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Work and Research Experience

Berkeley Education Alliance for Research in Singapore (BEARS)

Singapore, SG

Postdoctoral Scholar - SinBerBEST 2

06/2019 - present

Mobile: +65 8846 4838

Email: federicotartarini@gmail.com

- o Open source software: Maintainer and main developer of the CBE Thermal Comfort Tool v2.0 web tool for thermal comfort calculations and visualizations; pythermalcomfort – thermal comfort Python package; CBE Clima Tool – web tool to analyse climate data; Cozie for iOS and Fitbit – application for IEQ and physiological data collection.
- Research: Conducted a longitudinal thermal comfort study that aimed to developed personalized thermal comfort models using wearable and IoT devices. Performed data analysis, and carried out test experiments involving human subjects, as well as worked with researchers across SinBerBEST themes to achieve the program's aim to improve energy efficiency, sustainability, and indoor environmental quality in buildings in tropical climates
- Industrial research projects: Collaborated in the construction and commissioning of the BCA ZEB+ Building, the first retrofitted Zero Energy Building in Singapore for the Singaporean Building and Construction Authority (BCA). Helped with the development of the BCA Green Mark compliance path.

ASHRAE 55 committee member

Atlanta, US

SSPC 55 "Thermal Environmental Conditions for Human Occupancy" committee

11/2020 - present

- o Addenda: I wrote 7 addenda for the ASHRAE 55-2017 which are now part of the ASHRAE 55-2020.
- University of Wollongong Sustainable Buildings Research Centre (SBRC) Wollongong, AU Honorary Fellow - Faculty of Engineering 06/2019 - present
- University of Wollongong Sustainable Buildings Research Centre (SBRC) Wollongong, AU Associate Research Fellow - Faculty of Engineering 06/2017 - 06/2019
 - o Industrial research projects: Company: Daikin Australia. Developed smart controllers and IoT sensors for Daikin.
 - o Advantages SME grant: Company: Enviro Buildings Services. Developed learning algorithms using Python and Matlab for self-commissioning of HVAC components and models for performance prediction.
 - International Energy Agency Energy in Buildings and Communities (IEA EBC) Annex 69: Represented the SBRC in the IEA EBC Annex 69 "Strategy and practice of adaptive thermal comfort in low energy buildings".
 - Data Scientist: Helping colleagues analyzing data in several research projects and assisted the SBRC in the development of research facilities concerning data acquisition, storage, and analysis.
 - o Application developer: Developed two Android applications, one written in Java and one using Xamarin Forms.
 - o Teaching Assistant HVAC systems: Delivered several tutorials and developed course material for the UOW Engineering subject ENG 442/918 "Sustainable Energy in Buildings".
 - Guest Lecturer University of Sydney: Delivered a guest lecture on the Solar Decathlon Competition.

Bologna, IT

Consultant for an Italian engineering consulting firm

03/2013 - 02/2014

• Activities: Conducted feasibility studies for private and public clients. Modeled building energy consumption using EnergyPlus.

Teaching Experience

National University of Singapore (NUS)

Singapore, SG

Teaching assistant

Aug/2020 - present

- o Course BPS5223 Data Science for the Built Environment: Prepared and delivered a guest lecture on thermal comfort and reviewed students mid-term and final presentations.
- o Course BPS5229 Building Energy Performance Passive Systems: Reviewed students mid-term and final presentations.

University of Sydney

Sydney, AU

Guest lecture Oct/2018

o BAEN2002 - Design Integration Lab: Energy: Prepared and delivered a guest lecture on the Solar Decathlon Competition.

University of Wollongong

Wollongong, AU

Teaching assistant

Jul/2016 - Nov/2017

• ENG 442/918 - Sustainable Energy in Buildings: Co-taught the subject, prepared the course material and the exam.

