

SYMPOSIUM ON CHALLENGES IN APPLIED HUMAN BIOMETEOROLOGY

Monday, 2.3.2020 – Tuesday, 3.3.2020



Monday, March, 2, 2020

08:00 – 09:30 Registration

Openings and logistical information

09:30 – 10:15	Prof. Dr. Dr. h.c. Hans-Jochen Schiewer, Rector, Univ. Freiburg
	Prof. Dr. Gerhard Adrian, DWD and WMO President
	Prof. Dr. Andreas Christen, University of Freiburg
	Prof. Dr. Andreas Matzarakis, ZMMF/DWD

Plenary session A, Location: Haus zur Lieben Hand

Chairperson: Oded Potchter and Andreas Matzarakis

10:15 – 10:30	The long way from one parameter indices to complex and universal thermal models of the human body , Peter Höppe, Münchner Universitätsgesellschaft, Germany
10:30 – 10:45	The recent summers in Germany - heat waves and their impact on human health , Stefan Muthers, Deutscher Wetterdienst/ZMMF, Germany
10:45 – 11:00	A Masterplan for the Implementation of Heat Health Action Plans in Germany , Hans-Guido Mücke, Umweltbundesamt, Germany
11:00 – 11:15	The Euro-Mediterranean thermal bioclimate: Climatology and trends , Theodore M. Giannaros, Vassiliki Kotroni, Konstantinos Lagouvardos and Andreas Matzarakis, National Observatory of Athens, Greece
11:15 – 11:30	Climate services for future bioclimatic assessment in Portugal , António Lopes, Ezequiel Correia, Marcelo Fragoso and João Vasconcelos, Institute of Geography and Spatial Planning of the University of Lisbon (IGOT), Portugal
11:30 – 11:45	Pollen information services for general public , Tanja Cegnar, Andreja Kofol Seliger and Anja Simčič, Slovenian Environment Agency, Slovenia
11:45 – 12:00	Combined ground-level ozone and temperature events relevant for human health , Elke Hertig and Sally Jahn, Regional Climate Change and Health, Faculty of Medicine, Augsburg University, Germany

12:00 - 13:30	Lunch
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Session A: Health, Location: Haus zur Lieben Hand**Chairperson: Panagiotis Nastos**

13:30 – 13:45	Detailed analysis of extreme heat waves in Serbia, Biljana Basarin, Tin Lukić, Tanja Micić Ponjige, Slobodan B. Marković, Dragoslav Pavić, Minučer Mesaroš and Andreas Matzarakis, Department of Geography, Tourism and Hotel Management, Faculty of Sciences, University of Novi Sad, Serbia
13:45 – 14:00	Assessment of impacts of extreme heat on global health using human thermoregulation models and indices, Maria Albers, Janica Bühler, Beatrice Ellerhoff, Elisa Ziegler and Kira Rehfeld, Hannover Medical School (MHH), Germany
14:00 – 14:15	Evaluation of the ERA5-based UTCI on mortality data in Europe, Aleš Urban, Claudia Di Napoli, Fiorella Acquaotta, Hannah L. Cloke, Jan Kyselý and Florian Pappenberger, Institute of Atmospheric Physics of the Czech Academy of Sciences, Czech Republic
14:15 – 14:30	Residents' Perceptions and Attitudes Towards Winter in Cold Climate City Erzurum, Turkey, Defne Dursun and Dogan Dursun, Ataturk University, Turkey
14:30 – 14:45	Impact of biometeorological and aerosanitary conditions on influenza-like illnesses incidence in Warsaw, Katarzyna Lindner-Cendrowska and Peter Bröde, Institute of Geography and Spatial Organization Polish Academy of Science, Poland
14:45 – 15:00	Vulnerability to heat-related mortality during the summer of 2015: evidence for an urban population in Central European city (Novi Sad, Serbia), Daniela Arsenović, Stevan Savić, Zorana Lužanin, Ivana Radić, Dragan Milošević and Miodrag Arsić, Climatology and Hydrology Research Centre, Faculty of Sciences, University of Novi Sad, Serbia
15:00 – 15:15	Effects of climate change on seasonal morbidity and mortality of respiratory diseases in Germany, Irmela Schlegel, Stefan Muthers, Hans-Guido Mücke and Andreas Matzarakis, Deutscher Wetterdienst/ZMMF, Germany
15:15 – 15:30	Saharan dust intrusions over southern Portugal: overall characterization and atmospheric synoptic patterns (2005-2015), M. Frago, T. Silva, E. Correia, J. Vasconcelos, A. Lopes and M.G. Carraça, Centre of Geographical Studies - Institute of Geography and Spatial Planning, University of Lisbon, Portugal

