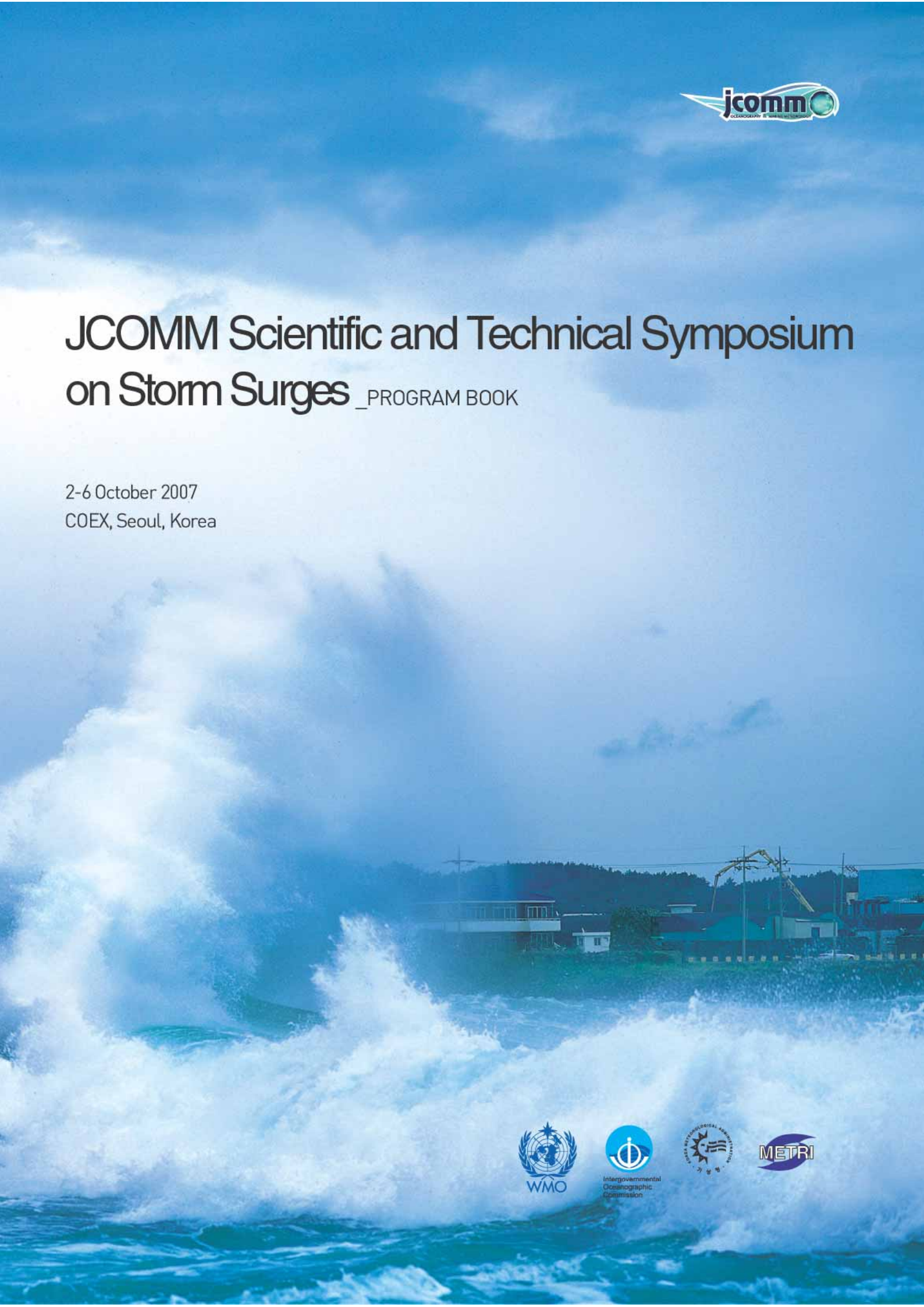

JCOMM Scientific and Technical Symposium on Storm Surges _PROGRAM BOOK

2-6 October 2007
COEX, Seoul, Korea

WMO
Intergovernmental Oceanographic Commission
METRI

Man-Ki Lee
Administrator of Korea Meteorological Administration (KMA)

Host Welcome Message

It is my great pleasure to welcome all of you to this distinguished JCOMM Scientific and Technical Symposium on Storm Surges which is the joint activities of WMO and IOC.

