



The Abdus Salam
**International Centre
for Theoretical Physics**



2nd Workshop on Water Resources in Developing Countries: Planning and Management in a Climate Change Scenario

Organizer(s): E. Coppola (ICTP), S. Sorooshian (Un. of California, USA), L. Mariotti (ICTP), M. Verdecchia (Univ. l'Aquila, Italy)
Trieste - Italy, 06 - 17 May 2013

Venue: Adriatico Guest House Kastler Lecture Hall

Programme

Monday, 6 May 2013 (Room:Adriatico Guest House Kastler Lecture Hall)

- 08:00 - 09:15** (Room: Adriatico Guest House - Kastler Lecture Hall Area (Lower Level 1))
--- Registration and administrative issues ---
- 09:15 - 09:30** **Welcome**
- 09:30 - 10:30** **Soroosh Sorooshian / University of California, Irvine**
Hydrological modelling requirements for Water Resources Applications I
- 10:30 - 11:00** (Room: Adriatico Guest House (Terrace))
--- Coffee Break ---
- 11:00 - 12:00** **Claudio Piani / American University of Paris**
Statistical Bias Correction of hydrological forcing fields from GCMs:basic concepts
- 12:00 - 13:00** **Claudio Piani / American University of Paris**
Statistical Bias Correction: operational challenges and common blunders
- 13:00 - 14:30** --- Lunch ---
- 14:30 - 16:00** (Room: Adriatico Guest House Informatics Lab.)
Verdecchia, Coppola, Mariotti
CHYM TUTORIAL

- 16:00 - 16:30** (Room: Adriatico Guest House (Terrace))
--- Coffee Break ---
- 16:30 - 18:00** (Room: Adriatico Guest House Informatics Lab.)
Laboratory Session
- 19:30 - 21:30** (Room: Adriatico Guest House (Terrace))
--- Ice Breaker - Reception ---

Tuesday, 7 May 2013 (Room:Adriatico Guest House Kastler Lecture Hall)

- 09:00 - 10:00** **Soroosh Sorooshian** / *University of California, Irvine*
Hydrological modelling requirements for Water Resources Applications II
- 10:00 - 10:30** (Room: Adriatico Guest House (Terrace))
--- Coffee Break ---
- 10:30 - 11:30** **A. AghaKouchak** / *University of California, Irvine*
From Data to Model Conceptualization of Hydrologic Processes Model Development
- 11:30 - 12:30** **E. Coppola** / *ICTP*
Hydrology at ICTP
- 12:30 - 12:45** **L. Mariotti** / *ICTP*
Case studies
- 12:45 - 14:30** --- Lunch ---
- 14:30 - 16:00** **J. Kim** / *University of California, Los Angeles*
Uncertainties in climate scenarios related model biases
- 16:00 - 16:30** (Room: Adriatico Guest House (Terrace))
--- Coffee Break ---
- 16:30 - 18:00** (Room: Adriatico Guest House Informatics Lab.)
Laboratory

Wednesday, 8 May 2013 (Room:Adriatico Guest House Kastler Lecture Hall)

- 09:00 - 10:00** **Marco Verdecchia** / *University of L'Aquila*
The Cellular-Automata Theory
- 10:00 - 10:30** (Room: Adriatico Guest House (Terrace))
--- Coffee Break ---
- 10:30 - 11:30** **A. AghaKouchak** / *University of California, Irvine*
Estimation of Model Components (Snowmelt, Soil Moisture, Evapotranspiration, Effective Precipitation etc.), Reservoir Concept, Runoff Response
- 11:30 - 12:30** **Marco Verdecchia** / *University of L'Aquila*
Application of CA to Hydro modelling
- 12:30 - 14:00** --- Lunch ---

14:00 - 15:30 (Room: Adriatico Guest House Informatics Lab.)
A. AghaKouchak / University of California, Irvine
Lab session (to be defined)

15:30 - 16:00 (Room: Adriatico Guest House (Terrace))
--- Coffee Break ---

16:00 - 18:00 (Room: Adriatico Guest House Informatics Lab.)
Laboratory

Thursday, 9 May 2013 (Room:Adriatico Guest House Kastler Lecture Hall)