Session B: Bioclimate in Urban Environments, Location: KG III, 3042**Chairperson: Antonio Lopes**

13:30 – 13:45	Seasonal microclimatic and thermal comfort conditions in various built-up and green areas of Ghent (Belgium), Dragan Milošević, Sara Top, Steven Caluwaerts and Stevan Savić, Climatology and Hydrology Research Centre, Faculty of Sciences, University of Novi Sad, Serbia
13:45 – 14:00	Analysing Outdoor Thermal Comfort with Proximity to Water Bodies in Tropical Humid Climate- Case Study of Kolkata, India, Rohini Mazumder Chakraborty and Debashish Das, Department of Architecture, Jadavpur University, India
14:00 – 14:15	Modeling the urban geometry influence on outdoor thermal comfort in the case of semi arid microclimate, Chahrazed Kedissa and Saliha Outtas, Laboratoire d'architecture bioclimatique et environnement (abe),

	Algeria
14:15 – 14:30	Influence of Thermal Comfort provided by Tree Shadows on sidewalks in Downtown São Paulo , Loyde Abreu-Harbich, G. G. D. Starke, P. F. Brocaneli, C. R. Maciel and S. H. Obata, Mackenzie Presbyterian University, Brazil
14:30 – 14:45	Latitude-dependent analysis of microclimatic conditions in ideal urban canyons , Kerstin Reusch and Andreas Matzarakis, Deutscher Wetterdienst /ZMMF, Germany
14:45 – 15:00	Detailed investigation of microclimate by means of computational fluid dynamics (CFD) in a tropical urban environment , Omer Muhammad Mughal, Aytac Kubilay, Paolo Burlando, Simone Fatichi, Naika Meili and Jan Carmeliet, Singapore ETH Center, Singapore
15:00 – 15:15	Cool spots as strategy for urban heat , Laura Kleerekloper and Jeroen Klok, Amsterdam University of Applied Science, Netherlands
15:15 – 15:30	Bioclimate, Urban heat Island and Urban development , Elena A. Grigorieva, Institute for Complex Analysis of Regional Problems Far Eastern Branch Russian Academy of Sciences, Russia

Location: Peterhofkeller

15:30 - 16:30	Poster viewing and Coffeebreak
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Session C: New methods and tools in Human Biometeorology, Location: Haus zur Lieben Hand

Chairperson: Fredrick Lindberg

16:30 – 16:45	R language, a powerful tool for biometeorological research , Ioannis Charalampopoulos, Laboratory of General and Agricultural Meteorology, Agricultural University of Athens, Greece
16:45 – 17:00	Evaluation and application of a low-cost measurement approach for urban air temperatures during record-dry summer 2018 , Moritz Gubler, Andreas Christen, Jan Remund and Stefan Brönnimann, University of Bern, Switzerland
17:00 – 17:15	Estimation of gridded near-surface air temperature using a machine learning-based model approach across Israel , Bin Zhou, Evyatar Erell, Ian Hough, Jonathan Rosenblatt, Allan C. Just, Victor Novack and Itai Kloog, Ben-Gurion University of the Negev, Israel
17:15 – 17:30	Discrepancies of the radiation component between different thermal comfort models – implications and solutions , Fredrik Lindberg, Nils Wallenberg, Björn Holmer and Sofia Thorsson, University of Gothenburg, Sweden
17:30 – 17:45	On the modification of the local microclimate by clusters of trees , Christos C. Halios, Stefan T. Smith, Brian Pickles and Li Shao, School of Built Environment, University of Reading, United Kingdom
17:45 – 18:00	Innovative methodology for the monitoring of urban environments' risks to health , Izhak Schnell, Tel Aviv University, Israel

