



NEWSLETTER

Commission
on Climatology

N° 8

June 2010

Dear Colleagues,

The last couple of years has been quite important as well as interesting from a climatological point of view. This is the case, first and foremost, because of the occurrence of an array of weather and climate extremes. There is no continent where extreme climate phenomena have not occurred. This raises a number of questions – the most difficult of which are what are the causes of such phenomena and to what extent is man responsible for the occurrence of such phenomena? Nevertheless, certain well known doubts concerning climate change and associated trends also appear to be rather important. The Fourth Report of Intergovernmental Panel on Climate Change did not provide the basis for an unequivocal answer to the aforementioned questions.

In addition to the key issues just mentioned, there are a number of other important questions relevant to human life and welfare. This includes the impact of weather and climate on man and the environment as well as the impact of man on the atmosphere and the climate on a variety of spatial scales. Such impact is especially important for urban areas.

All of the questions mentioned earlier and many others constitute a challenge for climate researchers around the world. The IGU Commission on Climatology needs to encourage and monitor such research. The Commission's role is very important and appears to become even more important with every year.

The Regional IGU Conference will take place on July 12-16 in Tel-Aviv, Israel. It will include sessions on climatology supervised by the CoC. I expect that the papers and posters presented at the Conference will offer advanced scientific insight and will make an attempt to answer the questions mentioned earlier. I am convinced that the Conference will allow for an open exchange of ideas and experiences that will help connect researchers from around the world as envisioned by the general purpose of the Conference. I wish all participants a successful scientific event.

The sessions on climatology at the Conference will be dedicated to the renowned climatologist, Professor Arie Bitan, who is celebrating his 75th birthday this year. Professor Bitan has worked with the CoC for many years and deserves our heartfelt appreciation. The entire climatology community is very grateful to Professor Bitan and wishes him further success in research.

Zbigniew Ustrnul – Chair of the CoC

Contents:

1. Membership
2. IGU Regional Conference Tel-Aviv 2010



1. MEMBERSHIP

Full Members

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Honorary & Senior Members

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A. Douguédroit (France), R. Brazdil (Czech Republic), T. Mikami (Japan).

2. IGU Regional Conference Tel-Aviv 2010

The Organizers take great pleasure in inviting to the IGU Regional Conference 2010, hosted by the Israeli National Commission for Geography. The conference will take place in Tel Aviv, July 12 – 16, 2010. The central theme of the conference is **Bridging Diversity in a Globalizing World**.

The responsibility of the Coordinators and Organizers the climatological sessions at the conference have been taken by Arie Bitan and Hadas Saaroni.

CONFERENCE TIMETABLE

Monday, July 12, 2010

18:00 – 20:00 Opening Ceremony
 Plenary Session
20:00 Get-Together Reception

Tuesday, July 13, 2010

09:00 Sessions
10:30 Coffee
11:00 Sessions
12:30 Lunch
13:30 Plenary session
15:00 Coffee
15:30 Sessions
17:00 Break
17:15 Sessions
18:45 Sessions end

Wednesday, July 14, 2010

09:00 Sessions
10:30 Coffee
11:00 Sessions
12:30 Lunch
13:30 Plenary session
15:00 Coffee
15:30 Sessions
17:00 Break
17:15 Sessions
18:45 Sessions end
Evening Optional Gala Dinner

Thursday, July 15, 2010

09:00 Sessions
10:30 Coffee
11:00 Sessions
12:30 Lunch
13:30 Plenary session
15:00 Coffee
15:30 Sessions
17:00 Break
17:15 Sessions
18:45 Sessions end
Evening DJ – dance till you drop!

Friday, July 16, 2010

08:30 Sessions
10:30 Coffee
11:00 Sessions
12:30 Coffee
13:00 Sessions
14:00 Sessions end

CLIMATOLOGY SESSIONS

General themes:

- ✓ Global warming and its impacts – different assessments
- ✓ Urban climate and environmental impacts
- ✓ Urban climate and thermal comfort
- ✓ Mediterranean climate
- ✓ Remote sensing and advanced techniques in climate research
- ✓ Regional climatology