Recently, we have seen extraordinarily severe disasters breaking out here and there around the globe due to high impact weather phenomena such as Storm surges, Typhoons, Heavy rainfalls, Floods, Droughts, Earthquakes, and Tsunami.

Storm surge phenomenon has been one of the major natural hazards in Korea and in North-western Pacific region as well, which is annually occurred/caused mainly by the Typhoon and causes a great deal of damages over the Korean Peninsula and neighboring regions. We have experienced by Typhoon "Maemi" which passed through the Korea Peninsula in 2003 and generated the strongest storm surge on record.

Korea has a long history of meteorological services that dates back to as early as the 10th century, when systematic meteorological observations were conducted by Seo-Un-Gwan, a government office of the Goryo Dynasty (A.D 918-1392).

The mission of the Korea Meteorological Administration (KMA) is to provide weather forecasts and warnings as well as climate information. KMA also provides information and forecasts of the typhoon and storm surges for the protection of lives and properties in the Northwest Pacific region. We recognize that the recent extreme changes in both weather and climate seriously impact on human lives, societies, and economics, and also are big challenges for the present and future.

I hope all the participants in this symposium will have the precious time to share their knowledge, experience, and information for better understanding of the major issue of natural hazards. Therefore forecast and observation of storm surge technologies should be advanced to meet the demands for human well beings.

Welcome again to Korea, and I wish you enjoy the beautiful Korea in Seoul and have a fruitful symposium.

Thank you very much.

Organization

Organizing Committee

Chair: Boram Lee (IOC of UNESCO)
Members: Peter Dexter (JCOMM Co-President, Australia)
Jean-Louis Fellous (JCOMM Co-President, France)
Craig Donlon (Coordinator of JCOMM Services Programme Area, UK)
Johannes Guddal (Capacity Building Rapporteur for JCOMM, Norway)
Jang-Won Seo (KMA, Republic of Korea)
Alice Soares (WMO)

Program Committee

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Members: Tad Murty (Canada)
Shishir Dube (India)
Kevin Horsburgh (United Kingdom)
Maria Paula Etala (Argentina)
Donald Resio (United States)
Mikhail Entel (Australia)
Sok Kuh Kang (Republic of Korea)
Vincent Cardone (United States)

Local Organizing Committee

Chair: Chee-Young Choi (Director General of METRI)
Secretary General : Jae-Cheol Nam (Chair)
Young-Jean Choi, Yong-Hoon Youn, Sik Huh, Kwan-Chang Lim
Sung Hyup You, Sang-Jin You, Se-Won Kim, Dong-Chul Shin

PR & Publication Committee : Jang-Won Seo (Chair)
Hee-Dong Jeong, Seung-Bae Kim , Soo-Yong Nam, Sung-Nam Oh
Kwang-Soon Park, Jong-Su Park, Moon-Sik Suk

Scientific Committee : Sok-Kuh Kang (Chair)
Jung Bae An, Byeong-Ho Choi, Yong-Quyn Kang, Sang-Young Lee, Yign Noh
Dong-Young Lee, Jaiho Oh, Keon-Tae Sohn, Seon-Gi Park, Seung-Buhm Woo

Summary of Symposium

1) Symposium Information

- Date : Oct 2(Tue) ~ Oct 6(Sat), 2007 (5 days)
- Venue : Room 304, 310, COEX, Seoul , Korea
- Program : Keynote Address, Oral Presentation, Poster Presentation
- All registrants are eligible to attend the Symposium and Welcome Reception and have conference kit.

2) Registration Desk

- Registration desk is located on 3rd Floor (in front of Room 310) at COEX Convention & Exhibition Center.
- It is open from 08:30 to 17:00 during the symposium.

3) Internet Cafe

- There are free internet computers for attendants at Room 310, COEX Convention & Exhibition Center.
- Free High - Speed wifi internet is also available in the Symposium venue.

4) Poster session

- Selected posters are to be presented at Room304, COEX Convention Center, in parallel with Oral Presentation sessions. The dedicated poster session is scheduled for Wednesday (3 October 2007) morning when all participants will have opportunities to discuss on posters with authors.