Session D: Communication and warnings, Location: KG III, 3042**Chairperson: Stefan Muthers**

16:30 – 16:45	Thermal walks for fundamental and applied research , Lisette Klok, Jeroen Kluck, Erica Caverzam Barbosa and Anna Solcerova, University of Applied Sciences Amsterdam, Netherlands
16:45 – 17:00	Revision of the Swiss heat warning system – indices comparison and recent developments , Annkatrin Burgstall, Ana Casanueva, Regula Gehrig and Sven Kotlarski, Bundesamt für Meteorologie und Klimatologie MeteoSchweiz, Switzerland
17:00 – 17:15	Fitness of heat event definition in representing heat stress in major climatic zones in India , Siva Ram Edupuganti and Mahua Mukherjee, Indian Institute of Technology, Roorkee, India
17:15 – 17:30	Indoor conditions during heat waves - Nocturnal part of the heat health warning system , Ronja Vitt, Stefan Muthers and Andreas Matzarakis, Universität Freiburg, Germany
17:30 – 17:45	Pollen forecast - latest developments at DWD , Christina Endler, Deutscher Wetterdienst/ZMMF, Germany
17:45 – 18:00	Importance of Atmosphere Related Syndroms in historical context and future possible developments , Kathrin Graw, Stefan Muthers and Andreas Matzarakis, Deutscher Wetterdienst/ZMMF, Germany

Location: Peterhofkeller

19:00 - 21:00	Reception and welcome party
	Martin Horn, Mayor Freiburg

Tuesday, March, 3, 2020**Plenary session B, Location: Haus zur Lieben Hand****Chairperson: Andreas Christen**

08:30 – 08:45	The influence of warm weather and outdoor-environment design on preschoolers' physical activities and thermal comfort , Sofia Thorsson, Oskar Bäcklin, Fredrik Lindberg and David Rayner, University of Gothenburg, Sweden
08:45 – 09:00	Urban Climate, Air Quality and Human Comfort in the South-Eastern Europe: Advancements and Challenges within the Climate Change Context , Sorin Cheval, Adina Croitoru, Jelena Dunjic, Christos Giannaros, Dragan Milosevic, Nina Nikolova, Rita Pongrácz, Stevan Savic and Róbert Szép, "Henri Coandă" Air Force Academy, Braşov, Romania
09:00 – 09:15	Modelling of continuous Sky View Factor based on ultra-high resolution natural color images taken by Remotely Piloted Airborne Systems. The case study of a complex building environment in the campus of National and Kapodistrian University of Athens , Panagiotis T. Nastos, Emmanuel Vassiliakis, Marina Panagiotis P. Nastos, Ioannis Charalampopoulouos and Andreas Matzarakis, Laboratory

	of Climatology and Atmospheric Environment, Department of Geology and Geoenvironment, National and Kapodistrian University of Athens, Greece
09:15 – 09:30	Urban thermal stress map based on human perception in urban areas , Tzu-Ping Lin and Yu-Cheng Chen, Department of Architecture, National Cheng Kung University, Taiwan
09:30 – 09:45	Advocating a Human Thermal Perception Protocol for Bio-Meteorological Research , Oded Potchter, Pninit Cohen, Tzu-Ping Lin and Andreas Matzarakis, The Laboratory for Urban Climatology and Bio-Climatology, Department of Geography and Human Environment Tel Aviv University, Israel
09:45 – 10:00	Strengthening interdisciplinary bridges between human biometeorology with that of bottom-up urban thermal sensitive design in an era of climate change , Andre Santos Nouri, Department of Interior Architecture and Environmental Design, Faculty of Art, Design and Architecture, Bilkent University, Turkey