Detailed sessions programme

Wednesday, July 14, 2010

09:00- 10:30 C08.04 Climatology Commission Business Meeting

Session 1

Session in honor of Prof. Arie Bitan's 75th Birthday

11:00 - 12:30

GLOBAL WARMING AND ITS IMPACTS - DIFFERENT ASSESSMENTS

Chair: **A. Bitan**, Israel

- 11:00 OPENING COMMENTS
Z. Ustrnul, Poland, *Head of the IGU Commission of Climatology*
- 11:10 PROJECTED U.S. REGIONAL CLIMATE CHANGE AND IMPACTS 2010-2050: TEMPERATURE AND ENERGY CONSUMPTION
J. Cohen, AER, Inc., Lexington, MA, USA
- 11:25 POLYNOMIAL COINTEGRATION TESTS OF THE ANTHROPOGENIC THEORY OF GLOBAL WARMING
Y. Reingewertz, M. Beenstock, *Hebrew University, Jerusalem, Israel*
- 11:40 THE EFFECT OF VULNERABILITY ON CLIMATE CHANGE MITIGATION POLICY
A. Tubi, E. Feitelson, I. Fischhendler, *Hebrew University of Jerusalem, Israel*
- 11:55 COOLING OF MAXIMUM SUMMER TEMPERATURES IN COASTAL AIR BASINS: A "REVERSE REACTION" TO GHG WARMING
R. Bornstein, J. Favors, B. Lebassi, J. Gonzalez, *San José State University, San José, CA, Santa Clara University, Santa Clara, CA, City College of New York, NY, USA*
- 12:10 POSSIBLE CONNECTION BETWEEN ENSO INDICES AND DECADESCALE VARIABILITY OF PRECIPITATION IN SERBIA
V. Ducic, **J. Lukovic**, V. Jovanovic, *University of Belgrade, Beograd, Singidunum University, Serbia*
- 12:25 Discussion

Session 2*A birthday tribute to Prof. Arie Bitan*

15:30 - 17:00

URBAN CLIMATE AND ENVIRONMENTAL IMPACTSChair: **R. Bornstein**, USA

- 15:30 HIGH POLLUTION RATES WITHIN THE URBAN ATMOSPHERE OF KIGALI, RWANDA
S. Henninger, *University of Kaiserslautern, Germany*
- 15:45 CONNECTION BETWEEN THE INTRA URBAN AIR AND SURFACE TEMPERATURES
T. Gál, **J. Unger**, *University of Szeged, Szeged, Hungary*
- 16:00 LONG-TERM CHANGES OF MOSCOW CLIMATE
M. Lokoshchenko, *Lomonosov Moscow State University, Moscow, Russia*
- 16:15 FEATURES OF THE URBAN HEAT ISLAND (UHI) AND LAND USE IN SUBTROPICAL HONG KONG
L.W. Siu, H. Melissa, *The University of Hong Kong*
- 16:30 CLIMATE CHANGE AND CITIES: A SYSTEMIC ANALYSIS OF CLIMATE CHANGE IMPACTS ON THE URBAN FUNCTION AND THE URBAN ECONOMY
E. Tranos, S. Barr, M. Batty, R. Dawson, A. Ford, J. Hall, *Newcastle University, CASA, UCL, UK*
- 16:45 Discussion

Session 3

17:15 - 18:45

URBAN CLIMATE AND THERMAL COMFORTChair: **H. Mayer**, Germany

- 17:15 EXPERIMENTAL APPROACH TO ANALYSE THE INFLUENCE OF METEOROLOGICAL VARIABLES ON HUMAN THERMAL COMFORT WITHIN URBAN STRUCTURES
J. Holst, H. Mayer, *Albert-Ludwigs-University of Freiburg, Germany*
- 17:30 OUTDOOR THERMAL COMFORT IN COURTYARDS IN A HOT ARID CLIMATE
S. Berkovic, A. Yezioro, A. Bitan, *Israel Institute for Biological Research, Technion - Israel Institute of Technology, Haifa, Tel Aviv University, Israel*
- 17:45 ASSESSING THE WATER CONSUMPTION OF LANDSCAPING STRATEGIES IN ARID REGIONS AND THEIR CONTRIBUTION TO THERMAL COMFORT IN SMALL URBAN SPACES
L. Shashua-Bar, **D. Pearlmutter**, E. Erell, *Ben Gurion University of the Negev, Israel*
- 18:00 THE USE OF STREET TREES FOR HEAT STRESS MITIGATION IN HOT ARID REGIONS, THE CASE STUDY OF BEER SHEVA, ISRAEL
O. Potchter, L. Shashua-Bar, S. Cohen, Y. Yaakov, J. Tanny, P. Bar-Kutiel, *Tel Aviv University, Ben Gurion University in the Negev, ARO, Volcani Center, Beit Berl Academic College, Israel*
- 18:15 ANALYSIS OF CORRELATIONS BETWEEN METEOROLOGICAL PARAMETERS AND BIOCLIMATIC LOAD INSIDE AND OUTSIDE THE CITY (SZEGED, HUNGARY)
A. Gulyas, J. Unger, *University of Szeged, Hungary*
- 18:30 Discussion