5) Social Events

- Opening Ceremony
  Date & Time : 9:30-10:00, Tuesday, October 2, 2007
  Place : Room310, COEX Convention & Exhibition Center

- Welcome Reception
  All participants to the Symposium are cordially invited to the Welcome Reception to have the opportunity to meet colleagues and friends informally.
  Date & Time : 18:30, Tuesday, October 2, 2007
  Place : Room 402, COEX Convention & Exhibition Center.

- KMA Tour
  KMA Tour will be a great opportunity to see great Korean Meteorological facilities.
  Date & Time : After Thursday's session adjourned, October 4, 2007
  Place : Korea Meteorological Administration (KMA)

- Invited Dinner(KORDI)
  Invited Dinner(KORDI) will be a wonderful evening. Please expect to share unforgettable memories with people from all around the world. Banquet is by invitation only.
  Date & Time : 18:30, Friday, October 5, 2007
  Place : Forsythia Room, Grand Intercontinental Hotel

- Closing Ceremony
  Date & Time : 12:00, Saturday, October 6, 2007
  Place : Room310, COEX Convention & Exhibition Center

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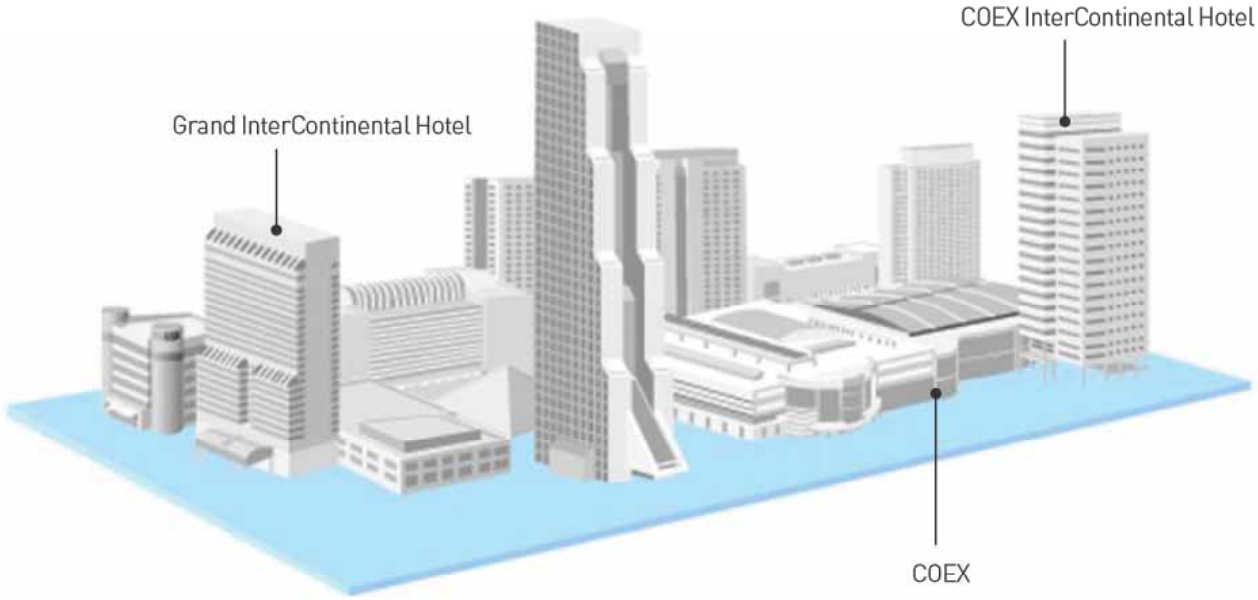
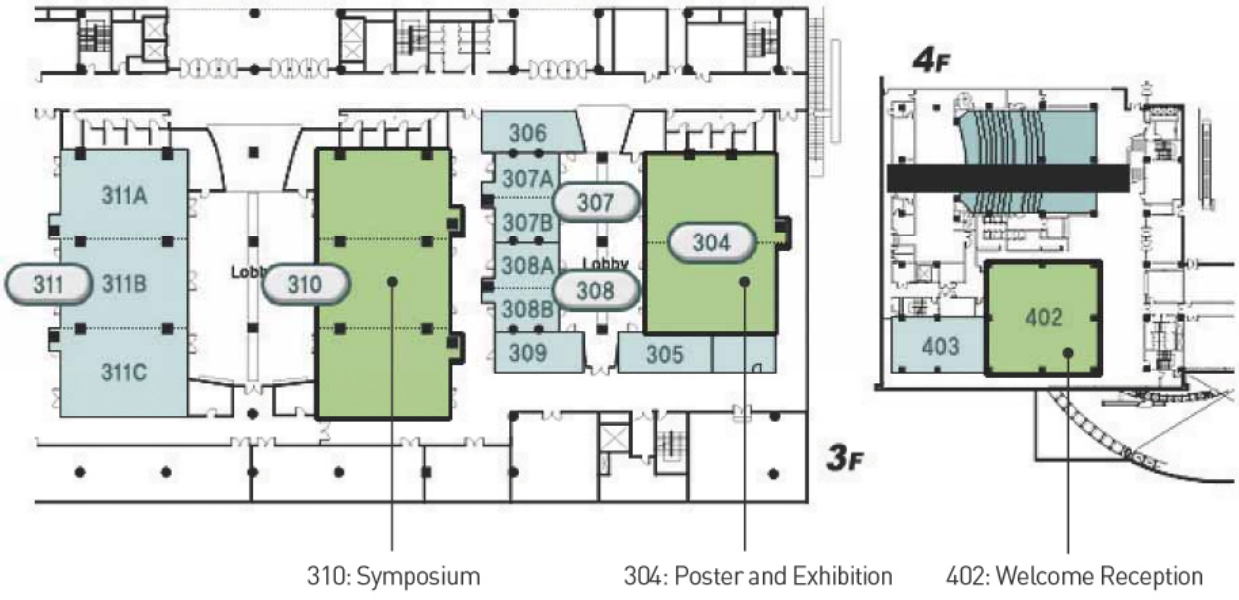
Venue Information





