Intensive Course on Optical Oceanography and Hydrolight

1-5 April 2019, at HICO in Gyeongju, South Korea

The Intensive Course on Optical Oceanography and Hydrolight will be offered at Hwabaek International Convention Center (HICO) on 1-5 April 2019. The course will provide young scientists and students with a fundamental knowledge of ocean optics. This course is sponsored by Korea Institutes of Ocean Science Technology (KIOST), with the goal of preparing a new generation of oceanographers trained in the use of optics to study the oceans.

Course elements include: (see detailed schedule below)

- Lectures on the basic theory of ocean optics; IOP, AOP, Absorption & Scattering etc.
- Laboratory training in use of radiative transfer software (HydroLight)
- Introduction to Remote Sensing; Atmospheric Correction, Statistical Methods, Spectrum-matching techniques etc.

Instructor: Curtis Mobley

Schedule & Location: 1-5 April 2019/ Hwabaek International Convention Center (room 105)

Registration: (by e-mail)

- Apply by 1st of March 2019, with notification by 6th of March 2019.
- Application email should include " Name / Affiliation / Position / Email / Country"

Contact: sunjulee@kiost.ac.kr

Notice:
* Students running HydroLight need personal computers
* Travel & Accommodation cost should be covered by yourself
* The registration fee is free but 30 places will be offered, first come, first served
* Please visit Gyeongju Tourguide and get more information about Gyeongju

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Intensive Course on Optical Oceanography and HydroLight

Presented by Curtis Mobley

Lectures are given as PowerPoint presentations and students running HydroLight will need to have access to personal computers with MicroSoft Windows, Apple OS X, or Linux operating systems. Laboratory sessions will use an executable "student" version of HydroLight, which students can run on their personal computers. Lecture times will vary with the topic, but will typically be 1 to 1.5 hours long, plus time for questions.

This schedule gives a very busy week for everyone, and gives students a good overview of the entire subject area and training in how to use HydroLight. Note that the day 4 and 5 lectures can be modified as needed to address specific topics of interest to the attendees.

Schedule & Contents

Date	Time (KST)	Subject	
1 April (Mon)	10:00~10:50(‘50)	Lecture 1	Light and Radiometry
	10:50~11:00(‘10)	Break	
	11:00~11:50(‘50)	Lecture 2	Defining Inherent Optical Properties
	11:50~13:30(‘100)	Lunch(*offered by KIOST)	
	13:30~14:20(‘50)	Lecture 3	The Radiative Transfer Equation
	14:20~14:30(‘100)	Break	
	14:30~15:20(‘50)	Lecture 4	Defining Apparent Optical Properties
2 April (Tue)	10:00~10:50(‘50)	Lecture 5	Bio-optical Models for Absorption (HydroLight inputs)
	10:50~11:00(‘10)	Break	
	11:00~11:50(‘50)	Lecture 6	Bio-optical Models for Scattering (HydroLight inputs)
	11:50~13:30(‘100)	Lunch	
	13:30~14:20(‘50)	Lecture 7	Overview of HydroLight

Date	Time (KST)	Subject	
	14:20~14:30(‘100)	Break	
	14:30~15:20(‘50)	Lecture 8	Demonstration Runs with HydroLight
	15:20~15:30(‘100)	Break	
	15:30~17:00(‘90)	Lab 1	Running HydroLight for Simple Problems
3 April (Wed)	10:00~10:50(‘50)	Lecture 9	Advanced Features of HydroLight
	10:50~11:00(‘10)	Break	
	11:00~11:50(‘50)	Lecture 10	Model-Data Closure
	11:50~13:30(‘100)	Lunch	
	13:30~15:00(‘90)	Lab2	Students Run HydroLight for Assigned Problems
4 April (Thu)	10:00~10:50(‘50)	Lecture 11	Introduction to Remote Sensing; Atmospheric Correction 1
	10:50~11:00(‘10)	Break	
	11:00~11:50(‘50)	Lecture 12	Atmospheric Correction 2: Shallow and Case 2 Water
	11:50~13:30(‘100)	Lunch	
	13:30~14:20(‘50)	Lecture 13	Statistical Methods for Remote Sensing
	14:20~14:30(‘100)	Break	
	14:30~15:20(‘50)	Lecture 14	Semi-analytical Methods for Remote Sensing.
5 April (Fri)	10:00~10:50(‘50)	Lecture 15	Spectrum-matching Techniques for Shallow-water Remote Sensing
	10:50~11:00(‘10)	Break	
	11:00~11:50(‘50)	Lecture 16	Incorporation of Optics into Coupled Physical-Biological-Optical Ecosystem Models.
	11:50~13:30(‘100)	Lunch	
	13:30~	Wrap-up of previous lectures	