Session 4

9:00 - 10:30

MEDITERRANEAN CLIMATE I

Joint session with the Mediterranean Renaissance Project

Chair: **A. Douguedroit**, France

- 09:00 GLOBAL WARMING PROJECTED WATER CHANGES OVER THE MEDITERRANEAN WITH FOCUS OVER ISRAEL– ARE WE DRYING?
P. Alpert, *Tel Aviv University, Israel*
- 09:15 THE POSSIBLE IMPACT OF CLIMATE CHANGE ON ISRAEL'S 2020S SURFACE TEMPERATURE, PRECIPITATION, AND CONVECTIVE INTENSITY
B. Lynn, E. Morin, Y. Yair, C. Price, *Weather It Is, Efrat, The Hebrew University of Jerusalem, Jerusalem, The Open University, Ra'anana, Tel-Aviv University, Tel-Aviv, Israel*
- 09:30 THE IMPACTS OF THE RAIN-SPELLS' PARAMETERS ON THE ANNUAL TOTAL IN THE MEDITERRANEAN BASIN
H. Reiser, *University of Haifa, Israel*
- 09:45 TYPES DE CIRCULATION ATLANTICO-EUROPEENS ET REGIMES DE TEMPS PLUVIEUX EN MEDITERRANEE
A. Douguedroit, C. Norrant-Romand, *Université Lille Nord de la France, France*
- 10:00 HIGH-RESOLUTION FORECASTS OF SEASONAL PRECIPITATION: A DYNAMICALLY-ENHANCED STATISTICAL DOWNSCALING APPROACH
D. Rostkier-Edelstein, Y. Liu, W. Wu, A. Givati, P. Kunin, M. Ge, G. Descomes, T. Warner, S. Swerdlin, *Israel Institute for Biological Research, Israel, National Center for Atmospheric Research, USA, Israel Hydrological Service, Israel*
- 10:15 POTENTIAL IMPACT OF CLIMATE CHANGE ON THE CIRCULATION IN THE MEDITERRANEAN SEA
S. Shalev, **S. Brenner**, *Bar Ilan University, Ramat Gan, Israel*

Session 5

11.00 - 12.30

MEDITERRANEAN CLIMATE II

Joint Session with the Mediterranean Renaissance Project

Chair: **P. Alpert**, Israel

- 11:00 FACTORS GOVERNING THE INTER-ANNUAL VARIATION AND THE LONG-TERM TREND OF THE TEMPERATURE OVER ISRAEL
H. Saaroni, B. Ziv, I. Osetinsky, P. Alpert, *Tel Aviv University, The Open University of Israel, The Israeli Meteorological Service, Israel*
- 11:15 INFLUENCE OF THE MADDEN-JULIAN OSCILLATION ON MIDDLE EAST PRECIPITATION
M. Barlow, *University of Massachusetts Lowell, MA, USA*
- 11:30 THE IMPACT OF THE DAILY RAINFALL THRESHOLD (DRT) ON VARIOUS RAIN-SPELLS' CHARACTERISTICS
H. Kutiel, *University of Haifa, Israel*
- 11.45 CLIMATE CHANGE AND FUTURE OF THE MEDITERRANEAN FOREST LANDSCAPES BY THE END OF THE 21ST CENTURY
A. Douguedroit, M. Vennetier, *Université de Provence, CEMAGREF, France*
- 12.00 ON THE IMPORTANCE OF SYNOPTIC CLASSIFICATION METHODS WITH RESPECT TO ENVIRONMENTAL PHENOMENA OVER THE EASTERN MEDITERRANEAN
U. Dayan, A. Tubi, I. Levy, *Hebrew University, Jerusalem, Israel, Air Quality Research Division, Environment Canada, Toronto, Canada*
- 12.15 Discussion

Session 6

15.30 - 17.00

REMOTE SENSING AND ADVANCED TECHNIQUES IN CLIMATE RESEARCH*Chair: I. Lensky, Israel*