09:00 - 10:30 **H. Hartmann / University of Arizona**
Communicating climate change scenarios to decision makers

10:30 - 11:00 (Room: Adriatico Guest House (Terrace))
--- Coffee Break ---

11:00 - 12:30 **F. Giorgi / ICTP**
CORDEX and Regional modelling

12:30 - 14:00 --- Lunch ---

14:00 - 15:30 **J. Kim / University of California, Los Angeles**
**Use of Climate Model Data for Assessing the Effects of Climate Change on Water Resources:
Uncertainties and Bias Correction**

15:30 - 16:00 (Room: Adriatico Guest House (Terrace))
--- Coffee Break ---

16:00 - 18:00 **J. Kim / University of California, Los Angeles**
Uncertainties and Bias correction

Friday, 10 May 2013 (Room:Adriatico Guest House Kastler Lecture Hall)

09:00 - 10:30 **H. Hartmann / University of Arizona**
Scenario planning from construction of narratives to evaluation of options

10:30 - 11:00 --- Coffee Break ---

11:00 - 12:30 **A. Tompkins / ICTP**
The role of surface hydrology in some vector borne diseases

12:30 - 14:00 --- Lunch ---

14:00 - 15:30 **H. Hartmann / University of Arizona**
Class exercise on scenario planning

15:30 - 16:00 --- Coffee Break ---

16:00 - 18:00 **Laboratory**

Monday, 13 May 2013 (Room:Adriatico Guest House Kastler Lecture Hall)

- 09:30 - 10:30** **J. Kim / *University of California, Los Angeles***
Bias correction in constructing inputs to surface hydrology models
- 10:30 - 11:00** --- Coffee Break ---
- 11:00 - 12:30** **Laboratory session**
- 12:30 - 14:00** --- Lunch ---
- 14:00 - 16:00** **Laboratory session**
- 16:00 - 16:30** **Coffee Break**
- 16:30 - 18:00** **Laboratory session**

Tuesday, 14 May 2013 (Room:Adriatico Guest House Kastler Lecture Hall)

- 09:30 - 10:00** **M. Zaroug / *ICTP***
Flood Analysis in the Blue Nile, a Case Study of Flood Simulation in Khartoum with Climate Change Scenarios
- 10:00 - 10:30** **I. Diallo / *ICTP***
Modelling the Effects of Climate Change on Water Resources in Southern Africa
- 10:30 - 11:00** --- Coffee Break ---
- 11:00 - 12:30** **Laboratory session**
- 12:30 - 14:00** --- Lunch ---
- 14:00 - 16:00** **Laboratory session**
- 16:00 - 16:30** --- Coffee Break ---
- 16:30 - 18:00** **Laboratory session**

Wednesday, 15 May 2013 (Room:Adriatico Guest House Kastler Lecture Hall)

- 09:30 - 10:00** **F. Colon Gonzalez / *ICTP***
Establishing links between water and disease
- 10:00 - 10:30** --- Coffee Break ---
- 10:30 - 12:30** **Laboratory session**
- 12:30 - 14:00** --- Lunch ---
- 14:00 - 16:00** **Laboratory session**
- 16:00 - 16:30** --- Coffee Break ---

16:30 - 18:00 **Laboratory session**

Thursday, 16 May 2013 (Room:Adriatico Guest House Kastler Lecture Hall)

09:30 - 10:00 **Laboratory session**

10:00 - 10:30 --- Coffee Break ---

10:30 - 12:30 **Laboratory session**

12:30 - 14:00 --- Lunch ---

14:00 - 16:00 **Laboratory session**

16:00 - 16:30 --- Coffee Break ---

16:30 - 18:00 **Laboratory session**

Friday, 17 May 2013 (Room:Adriatico Guest House Kastler Lecture Hall)

09:30 - 10:00 **Participants presentations**

10:00 - 10:30 --- Coffee Break ---

10:30 - 12:30 **Participants presentations**

12:30 - 14:00 --- Lunch ---

14:00 - 15:00 **Closing session - certificates**