10:00 - 11:00	Poster viewing and Coffeebreak
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Session E1: Thermal indices, Location: Haus zur Lieben Hand

Chairperson: Peter Höppe

11:00 – 11:15	Anisotropic longwave sky radiation , Björn Holmer, Nils Wallenberg and Fredrik Lindberg, University of Gothenburg Dept of Earth Sciences, Sweden
11:15 – 11:30	UTCI calibration for a tropical Brazilian city and the influence of the sample size upon the calibration , Thiago José Vieira Silva and Simone Queiroz da Silveira Hirashima, Department of Civil Engineering, Federal Center of Technological Education of Minas Gerais (CEFET-MG), Brazil
11:30 – 11:45	Thermal Comfort Index Calibration: review and analysis of statistical methods used , Larissa Mara Costa Morais and Simone Queiroz da Silveira Hirashima, Federal Center of Technological Education of Minas Gerais, Brazil
11:45 – 12:00	Thermal Comfort Evaluation in different Neighborhoods , Lutz Katzschner and Carolin Vieira, Institut für Klima und Energiekonzepte, Germany
12:00 – 12:15	Determination of bioclimate change in the sample of Erzurum city centre for a 35-year period , Süleyman Toy, Atatürk University, Turkey
12:15 – 12:30	Modified Physiologically Equivalent Temperature (mPET) to investigate biometeorological conditions and seasonal power demand in tropic region , Yung-Chang Chen, Wei-Chieh Chang, Chien-Ke Cheng, Chien-Hung Andy Tung, Wei-Nai Chen, Charles C.-K. Chou and Andreas Matzarakis, Research Center for Environmental Changes, Academia SINICA, Taiwan

Session F: Climate Change, Location: KG III, 3044

Chairperson: Sorin Cheval

11:00 – 11:15	Urbanization Induced Temperature Rise over Eastern India: A Primary Appraisal to Estimate Urban Climate Change , Partha Pratim Gogoi and V. Vinoj, School of Earth, Ocean and Climate Sciences, Indian Institute of Technology Bhubaneswar (IIT BBS), India
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11:15 – 11:30	Predictions and Projections of Heat Exposure on European Scales: The HEAT-SHIELD Project , Sven Kotlarski, Annkatrin Burgstall, Ana Casanueva and Christoph Spirig, Federal Office of Meteorology and Climatology MeteoSwiss, Switzerland
11:30 – 11:45	Estimating the future thermal comfort in Lisbon , João Vasconcelos, Ezequiel Correia, Marcelo Fragoso, Ana Oliveira and António Lopes, Instituto de Geografia e Ordenamento do Território Politécnico de Leiria, Portugal
11:45 – 12:00	Thermal climate and case studies on urban heat island during heatwaves in coastal city of Helsinki, Finland , Reija Ruuhela, Athanasios Votsis, Olli Saranko and Carl Fortelius, Finnish Meteorological Institute, Finland
12:00 – 12:15	Urban air quality under climate change – overview and the role of biogenic emissions , Markus Quante, Josefine Feldner, Matthias Karl, Volker Matthias and Martin Ramacher, Helmholtz-Zentrum Geesthacht, Institute of Coastal Research, Germany
12:15 – 12:30	Adaptation for the impact of climate change in biometeorological field , Jun-ichiro Giorgos Tsutsumi, University of the Ryukyus, Japan

12:30 - 14:00	Lunch
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Session E2: Thermal indices, Location: Haus zur Lieben Hand

