/index\\_en.htm](http://www.ugr.es/~agcasco/gaia/english/index_en.htm))

Professor at the University Master in Astrophysics, *University Complutense*, Madrid, Spain (<https://www.ucm.es/masterastrofisica/trabajo-fin-de-master>)

#### ***Academic Year 2012-2013***

Professor at the Master about “Space Missions”, *University Politécnica*, Madrid, Spain (<http://msst.aero.upm.es/>)

#### ***Academic Year 2008-2009***

Lecturer in Prof. Yuk Yung’s Graduate Courses at the California Institute of Technology (CalTech)(<http://www.gps.caltech.edu/content/yy/courses>)

***Course ESE/Ge 152. “Atmospheric Radiation”***

***Course Ge 159. “Planetary Evolution and Habitability”***

### **Undergraduate student Courses:**

***Academic Years 2011-2012, and 2012-2013:*** Tutor of last year of undergraduate students in Mathematics and Physics at the *University Complutense*, Madrid, Spain

### **Direction of Master Thesis:**

3 directed Master Thesis 3 Master Thesis Direction in progress:

#### ***Academic Year 2010-2011:***

Name of student: Alfonso Delgado-Bonal Title: “Radiative Transfer and Non-Local thermodynamics Equilibrium Effects”, University: University of Alcalá de Henares, Madrid, Spain

#### ***Academic Year 2011-2012:***

Name of student: Teresa Mendaza de Cal Title: “Science and Space Technology” University: University Complutense, Madrid, Spain

Name of student: Jorge Pla-García Title: “Effect of the emergence of life in the spectrum of the Earth's atmosphere: application to exoplanets” University: University of Valencia, Valencia, Spain

#### ***Academic Year 2013-2014***

Name of student: Víctor Gómez Sánchez Title: “Modeling the shapes of the spectral lines in the atmospheres

of the planets of the solar system and exoplanets”University: University Complutense, Madrid, Spain

Name of student: Alfonso Delgado-Bonal Title “ Exergy on Mars”University: University of Valencia, Valencia, Spain

Name of student Jorge Pla-García Title: “Meteorological interpretations at Gale Crater, Mars, through comparisons of actual observations of the REMS (Rover Environmental Monitoring Station) instrument rover Curiosity (MSL mission-NASA) versus simulations with the mesoscale model MRAMS (Mars Regional Atmospheric Modeling System)”

Name of student: Teresa Mendaza de Cal Title: “Study of the effect of solar events in the orbit of the International Space Station”University: University Complutense, Madrid, Spain

**PhD Thesis Direction:**

*Academic Year: 2011-2012*

Name of student: Xi Zhang (co-direction) Title of Thesis: “Aerosols and chemistry in the planetary atmospheres” Defense Date: November 29, 2012 Grade: Honours University: California Institute of Technology, Pasadena, California

*PhD Thesis in progress*

Name of student: Alfonso Delgado-Bonal Title: “Effects of life in planetary atmospheres” University: To be presented at the University of Salamanca, Salamanca, Spain

Name of student: Jorge Pla-García Title: “Photochemical and Dynamical modeling of the atmosphere of Mars and interpretation of the environmental observations of REMS on the Curiosity rover” University: To be presented at the University of Granada, Granada, Spain

Teresa Mendaza de Cal, “The atmospheric circulation in slowly rotating and phase locked Earth-like planets”

To be presented at the University of Granada, Granada, Spain

Patricia Valentín-Serrano Title: “Analysis of effects of solar heating, thermal stress, and mobility of the rover on the environmental data provided by REMS (Rover Environmental Monitoring Station)/Mars Science Laboratory” To be presented at the University of Granada, Granada, Spain