Program Schedule

TIME \ DATE	OCTOBER 2 TUESDAY	OCTOBER 3 WEDNESDAY	OCTOBER 4 THURSDAY	OCTOBER 5 FRIDAY	OCTOBER 6 SATURDAY
9:00					
9:10					
9:20					
9:30	OPENING CEREMONY				
9:40					
9:50		METOCEAN FORCING	REGIONAL STUDIES #1	STORM SURGE CLIMATE AND CLIMATE CHANGE	PANEL DISCUSSION
10:00					
10:10					
10:20	INTRODUCTION				
10:30					COFFEE BREAK
10:40					
10:50			COFFEE BREAK	COFFEE BREAK	
11:00					
11:10	COFFEE BREAK	COFFEE BREAK			
11:20					PANEL DISCUSSION
11:30					
11:40			REGIONAL STUDIES #2	STORM SURGE CLIMATE AND CLIMATE CHANGE	
11:50	STORM SURGE MODELLING	POSTER SESSION			
12:00					CLOSING CEREMONY
12:10					
12:20					
12:30					
12:40					
12;50	LUNCH	LUNCH	LUNCH	LUNCH	
13:00					
13:10					
13;20					
13:30					
13:40					
13:50					
14:00					
14:10	STORM SURGE MODELLING	METOCEAN FORCING OBSERVATIONS	REGIONAL APPLICATION	RISK AND IMPACTS	
14:20					
14:30					
14:40					
14:50					
15:00		COFFEE BREAK			
15:10	COFFEE BREAK				
15:20					
15:30					
15:40			COFFEE BREAK	COFFEE BREAK	
15:50					EVENT OVER
16:00					
16:10					
16:20					
16:30		DISCUSSION SESSION	CASE STUDIES	RISK AND IMPACTS	
16:40					
16:50					
17:00	OPERATIONAL STORM SURGE FORECASTING				
17:10					
17:20				DISCUSSION SESSION	
17:30					
17:40					
17:50					
18:00			KMA TOUR		
18:10					
18:20				INVITED DINNER (KORDI)	
18:30	WELCOME RECEPTION				
18:40					
18:50					
19:00					

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OSS_04 Operational Storm Surge Forecasting at Japan Meteorological Agency

Masakazu Higaki, Japan Meteorological Agency

OSS_05 Verification of RiCOM for storm surge forecasting

Emily Lane, National Institute of Water and Atmospheric Research - Taihoro Nukurangi

Session 3: Metocean Forcing [3 Oct., 09:00-11:00]

Chair: Kevin Horsburgh

Rapporteur: Masakazu Higaki

MOF_01 Tropical Cyclone Wind Field Forcing for Surge Models : Critical Issues and Sensitivities

