



## COMFORT AT THE EXTREMES: ENERGY, ECONOMY AND CLIMATE

10<sup>th</sup>-11<sup>th</sup> April 2019 Heriot Watt University, Dubai

### DRAFT FINAL PROGRAMME

#### Wednesday 10<sup>th</sup> April 2019: Comfort Challenges

**08:30 Registration**

**09:00 - 11.00 SESSION 1. Comfort & Health Limits:** **Chair:** Susan Roaf

09.05	Welcome speeches	
09.30	The physiology of comfort at the extremes:	Wouter van Marken Lichtenbelt
09.55	Global occupied domestic temperatures: A New Comfort Normal	Fergus Nicol
10.20	The epidemiology of health and mortality at extremes:	Alana Hansen
10.45	Discussion	

**11.00 Coffee**

**11:30 – 13.00 SESSION 2: Exceeding the Limits:** **Chair:** Evangelia Topriska

11.30	Passive survival and resilience planning: US city lessons:	Alex Wilson
11.55	Heatwave design response in Ahmadabad:	Rajan Rawal
12.20	Thermal adaptation to the extremely cold climate of Nepal	Hom Rijal
12.30	Refuge at the extremes:	Sukumar Natarajan
12.50	Discussion	

**13:00 Lunch**

**14.00 - 1600 WORKSHOP SESSION 1**

**Workshop 1: Chairs:** Peter Holzer and Philipp Stern

	Resilient Cooling: Low Energy, Low Carbon & Adaptive Design
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**Workshop 2: Chairs:** Wouter van Marken Lichtenbelt and Hannah Pallubinsky

	Physiology, Health and Comfort: Real Life Challenges at Extremes
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**Workshop 3: Chairs:** Rajan Rawal and Fergus Nicol

	Surviving Street Life in Extreme Climates
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**Workshop 4: Chairs:** Matheos Santamouris and Wolfgang Kessling

	Structures at the Extremes
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**Workshop 5: Chairs:** Kathryn Janda and Hom Rijal

	Well-Being, Health and Air Quality
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**16.00 Tea**

<b>16.30 – 1800</b>	<b>Session 3: Tools for the Future:</b>	<b>Chair:</b> Matt Santamouris
16.30	Adapting building rating schemes for the extremes:	Dong Chen
16.55	Applying adaptive principles: guidance for planning practice	Runa Hellwig
17.15	Bahrain Parks: Baselining change for urban resilience	Joao Pinelo Silva
17.35	Are Indian buildings really Green? Lessons from POE:	Rajat Gupta

#### 18:00 Conference Reception –

#### 19:00 After-Dinner Talks.

**Chair: Ammar Kaka**

- 1) *Greening the Buildings of the Gulf*, **Habiba Al Marashi**, co-founder of the Emirates Green Building Council
- 2) *Implications for Construction of Warmer Temperatures in the Gulf* – **Bashar Kassab**  
Facilities Manager of the Burj Khalifa and The Dubai Mall
- 3) *Resilient Cooling: A 21<sup>st</sup> Century Imperative* - **Bjarne Olesen**, President of ASHRAE

### Thursday 11<sup>th</sup> April 2019: Comfort Opportunities

#### 08:30 Registration

<b>09:00 - 11.00</b>	<b>SESSION 4: Radical Comfort Thinking</b>	<b>Chair:</b> Adrian Pitts
09.05	Local Climate Change and Urban Mitigation Techniques	Matt Santamouris
09.30	Passive Design in Extreme Climates	Pablo La Roche
09.55	A paradigm shift in comfort design for Singapore	Wolfgang Kessling
10.20	New thinking for mechanical comfort cooling:	Risto Kosonen
10.45	Discussion	
<b>11.10</b>	<b>Coffee</b>	

#### 11:30 – 13:00 WORKSHOP SESSION 2

**Workshop 6: Chairs:** Risto Kosonen and Bjarne Olesen

	Boosting Comfort Locally with Personal Micro-Climate Systems
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**Workshop 7: Chairs:** Grainne McGill and Jessica Aguera

	Behaviours, Opportunities and Expectations as Thermal Defences
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**Workshop 8: Chairs:** Alex Wilson and Runa Hellwig

	Building Resilient Cities in Extreme Climates
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**Workshop 9: Chairs:** Maria Kolokotroni and Ulrike Passe

	The Role of Natural Ventilation in Future Comfort Design
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**Workshop 10: Chairs:** Abdulrahman Alshaikh and Shady Attia

	Designing Better Buildings in Extremely Hot Climates (1)
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#### 13.00 – 14.00: Lunch

#### 14.00 – 15.30 WORKSHOP SESSION 3

**Workshop 11: Chairs:** Craig Farnham and Adrian Pitts

	Evaporative Cooling for Hot Buildings and Cities
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**Workshop 12: Chairs:** Sukumar Natarajan and Daniel Fosas

	Thermally Resilient Design for Transitional Refugee Shelters
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**Workshop 13: Chairs:** Alana Hansen and Grainne McGill

	Comfort, Health and Mortality in Real Buildings
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**Workshop 14: Chairs:** Ryoko Ooko and Hassam Chaudhry

	Comfort and Energy Studies for Extreme Climates
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**Workshop 15: Chairs:** Samuel Domínguez-Amarillo and Hanan Al-Khatiri

	Designing Better Buildings in Extremely Hot Climates (2)
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<b>16.00 – 17.30</b>	<b>SESSION 5: Towards a new Vernacular</b>	<b>Chair: Rajan Rawal</b>
16.00	Role of Ventilative Cooling in Extreme Climates,	Maria Kolokotroni
16.20	Learning from Building Failures	Samuel Dominguez-Amarillo
16.40	Austrian Pavillon in EXPO 2020, Dubai: A New Vernacular?	Peter Holzer
17.00	Extreme Design	Susan Roaf
17.30	Session Ends	
<b>17.30</b>	<b>Final Session, Jeff Cook Best Paper Awards and Future Plans:</b>	
	<b>Chairs:</b> Sue Roaf and Evangelia Topriska	
	<b>Towards a New Vernacular:</b> Jeff Cook's Vision	Pablo La Roche
	<b>Prize giving + Best Paper Awards</b>	
<b>18.00</b>	<b>FREE EVENING TO EXPLORE THE CITY</b>	

## Friday 12<sup>th</sup> April 2019

### WINDCATCHER FIELD TRIP

Half Day Field Trip to a Sustainable Community and to Bastakia, the old Windcatcher Quarter of Dubai with expert guides.

Details of time and bus transfer will be announced near the date.

