

## CURRICULUM VITAE

### **NIRMAL NISCHAL**

101 Regency Dr.

Central, SC, 29630, USA

Phone: 443-995-0701

Email: [nischa@g.clemson.edu](mailto:nischa@g.clemson.edu)

### **Education**

**Aug 2018 (Expected): Ph. D.** Clemson University, USA

**Dissertation Title:** “Impact of tropospheric tides on the energy budget of the thermosphere and other parameters important to the aeronomy of the ionosphere-thermosphere system”.

**Advisor:** Dr. Jens Oberheide

**May 2013: M. Sc. Physics,** Tribhuvan University, Nepal

**Thesis Title:** “First-principles study of electronic and vibrational properties of small silver clusters.”

**Advisor:** Dr. Sitaram P. Byahut

**Feb 2009: B. Sc. Physics,** Tribhuvan University, Nepal

### **Research Experience**

**2015-current:** Photochemical modeling of nonmigrating tides in the CO<sub>2</sub> and NO infrared cooling of the thermosphere.

**2014-current:** Tidal diagnostics of SABER data to extract nonmigrating tidal signals in CO<sub>2</sub> 15 μm and NO 5.3 μm infrared cooling rates in the Thermosphere.

**2011-12:** Ab initio calculations using Gaussian to find the equilibrium geometry, ionization potential, binding energy and the harmonic frequency of small silver clusters.

## **Work Experience**

**2017: Teaching Assistant**, Clemson University – Department of Physics & Astronomy, PHYS 2090, Algebra-based physics laboratory that emphasizes general physics mechanics, including linear motion, circular motion, momentum, energy and oscillations.

**2015: Teaching Assistant**, Clemson University – Department of Physics & Astronomy, PHYS 1240, Calculus-based physics laboratory that emphasizes calculus based mechanics, including linear motion, rotational motion, momentum, energy and oscillations.

**2014: Teaching Assistant**, Clemson University – Department of Physics & Astronomy, PHYS 1240, Calculus-based physics laboratory that emphasizes calculus based mechanics, including linear motion, rotational motion, momentum, energy and oscillations.

**2013: Teaching Assistant**, Clemson University – Department of Physics & Astronomy, PHYS 2090, Algebra-based physics laboratory that emphasizes general physics mechanics, including linear motion, circular motion, momentum, energy and oscillations.

## **Memberships**

**2014-current:** Member, American Geophysical Union, AGU.

## **Participations**

Heliophysics Summer School 2016, Boulder, CO, USA

## **Publications**

Nischal, N., J. Oberheide, M. G. Mlynczak, L. A. Hunt, and A. Maute

*Nonmigrating tidal impact on the CO<sub>2</sub> 15 μm infrared cooling of the lower thermosphere during solar minimum conditions*

J. Geophys. Res. Space Physics, 122, 6761-6775, 2017JA024273, 2017

## **Presentations**

Nirmal Nischal, J. Oberheide, M. G. Mlynczak, Daniel R. Marsh, *Solar cycle variability of nonmigrating tides in the infrared cooling of the thermosphere*. **Poster** presented at AGU Fall Meeting, New Orleans, LA, 2017

Nirmal Nischal, J. Oberheide, M. G. Mlynczak, L. A. Hunt, and A. Maute, *Seasonal and solar cycle variability of DE2 and DE3 in the CO<sub>2</sub> 15 μm cooling of the lower thermosphere*. **Talk and Poster** presented at CEDAR Workshop Keystone, CO, 2017

Nirmal Nischal, J. Oberheide, M. G. Mlynczak, L. A. Hunt, and A. Maute, *Nonmigrating tidal impact on the CO<sub>2</sub> 15 μm infrared cooling of the lower thermosphere*. **Oral presentation** at AGU Fall Meeting, San Francisco, CA, 2016

Nirmal Nischal, J. Oberheide, M. G. Mlynczak, L. A. Hunt, and A. Maute, *Photochemical modeling of nonmigrating tides in the 15 μm cooling of the lower thermosphere*. **Poster** presented at CEDAR Workshop Santa Fe, NM, 2016

Nirmal Nischal, J. Oberheide, M. G. Mlynczak, L. A. Hunt, and A. Maute, *Photochemical modeling of nonmigrating tides in the 15 μm infrared cooling of the lower thermosphere and comparison with SABER*. **Poster** presented at AGU Fall Meeting, San Francisco, CA, 2015

Nirmal Nischal, J. Oberheide, M. G. Mlynczak, L. A. Hunt, and A. Maute, *Photochemical modeling of nonmigrating tides in the 15 μm infrared cooling of the lower thermosphere and comparison with SABER*. **Poster** presented at CEDAR Workshop Seattle, WA, 2015

Nirmal Nischal, J. Oberheide, M. G. Mlynczak, and L. A. Hunt, *Nonmigrating tidal impact on the CO<sub>2</sub> 15 μm infrared cooling of the lower thermosphere*. **Poster** presented at AGU Fall Meeting, San Francisco, CA, 2014

Nirmal Nischal, J. Oberheide, M. G. Mlynczak, and L. A. Hunt, *Nonmigrating tidal impact on the CO<sub>2</sub> 15 μm infrared cooling of the lower thermosphere*. **Poster** presented at CEDAR Workshop Seattle, WA, 2014

## **Awards**

**2013-2015: Curry Fellowship** in Graduate Astrophysics, Clemson University, USA

**2005-2007: Undergraduate Scholarship**, R. R. M. Campus, Janakpur, Nepal

## **References**

Dr. Jens Oberheide

Professor of Physics

Clemson University

Department of Physics

102B Kinard Laboratory

Clemson SC 29634

Phone: 864-656-5163

Email: [joberhe@clemson.edu](mailto:joberhe@clemson.edu)