



# Taksha University

Short Course TRS105:

## Remote Sensing Instrument Design: Basics and Trade-Offs



*Sponsored by the Institute for Atmospheric Optics and Remote Sensing (IFAORS),  
a division of Taksha University (TU)*

**Date: December 2-3, 2010**

**8:30am-5:00pm (6 classroom hrs. per day)**

**Location: Newport News, VA – Patrick Henry Courtyard Marriott**

### *Course Faculty:*

#### **Instructors:**

**Dr. Jack S. Margolis** - Professor, IFAORS/Taksha University; Member, NASA Jet Propulsion Laboratory (JPL) Technical Staff, 1966-1999; Distinguished Visiting Professor, Washington University (St. Louis), 1977; Consultant OKSI, UCSB, and Caltech.

**Dr. Vijay Natraj** - Scientist, JPL; Researcher, Caltech, 2007-2010; Graduate Student, Caltech, 2001-2007; Member, Orbiting Carbon Observatory L2 Algorithm Team, 2003-present.

#### **Director:**

**Dr. Paul Try** - Exec. Dir. and Professor, IFAORS/Taksha University; Senior Vice President and Program Manager at Science and Technology Corporation (STC) and recent past Director of the International Global Energy and Water Cycle Experiment (GEWEX) Project Office.

### **COURSE DESCRIPTION**

As a primer on the subject of remote sensing instrument design, TRS105 should prove useful to managers, engineers, and scientists involved with remote sensing programs who are required to be familiar with all aspects of the field. It is important that managers and supervisors have a broad grasp of how trade-offs in instrument design affect the information content of the observations. It will also provide an understanding of how changes in one aspect of instrument technology affect the other aspects of design. It should also prove useful to beginners in pointing out what areas of physics and chemistry are important to remote sensing instrument design. This course is *not* intended to extend the knowledge of experts in their own discipline, though it will be understood by experts who wish to understand the physics of the other disciplines that are required for instrument design.

Regarding the subject matter of the course, the radiative transfer in the atmosphere and the parameters of molecular absorption and scattering that affect it will be discussed. The information contained in the spectrum will be investigated, as well as how this affects the optimum design of remote sensing instruments. The application of these concepts to the design of several remote sensing instruments will also be discussed. *Follow link at bottom of [www.taksha.org/course/TRS105](http://www.taksha.org/course/TRS105) for a detailed course outline.*

A Certificate of Course Completion (CCC) for 12 credit-hours will be awarded to each student at the end of the course. A copy of the lecture slides will be provided.

### **FEES AND REGISTRATION: Register online at [www.taksha.org/course/TRS105](http://www.taksha.org/course/TRS105)**

**Course Fee:** \$599.00

**Early Registration Fee:** \$540.00, if paid before 11/01/10. Group discounts are also available. See website for more information.

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**[www.taksha.org/list\\_courses](http://www.taksha.org/list_courses)**

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