

# WCRP Grand Challenge on Clouds, Circulation and Climate Sensitivity: 2nd Meeting on Monsoons and Tropical Rain Belts



**2 - 5 July 2018**  
**Trieste, Italy**

Further information:  
<http://indico.ictp.it/event/8457/>  
[smr3214@ictp.it](mailto:smr3214@ictp.it)

The workshop aims to bring together expertise on climate dynamics, small scale cloud and precipitation processes, hierarchical modeling and observation. The aim is to both review recent progress on tropical rainfall dynamics and to identify areas where progress is most amenable in the future.

## Directors:

M. Biasutti, Columbia University, USA  
A. Voigt, KIT, Germany  
M. Byrne, Imperial College, UK  
R. Farneti, ICTP, Italy  
F. Kucharski, ICTP, Italy  
A. Pirani, Université Paris-Saclay, France  
A. Tompkins, ICTP, Italy

## Description:

Reliable projections of tropical rainfall changes are key to any climate adaptation efforts in a warming world. Yet, our climate models are a subpar tool for the task: their spatial resolution is too coarse to reproduce the deep convection that produces most rainfall in the tropics, and current parametrizations are inadequate – as signified by persistent biases in the simulation of the annual and diurnal cycles of rainfall, as well as the response to forcing of the past. Nonetheless, tropical rainfall is organized in the large-scale structures of the monsoons and the ITCZ whose dynamics are shaped by large-scale energetic and momentum constraints that involve the global circulation of both the ocean and the atmosphere. This suggests that building a coherent understanding of tropical rainfall can benefit from an understanding of these large-scale influences and their coupling with small scale cloud and precipitation processes.

## Topics:

- modern and paleo data of relevance to tropical rainfall dynamics;
- hierarchical use of process models and global climate models to understand past and future changes in the tropical rain belts, including coupling with land-surface and oceanic process;
- theoretical advances towards a theory of ITCZ and monsoon dynamics;
- model development and contributions that exploit recent model intercomparison efforts.

## Speakers:

W. Boos, UC Berkeley, USA  
C. Jakob, Monash U., Australia  
S. Kang, UNIST Ulsan, Republic of Korea  
J. Marshall, MIT, USA  
M. Mohtadi, Marum, U. of Bremen, Germany  
S. Seneviratne, ETH Zürich, Switzerland  
H. Su, JPL, USA  
A. Turner, U. Reading, UK  
T. Zhou, IAP, China

## How to apply:

Online application:  
<http://indico.ictp.it/event/8457/>

Female scientists are encouraged to apply.

## Grants:

A limited number of grants are available to support the attendance of selected participants, with priority given to participants from developing countries. There is no registration fee.

## Deadline:

**1 March 2018**