Chairperson: Tzu-Ping Lin

14:00 – 14:15	The relevance of thermal indices in assessing urban heat impacts to public health in Dar es Salaam and Zanzibar, Tanzania , Emmanuel Lubango Ndetto and Andreas Matzarakis, Department of Geography and Environmental Studies, Sokoine University of Agriculture, Tanzania
14:15 – 14:30	Bioclimatic and climatic tourism conditions on the Polish coast of the Baltic Sea , Arkadiusz M. Tomczyk, Magdalena Kugiejko and Andreas Matzarakis, Department of Climatology, Adam Mickiewicz University in Poznań, Poland
14:30 – 14:45	Bioclimate conditions Assessment of Algeria for comfort and Tourism purposes , Salah SAHABI ABED and Andreas Matzarakis, National Climate Center, Office National de la Météorologie, Algeria
14:45 – 15:00	Urban Morphology Aspects on Microclimate in a Hot and Humid Climate , Beta Paramita and Andreas Matzarakis, Universitas Pendidikan Indonesia, Indonesia
15:00 – 15:15	Human Thermal Perception and Adaptation in a World of Population Mobility , Pninit Cohen and Oded Potchter, The Laboratory for Urban Climatology and Bio-Climatology, Department of Geography and Human Environment, Tel Aviv University, Israel
15:15 – 15:30	Define the thermal comfort range based on different generation in the same climate region , Shing-Ru Yang and Tzu-Ping Lin, National Cheng Kung University, Taiwan
15:30 – 15:45	Uncertainties and errors in heat sensation inferential model and their feedbacks in climate-conscious urban planning , Manon Kohler and Winston T.L. Chow, Singapore Management University, Singapore
15:45 – 16:00	Climate and Sports Events - The Tokyo 2020 Olympic Games , Dominik Fröhlich, Stéphane Berton, Paolo Emilio Adami and Andreas Matzarakis, Deutscher Wetterdienst/ZMMF, Germany

Session G: Bioclimate, planning and design, Location: KG III, 3044**Chairperson: Andre Nouri**

14:00 – 14:15	Towards Sustainable Cities: Environmental Planning for Outdoor Thermal Comfort in Hot Arid Areas , Nada Al Amir, Urban Development, Technical University of Berlin, Germany
14:15 – 14:30	Assessment of thermal environment and air quality in Compact Built Environment in Hot-Humid Regions , Si-Yu Yu, Andreas Matzarakis and Tzu-Ping Lin, Department of Architecture, National Cheng Kung University Taiwan, Taiwan
14:30 – 14:45	A spatial-temporal study of heat vulnerability: a case study of Hong Kong over 2006-2016 , Chao Ren, Xuyi Zhang, Xinwei Li and Yuan Shi, Faculty of Architecture, The University of Hong Kong, Hong Kong
14:45 – 15:00	Microclimate modelling to support climate change adaptation in densifying cities , Sabrina Erlwein and Stephan Pauleit, Chair for Strategic Landscape Planning and Management, Technical University of Munich, Germany
15:00 – 15:15	The Evaluation of the Effects of New Settlement Areas on the Thermal Comfort in a Cold Climate City: Erzurum Case , Dogan Dursun and Merve Yavas, Ataturk University, Turkey
15:15 – 15:30	An exploration of a latitude based street-level density manipulation for climate sensitive urban street design , Nusrath Maharroof, Rohinton Emmanuel and Craig Thomson, School of Computing, Engineering and Built Environment, Glasgow Caledonian University, United Kingdom
15:30 – 15:45	Planting trees in urban areas using Computer Decision Making algorithms , Nils Wallenberg and Fredrik Lindberg, University of Gothenburg, Sweden
15:45 – 16:00	GrüneLunge-Project - Potential of the urban green infrastructure to reduce heat stress , Marcel Gangwisch and Andreas Matzarakis, Deutscher Wetterdienst/ZMMF, Germany