Vince Cardone

MOF_02 The next generation tropical cyclone-wave-ocean coupled model for research and operational forecasting

Issac Ginis, University of Rhode Island

MOF_03 Effect of the surface wind stress parameterizations on the storm surge modeling

Il-Ju Moon, Cheju National University

MOF_04 On the Accuracy of Atmospheric Forcing in Extra-Tropical Storm Surge Prediction

Paula Etala, Naval Hydrographical Service

MOF_05 Sensitivity Experiments of winds prediction with planetary boundary layer parameterizations

Ji Hye Kwun, National Institute of Meteorological Research

Session 4: Metocean Forcing Observations [3 Oct., 13:30-15:00]

Chair: Joannes westerink

Rapporteur: Sujit Debsarma

MFO_01 Satellite Remote sensing of severe meteorological/oceanographic events

Mark Drinkwater, European Space Agency

MFO_02 Upper ocean response to typhoons in the Northwest Pacific from ARGO floats

Kyung-Ae Park, Seoul National University

MFO_03 Long-period water surface fluctuations measured in the coastal waters of Korea

Dong-Young Lee, Korea Ocean Research and Development Institute

MFO_04 Numerical Study of Tide-Wind Interaction using Internally Generated Tidal Boundary Condition

Seung-Buhm Woo, Inha University

Session 5-1: Regional Studies #1 [4 Oct., 09:00-10:50]

Chair: Keith Thompson

Rapporteur: Marzenna Sztobryn

RS1_01 Dynamical aspects of SE South America Storm Surges

Paula Etala, Naval Hydrographical Service

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Session 7: Case Studies [4,Oct. 16:00-17:20]

Chair: Paula Etala

Rapporteur: Regina Folorunsho

CSS_01 **Tropical cyclone Larry: can the observed storm surge be explained by a Holland-type vortex?**
Mikhail Entel, Australian Bureau of Meteorology

CSS_02 **The storm surge from tropical cyclone Larry**
Ivor Blockley, Australian Bureau of Meteorology

CSS_03 **The case study of the storm surges in the Seto Inland Sea caused by Typhoon Chaba**
Nadao Kohno, Meteorological Research Institute

CSS_04 **Hindcasting of Storm Surge by Typhoon 0314(Maemi) in Masan Bay, Korea**
See-Whan Kang, Chonbuk National University

Session 8-1: Storm Surge Climate and Climate Change [5 Oct. 09:00-10:50]

Chair: Bruce Harper

Rapporteur: Ivor Blockley

SSC_01 **Extreme Sea Levels, Coastal Flooding and Climate Change**
Keith Thompson, Dalhousie University

SSC_02 **Assessing the impact of climate change on storm surges in southern Australia**
Kathleen McInnes, CSIRO

SSC_03 **Impact on the global warming on the intensity of future tropical storm**
Jai-Ho Oh, Pukyong National University

SSC_04 **Spatially high resolved projections of possible future changes in North Sea storm surge extremes**
Katja Woth, GKSS Research Center

SSC_05 **Exploring the feasibility of regional typhoon modelling**
Frauke Feser, GKSS Research Center

Session 8-2: Storm Surge Climate and Climate Change [5 Oct. 11:20-12:20]

Chair: Bruce Harper

Rapporteur: Ivor Blockley

SSC_06 **Statistics of abnormal sea states around Korean Peninsula**
Jong Chan Lee, KORDI

SSC_07 **Storm Surges In Tideless Seas - Southern Baltic Sea**
Marzenna Sztobryn, Institute of Meteorology and Water Management

SSC_08 **Storm Surges Caused Sea Level Rise and Assessment of the Risk of Inundation along the Bulgarian Black Sea Coast**
Atanas Palazov, Institute of Oceanology

JCOMM Scientific and Technical Symposium on Storm Surges

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PSN_07 **Abnormally high storm waves in the East Coast of Korea**
Sang-Ho Oh, Korea Ocean Research & Development

PSN_08 **Characteristics of differences between satellite-derived sea surface temperature and subsurface temperature from ARGO profiling floats in the Pacific Ocean**
Kyung-Ae Park, Seoul National University

PSN_09 **Distinction of satellite-observed SST response to typhoons and subsurface response from ARGO floats in the North Pacific**
Kyung-Ae Park, Seoul National University

