

## International Ocean Colour Science Meeting, Busan, South Korea.

### Breakout Workshop 1: [Open source scientific computing tools and resources](#).

Tuesday 9 April 2019 (2:00 – 4:30 pm)

**Co-chairs:** Joaquín E. Chaves (NASA GSFC/SSAI), Erdem M. Karaköylü (NASA GSFC/SAIC), and Joel P. Scott (NASA GSFC/SAIC)

#### Key questions:

- *What recent shifts among Ocean Color community have there been towards open source tools?*
- *How and why is the community using these tools?*
- *How are teaching, mentoring, and research deliverables being changed by open source?*
- *Are these tools promoting reproducibility, code preservation, accessibility, diversity & inclusion?*

#### Workshop agenda:

- 2:00--2:05: **Intro, motivation and goals** (co-chair: J. Chaves, NASA GSFC/SSAI):  
Open Source software revolution: Resources and opportunities for ocean color science research, data distribution, education and mentoring
- 2:05--2:25 **Python for multi-year GOCI ocean color products analysis: sharing the advantages and issues** (Dr. Myung-Sook Park, KIOST)
- 2:25--2:30 **QA and interactive discussion.**
- 2:30--2:50 **Leveraging Python & Jupyter Notebook to validate satellite Ocean Color retrievals via SeaBASS data** (co-chair: J. Scott, NASA GSFC/SAIC)
- 2:50--2:55 **QA and interactive discussion.**
- 2:55--3:00 *Coffee break*
- 3:00--3:20 **Use of Python and SeaDAS for Ocean Color Processing, Analysis and Visualization** (Bruce Monger, Cornell University)
- 3:20--3:25 **QA and interactive discussion.**
- 3:25--3:45 **The importance of open science principles for expanding and diversifying the user base of marine satellite data** (Dr. Hayley Evers-King, Plymouth Marine Lab)
- 3:45--3:50 **QA and interactive discussion.**
- 3:50--4:10 **Probabilistic Programming Workflow in Python** (co-chair E. Karaköylü, NASA GSFC/SAIC)
- 4:10--4:15 **QA and interactive discussion.**
- 4:15--4:30 **Summary and group discussion (Co-chairs, others)**

Possible outcomes: Recommendations for novel open source computational tools for the ocean color community. Identification of gaps in available software libraries for specific domains relevant to ocean color research. Development of working groups to foster adoption and tool development.