16:00 - 16:30	Coffeebreak
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Plenary session C, Location: Haus zur Lieben Hand**Chairperson: Andreas Christen and Andreas Matzarakis**

16:30 – 16:45	Future perspectives on micro scale modelling and communication aspects in human biometeorology , Andreas Matzarakis, Deutscher Wetterdienst/ZMMF, Germany
16:45 – 17:00	Future perspectives at the intersection between urban climate and human biometeorology , Andreas Christen, University Freiburg, Germany
17:00 – 17:30	Closing-ceremony

Poster session, Location: Peterhofkeller

43	A new approach of generating human biometeorological information based on gridded high-resolution data (basic data of Test-Reference- Years) , Irmela Schlegel and Andreas Matzarakis, Deutscher Wetterdienst/ZMMF, Germany
64	Implementation of human thermal comfort and air humidity in Köppen-Geiger climate classification and importance towards the achievement of Sustainable Development Goals , Shi-Qi Yang and Andreas Matzarakis, Shenzhen Institute of Building Research Co., Ltd. Shenzhen, China
97	Variability and changes in bioclimatic parameters in Estonia – preliminary findings , Biljana Basarin, Tiiu Koff, Andreas Matzarakis, Jaak Jaagus, Slobodan B. Marković and Tin Lukić*, Department of Geography, Tourism and Hotel Management, Faculty of Sciences, University of Novi Sad, Serbia
105	Review of outdoor thermal comfort research in urban areas of Central and South East Europe , Jelena Dunjić, Dragan Milošević, Stevan Savić, Daniela Arsenović and Ivan Šećerov, University of Novi Sad, Faculty of Sciences, Department of Geography, Tourism and Hotel Management, Serbia
72	Effects of street design on outdoor thermal comfort during record-breaking heat and cold periods in Novi Sad, Serbia , Stevan Savić, Dragan Milošević, Daniela Arsenović, Jelena Dunjić and Andreas Matzarakis, Climatology and Hydrology Research Centre, Faculty of Sciences, University of Novi Sad, Serbia
103	Seasonal variations of UTCI and PET in Belgrade (Serbia) , Milica Pecelj, Geographical Institute 'Jovan Cvijić' Serbian Academy of Science and Arts, Belgrade, Serbia
108	A look at indices evaluating climatic characteristics for tourism activities in the sample Erzurum city to discuss a Turkey's climate index for tourism , Süleyman Toy and Aslihan Esringu, Atatürk University, Turkey
52	Climate sensitivity of an historical places in cold climate zone: The Case of Erzurum , Merve Yavas and Dogan Dursun, Ataturk University, Turkey
145	Human thermal comfort modeling against mobile measurements in a green-urban area of Athens, Greece. Adaptation and mitigation recommendations , Panagiotis T. Nastos, Iliana D. Polychroni, Ioannis Charalampopoulos, Aikaterini Varvaringou and Ioannis Tsiros, Laboratory of Climatology and Atmospheric Environment, Department of Geology and Geoenvironment, National and Kapodistrian University of Athens, Greece
120	Biometeorological footprint on crime incidence over the greater Athens area, Greece , Iliana A. Petta and Panagiotis T. Nastos, Laboratory of Climatology and Atmospheric Environment, National and Kapodistrian University of Athens, Greece
118	Bioclimatological assessment of Camino de Santiago , Domingo Rasilla, Department of Geography and Environmental Planning, University of Cantabria, Spain
116	Deepening the knowledge of urban climate and human thermal comfort conditions: an approach based on local weather types , Cláudia Reis, António Lopes and André Nouri, Universidade de Lisboa - IGOT (Institute of Geography and Spatial Planning), Portugal