PSN_10 **Sensitivity of model resolution to wave setup calculations**
Wataru Sasaki, National Research Institute for Earth Science and Disaster Prevention

PSN_11 **Future exploitation of in-situ wave measurements at Station Mike**
Margaret Yelland, National Oceanography Centre

PSN_12 **Development and Application of High Resolution Coastal Storm surges/Tide Prediction System**
Sung Hyup You, National Institute of Meteorological Research/KMA

PSN_13 **Simulation of Atmospheric State for the Case of Young-Gwang Storm Surge on 31 March 2007: Model Comparison between MM5, WRF, and COAMPS**
Kyung-Ja Ha, Pusan National University

PSN_14 **Developing ocean prediction system in the northwest Pacific**
Yang-Ki Cho, Chonnam National University

Discussion Session I: "Scientific Requirements" [5 Oct. 15:30-17:30]

Chair: Val Swail

Rapporteur: Alice Soares

-a discussion of priorities necessary to improve the operational forecasting of storm surges;
-encompassing research requirements on storm surge models;
-improvements to atmospheric forcing including additional data requirements;
-atmospheric model improvements;
-improved storm track predictions, especially tropical storms;
-requirement for developing and improving hydrological models;
-results to feed into final Panel and wrap-up session.

Discussion Session II: "Mitigation Aspects" [5 Oct., 17:00-18:00]

Chair: Tad Murty

Rapporteur: Hans De Vries

-a discussion of priorities necessary to minimize the catastrophic effects of storm surge events;
-timeliness and dissemination of forecasts;
-development of forecast products such as inundation forecasts and risk analysis, design;

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-impacts;
-adaptation and mitigation strategies;
-capacity building;
-synergy with tsunami mitigation efforts;
-results to feed into final Panel and wrap-up session.

Panel Discussion [6 Oct. 09:00-12:00]

Chair: Peter Dexter

Rapporteur: Boram Lee

- The Panel will represent diverse views and expertise from the Symposium as a whole, from the scientific requirements to mitigation aspects, from research, both government and academia, to operational agencies and intergovernmental bodies;
- In addition to the baseline knowledge and expertise of the Panel members, the Panel discussion will reflect the presentations from the Symposium week as well as the two targeted discussion sessions on Scientific Requirements (Wednesday) and Mitigation Aspects (Friday);
- The goal of the Panel Discussion session will be to develop a list of requirements, gaps, and priorities with respect to storm surge activities;
- It also aims to develop a consensus basis for the subsequent development of an Action Plan for storm surge activities, encompassing the whole spectrum of intergovernmental organizations such as JCOMM, GCOS,GEOSS, other parts of WMO and IOC, and agencies such as NOAA, NASA, ESA so they can try to build these into their own respective plans;
- The Panel discussion will be fairly informal rather than rigid. One general theme is to identify what we think is necessary to prevent disasters of the magnitude of Katrina or the Bangladesh event of 1970 from being so destructive. There are obviously many different aspects of this, from better atmospheric, wave and surge models, better data including remote sensing and in situ, better hurricane track forecasts, better and more timely forecast dissemination, better design, better understanding of the climate, climate change and risk, adaptation, capacity building at all levels (from basic education of the public, development of simple forecast capabilities in developing countries, up to and including the top level which is a goal of this Symposium and also the Waves Workshops and Coastal Hazard Symposium.

- Discussion Panel
  Peter Dexter (Chair;JCOMM)
  Donald Resio (Katrina)
  Shishir Dube (Academia)
  Ming Ji (Forecast)
  Russell Arthurton (IOC-ICAM)
  Linda Anderson-Berry (Mitigation)
  Boram Lee (Rapporteur)

JCOMM Scientific and Technical Symposium on Storm Surges

Memo

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Memo

World Meteorological Organization
WMO 7 bis, avenue de la Paix CP No. 2300
CH-1211 Geneve 2 Switzerland
Tel.: + 41 22 730 82 37; Fax: + 41 22 730 81 28
Website: http://www.wmo.int

Intergovernmental Oceanographic Commission
IOC/UNESCO 1, rue Miollis
75732 Paris cedex 15 France
Tel.: + 33 1 45 68 39 88; Fax: + 33 1 45 68 58 12
Website : http://ioc.unesco.org