•	University of Wollongong - Faculty of Engineering PhD in Engineering and Information Sciences	Wollongong, AU 03/2014 - 12/2017
•	University of Bologna - Faculty of Engineering Master of Science Degree in Energy Engineering; Final grade 110/110 with honours	Bologna, IT 09/2010 - 03/2013
•	University of Wollongong - Faculty of Engineering Exchange program	Wollongong, AU 09/2012 - 02/2013
•	Technical University of Copenhagen, Denmark - Faculty of Engineering Exchange program	Copenhagen, DK 01/2011 - 06/2011
•	University of Bologna, Italy - Faculty of Engineering Bachelor in Energy Engineering; Final grade 108/110	Bologna, IT 09/2007 - 07/2010

Main Peer-reviewed publications

• Journal publications

- o Földváry Ličina, et al., 2018. Development of the ASHRAE Global Thermal Comfort Database II. Build. Environ. 142, 502–512. https://doi.org/10.1016/j.buildenv.2018.06.022
- Schweiker, M., et al., 2020. Evaluating assumptions of scales for subjective assessment of thermal environments
 Do laypersons perceive them the way, we researchers believe? Energy Build. 211, 109761.
 https://doi.org/10.1016/j.enbuild.2020.109761
- Kim, J., Tartarini, F., Parkinson, T., Cooper, P., de Dear, R., 2019. Thermal comfort in a mixed-mode building: Are occupants more adaptive? Energy Build. 203, 109436. https://doi.org/10.1016/j.enbuild.2019.109436
- o Tartarini, F., Cooper, P., Fleming, R., 2018. Thermal perceptions, preferences and adaptive behaviours of occupants of nursing homes. Build. Environ. 132. https://doi.org/10.1016/j.buildenv.2018.01.018
- Tartarini, F., Cooper, P., Fleming, R., Batterham, M., 2017. Indoor Air Temperature and Agitation of Nursing Home Residents with Dementia. Am. J. Alzheimers. Dis. Other Demen. 32. https://doi.org/10.1177/1533317517704898
- Tartarini, F., Cooper, P., Fleming, R., 2017. Thermal Environment and Thermal Sensations of Occupants of Nursing Homes: A Field Study, Procedia Engineering. https://doi.org/10.1016/j.proeng.2017.04.196
- Please visit my Google Scholar or Scopus profile for the complete list of publications.

PROFESSIONAL AFFILIATIONS AND REVIEW ACTIVITIES

- **Professional Affiliations**: Australian Institute of Refrigeration, Air conditioning and Heating (AIRAH), and ASHRAE 55 committee member T-STDS-SSPC 55
- Journal reviews: reviewed papers for the journals Building and Environment and Energy and Buildings.

Conferences Attended

• Oral presentations

- o Indoor Air 2020: 16th Conference of the International Society of Indoor Air Quality and Climate, Seoul, Korea.
- IAQVEC: 10th International Conference on Indoor Air Quality, Ventilation and Energy Conservation in Buildings (2019), Bari, IT.
- SBE16 Sydney: International High-Performance Built Environments Conference (2016), Sydney, AU.
- AAG National Conference (2016), Canberra, AU.
- o Oral presentation at the 15th National Conference of Emerging Researchers in Aging (2016), Canberra, AU.
- o IPA-International Congress (2016), San Francisco, CA, USA.
- 13th National Conference of Emerging Researchers in Aging (2014), Adelaide, AU.

AWARDS

•	Experienced Researcher for the IAQVEC conference (I co-authored the paper)	2019
•	Best Paper Award from the journal Building and Environment	2018
•	Student of the year from AIRAH (Australian Institute of Refrigeration, Air Conditioning and Heating)	2017
•	Best presentation from the 15th National Conference of Emerging Researchers in Ageing	2016
•	Innovation in ageing research from the 13th National Conference of Emerging Researchers in Ageing	2014

Skills

- \bullet Languages: Italian, English
- $\bullet \ \mathbf{Programming} \ \mathbf{languages} \text{: } \mathbf{Python}, \ \underline{\mathbb{L}} \mathbf{T}\underline{\mathbf{p}} \mathbf{X}, \ \mathbf{Javascript}, \ \mathbf{SQL}, \ \mathbf{Matlab}$
- \bullet ${\bf Softwares}:$ JetBrains IDEs, Matlab, Office

References

• References will be made available on request