

POSITION DESCRIPTION

Postdoctoral Fellow

Position Level	A
Faculty/Division	Arts, Design and Architecture
Position Number	00092379
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Position Summary

The Postdoctoral Fellow (Level A) will conduct research within the High Performance Architecture Lab on the ARC project: Scalable daytime radiative cooling for buildings and the built environment.

The role of Postdoctoral Fellow reports to Scientia Professor Mattheos Santamouris.

Accountabilities

Specific accountabilities for this role include:

- Undertake discipline-appropriate research activities, e.g. surveys, literature reviews, data gathering and/or recording of results using appropriate research methods.
- Research on high-performance urban heat mitigation materials, including development and characterisation of elastocaloric and/or daytime radiative cooling materials.
- Assessment of the performance of these materials by means of computational optical methods, thermal and optical characterisation in the laboratory and outdoors
- Assessment of the benefits of heat mitigation materials in terms of building energy savings with dynamic building simulation
- Assessment of the benefits of heat mitigation materials in terms of reduction of the ambient temperature with local climate modelling
- Support the dissemination of research outcomes through appropriate channels and outlets.
- Participate in and/or present at conferences and/or workshops relevant to the project as required.

- Assist in the development of the High Performance Architecture Lab
- Contribute to the research environment of the High Performance Architecture research cluster
- Align with and actively demonstrate the [UNSW Values in Action: Our Behaviours](#) and the [UNSW Code of Conduct](#).
- Cooperate with all health and safety policies and procedures of the university and take all reasonable care to ensure that your actions or omissions do not impact on the health and safety of yourself or others.

Skills and Experience

- A PhD in a related discipline, and/or relevant work experience.
- Experience in the following characterisation techniques:
 - optical characterisation UV-Vis-NIR
 - surface temperature measurements with infrared thermography
 - ambient parameters monitoring with weather stations and net-radiometry.
- Proven commitment to proactively keeping up to date with discipline knowledge and developments.
- Demonstrated ability to undertake high quality academic research and conduct independent research with limited supervision.
- Demonstrated track record of publications and conference presentations relative to opportunity, with at least two publications in peer-reviewed journals as first and/or corresponding author.
- Demonstrated ability to work in a team, collaborate across disciplines and build effective relationships, and demonstrated experience in collaborative research projects.
- Evidence of highly developed interpersonal skills.
- Demonstrated ability to communicate and interact with a diverse range of stakeholders.
- An understanding of and commitment to UNSW's aims, objectives and values in action, together with relevant policies and guidelines.
- Knowledge of health and safety responsibilities and commitment to attending relevant health and safety training.

Pre-employment checks required for this position

- Verification of qualifications

About this document

This Position Description outlines the objectives, desired outcomes, key responsibilities, accountabilities, required skills, experience and desired behaviours required to successfully perform the role.

This template is not intended to limit the scope or accountabilities of the position. Characteristics of the position may be altered in accordance with the changing requirements of the role.