- 15:30 TOPOCLIMATE REVEALED BY LAND SURFACE TEMPERATURE
I. Lensky, U. Dayan, *Bar Ilan University, Hebrew University, Israel*
- 15:50 TIME AND SPACE HETEROGENEITY OF DEAD SEA SURFACE TEMPERATURE BY REMOTE SENSING
R. Nehorai, I.M. Lensky, N.G. Lensky, S. Shif, *Geological Survey of Israel, Bar Ilan University, Israel*
- 16:10 EVALUATION OF SHELTER EFFECTIVENESS FROM NUMERICAL SIMULATION OF THE AIRFLOW ACROSS TREES IN A WINDBREAK
M. Rosenfeld, **G. Marom**, A. Bitan, *Tel Aviv University, Israel*
- 16:30 A NEW ESTIMATE ABOUT THE EVAPORATION RATE IN THE BADAIN JARAN DESERT, WESTERN INNER MONGOLIA AND ITS SIGNIFICANCE FOR UNDERSTANDING THE GROUNDWATER SYSTEM IN DRYLANDS
X. Yang, J. Dong, B. Zhu, *Chinese Academy of Sciences, Beijing, China*
- 16:50 Discussion

Session 7

15.30 - 17.00

MEDITERRANEAN AND REGIONAL CLIMATOLOGY*Chair: Z. Ustrnul, Poland*

- 15:30 SEASONAL SIMULATIONS OF THE MEDITERRANEAN CLIMATE WITH A REGIONAL COUPLED ATMOSPHERE OCEAN MODEL
E. Shiber, **S. Brenner**, *Bar Ilan University, Ramat Gan, Israel*
- 15:45 THE PALAEOCLIMATIC CONDITIONS TRIGGERING THE DEVELOPMENT OF THE NORTHWEST NEGEV DUNEFIELD, ISRAEL
J. Roskin, H. Tsoar, N. Porat, D.G. Blumberg, *Ben-Gurion University in the Negev, Beer Sheva, Israel Geological Survey, Jerusalem, Israel*
- 16:00 CLIMATE VARIABILITY RECONSTRUCTION DERIVED FROM BOTH LAKE SEDIMENTS AND TREE RING SERIES (ALTAI MOUNTAINS)
I. Kalugin, A. Darin, V. Myglan, D. Ovchinnikov, L. Holodova, *Institute of Geology and Mineralogy SB, RAS, Institute of Forest SB, RAS, Russia*
- 16:15 VARIABILITY OF CLIMATIC WATER BALANCE IN THE GROWING SEASON IN POLAND
A. Wypych, *Jagiellonian University, Krakow, Poland*
- 16:30 Discussion

Session 8

17:15 - 18:45

REGIONAL CLIMATOLOGY I*Chair: H. Kutiel, Israel*

- 17:15 OBVIOUS IMPACTS OF CLIMATE CHANGE IN RWANDA
S. Henninger, *University of Kaiserslautern, Germany*
- 17:35 CLIMATE CHANGE IN THE ARCTIC: AN INDIGENOUS PERSPECTIVE
S.C. Dinero, *Philadelphia University, Philadelphia, PA, USA*
- 17:55 QUASI PERIODICITIES OF EXTREME PRECIPITATION EVENTS IN THE YANGTZE RIVER BASIN, CHINA
S. Becker, *University of Wisconsin Oshkosh, Oshkosh, WI, USA*
- 18:15 CHANGES OF HIGH-MOUNTAINOUS LANDSCAPES OF THE SOUTH OF RUSSIA IN DIFFERENT CONDITIONS OF CLIMATE CONTINENTALITY
K. Christyakov, *St. Petersburg State University, Russia*
- 18:30 Discussion

REGIONAL CLIMATOLOGY II*Chair: B.D. Malamud, UK*

- 17:15 CHANGES IN GROWING SEASON AIR TEMPERATURE EXTREMES IN POLAND CAUSED BY ATMOSPHERIC CIRCULATION CONDITIONS
Z. Ustrnul, *Jagiellonian University, Krakow, Poland*
- 17:35 RIVER-CHANNEL PROCESSES AND CLIMATE CHANGE
S.R. Chalov, *M.V. Sidorova, Lomonosov Moscow State University, Russia*
- 17:55 THE NATURAL AND CLIMATIC CONDITIONS OF HUMAN LIFE IN RUSSIAN AND THE GLOBAL CLIMATE CHANGE
V. Vinogradova, *Russian Academy of Sciences, Moscow, Russia*
- 18:15 THE FEATURES OF AIR THERMAL BEHAVIOR (1935-2006) IN ARMENIA
V. Margaryan, *Yerevan State University, Armenia*
- 18:35 Discussion

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