101	Understanding the street thermal environment by the mobile transect technique. Emmanuel Lubango Ndetto, Andreas Matzarakis and Andreas Christen, Department of Geography and Environmental Studies, Sokoine University of Agriculture, Tanzania
144	Evaluating the effect of trees on UHI mitigation and reduction of energy usage in different built up areas in Cairo, Amir Aboelata and Sahar Sodoudi, Institute of Landscape Architecture and Environmental Planning, TU Berlin, Germany
88	Study on Riparian Shading Envelope for Wetlands to Create Desirable Urban Bioclimates, Abu Taib Mohammed Shahjahan, Khandaker Shabbir Ahmed and Ismail Bin Said, American International University-Bangladesh, Bangladesh
115	Urban Spatial Patterns and Heat Vulnerability in the City of Tel Aviv, Moshe Mandelmilch, Noa Mandelmilch, Michal Ferenz and Oded Potchter, Dept. of Geography and Human Environment, Israel
85	Cooling Effect of Green and Blue Spaces in Urban Requalification Project of Oued El-Harrach in Algiers, Benbrahim Ala Eddidne El Mahdi and Abdou Saliha, Architecture and Bioclimatic Environment Laboratory -ABE- Constantine-3- University, Algeria
136	Impact Analysis of Dynamic Bluespace on Human Biometeorology: Case of Roorkee, Aditya Rahul and Mahua Mukherjee, Indian Institute of Technology Roorkee, India
126	Indices of Outdoor Thermal Comfort: A Comparative Study in Mendoza, Argentina, M. Angélica Ruiz and Erica N. Correa, Instituto de Ambiente, Hábitat y Energía INAHE – CCT CONICET Mendoza, Argentina
130	Influence of urban form on urban thermal comfort of in tropical cities: Case of Goiania, Brazil, Loyde Viera Abreu-Harbich, School of Architecture and Urbanism of Presbyterian Mackenzie University, Brazil
138	Evaluation of Indoor thermal comfort in scholar buildings of Federal University Goiás, D. S. Vale, M. L. Ebang, K. E. R Hora and Loyde Abreu-Harbich, School of Architecture and Urbanism of Mackenzie Presbyterian University, Brazil
139	Microclimate influences on the indoor thermal comfort of scholar building on tropics: case of Cidade de Goiás- Brazil, P. J. L. Perillo, M. A. S Campus, and Loyde Abreu-Harbich, School of Architecture and Urbanism of Mackenzie Presbyterian University, Brazil
81	Vulnerability of Poor Urban Populations to Temperature-Related Health Issues in Ibadan, Betty O. Adegebo, University of Ibadan, Nigeria
57	Future heat waves along latitudinal transect across Europe based on climate change indicators, Andreas Krein, Klaus Görgen and Jürgen Junk, Luxembourg Institute of Science and Technology (LIST) Environmental health, Luxembourg
122	Immediate impacts of extreme winter weather on mortality in the Czech Republic, Eva Plavcová and Aleš Urban, Institute of Atmospheric Physics CAS, Prague, Czech Republic
99	Exists a HHWS in the Czech Republic?, Martin Novák, Czech Hydrometeorological Institute/Jan Evangelista Purkyně University, Faculty of Environment, Czech Republic
49	Statistical modeling of combined ozone and temperature extremes in Central Europe, Sally Jahn and Elke Hertig, Regional Climate Change and Health Faculty of Medicine and Institute of Geography Augsburg University, Germany
117	Development of a black-globe thermometer for low-cost networks to

	determine the Mean Radiant Temperature (MRT) , Mona Schätzle, Markus Sulzer, Andreas Christen and Andreas Matzarakis, Albert-Ludwigs-Universität Freiburg, Germany
127	High resolution meteorological station network in Swiss Cities: City Weather Monitoring and operational forecasts , Sebastian Schlögl, Ferdinand Briegel and Karl G. Gutbrod, meteoblue AG, Switzerland
25	Tension between Jews and Arabs increases risk to health: variance in Heart rate variability among Jewish and Muslim women in Afula and Nazareth , Diana Saadi, Tel Aviv University, Israel