From the editor ...

Dear Colleagues,

Welcome to the newsletter. It is a pleasure to introduce 60.4 Edition of ASR. This is a milestone for the Journal as we are fortunate to have received a Special Edition from the Passive Low Energy Architecture association and selected papers from the conference in the USA last year. Many thanks to the PLEA association for putting this together and hopefully start a new tradition of Special Editions from them. PLEA is a peak body dedicated to architectural science so it is was hoped to see more papers the future. My gratitude goes to the guest editors Pablo La Roche, Marc Schiler and Paula Cadima for their efforts in making this possible.

Special Issue: Passive Low Energy Architecture Association (PLEA) Effects of Envelope & Materiality in the Built Environment.

Guest Editors: Pablo La Roche, Marc Schiler and Paula Cadima

1) Effects of envelope and materiality in the built environment. Pablo La Roche, Marc Schiler and Paula Cadima
2) Reflectivity and specularity of building envelopes: how materiality in architecture affects human visual comfort. Jae Yong Suk, Marc Schiler and Karen Kensek
3) Unified evaluation of total radiation in urban environments. Navid Hatefnia, Amir Barakati, Marjan Ghobad and Azar Eslam Panah
3) Care provision fit for a warming climate. Rajat Gupta and Matt Gregg

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Special PLEA Edition


Guest editors:
Pablo La Roche, Paula Cadima, and Marc Schiler

Pablo La Roche is Professor of Architecture at Cal Poly Pomona University and Sustainable Design Leader at CallisonRTKL. His research interests include passive cooling systems and low energy carbon neutral architecture having published more than 130 papers in conferences and journals in these topics. He has authored and co-authored several books and the second edition of his book “Carbon Neutral Architectural Design” (CRC Press-Taylor Francis) will be available in July 2017. In 2008 he led the Cal Poly Pomona team that received the NCARB Grand Prize and recently his studio was selected to participate in the pilot phase of the 2030 curriculum project. Dr La Roche has served as chair and technical reviewer of numerous conference sessions and in 2016 chaired the 32nd edition of the Passive Low Energy Architecture Conference PLEA in Los Angeles California. Dr La Roche is also past president of the Society of Building Science Educators (SBSE) and past chair of the solar buildings division of the American Solar Energy Society (ASES).

Marc Schiler is a professor at the University of Southern California, teaching undergraduate and graduate courses in Environmental Controls and graduate studios in lighting and environmentally related courses. He has been the director of the Chase L Leavitt Graduate Program in Building Science and Vice Dean. Professor Schiler graduated from USC in 1974 and worked in Los Angeles, attended Cornell, did research in the Cornell Computer Graphics lab and was an Assistant Professor of Architecture and Landscape Architecture there for four years. He returned to USC in 1982 and has been consulting and teaching in Southern California ever since. He has authored, co-authored or edited six books on topics in environmental controls, over 100 papers, consulted on over 50 buildings and given invited lectures, worldwide. Professor Schiler first studied the impact of landscape design on building energy usage. His research interests transitioned toward lighting and daylight harvesting and then towards issues of glare, and then to issues of glare and solar convergence around buildings. The best-known example is his work on the Walt Disney Concert Hall, rectifying the glare issues without impacting the building aesthetically. He continues to consult on reflected glare and has managed to keep multiple projects out of the news.

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Subscriptions email: sales@portland-services.com
Information for authors: Author Services at http://journalauthors.tandf.co.uk
This design research explores the physical and poetic relation between architecture and climate by introducing a combined tactile and numerical approach to creation. Through a graduate design studio experience based on a conceptual framework, it is structured in several steps and exploration methods to address the following questions:

- How does the structure of space regulate environmental forces such as sun and wind to increase the hedonic experience of place?
- How does material change in response to environmental flows of wind, sun, rain and snow?
- How can physical model experiences inspire architects and engineers to engage in a more ‘tactile’ reflection on natural phenomena?
- How can eroded matter create new typologies best adapted to a given environment?

The project innovates at three levels: its unique corpus of erosion typologies, its combined analogical and numerical simulation methodology, and the representation of the dynamic nature of erosion into architectural morphology.

Figure 6. A thermal erosion using foam layers, from sunlighting to night-time experiences.

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5) Effect of changing window type and ventilation strategy on indoor thermal environment of existing garment factories in Bangladesh. Md Mohataz Hossain, Benson Lau, Robin Wilson and Brian Ford

6) The impacts of dynamic façade shading typologies on building energy performance and occupant’s multi-comfort. Ihab Elzeyadi

7) Erosion in architecture: a tactile design process fostering biophilia. Claude M. H. Demers and André Potvin

8) Satisfaction with indoor environmental quality in BREEAM and non-BREEAM certified office buildings. Sergio Altomonte, Sara Saadouni, Michael G. Kent and Stefano Schiavon

---Conference Index---

NEW ZEALAND
51st International Conference of the Architectural Science Association (ANZAScA)
Victoria University of Wellington, New Zealand
29 November - 2 December 2017
Back to the future: The next 50 years

UK
London Design Festival
London, England
Sept 16–24 2017
AA Women and Architecture in Context
London, England
Nov 2–7 2017

Canada
World Design Summit
Montreal, Canada
Oct 16–25 2017

2017 Architectural Science Association (ASA ANZAScA) Conference Update
We can report that this year’s conference has already had 170 submissions
The Past and Future City. How Historic Preservation is Reviving America's Communities

Authors: Stephanie Meeks and Kevin C. Murphy

Review by: Professor Richard Hyde

Publisher: Island Press, New York

The first glance this book is a blue print for developing a place centre urbanism that brings continuity to our cities. The table of contents roughly translates into a set of principles for creating more livable and loveable cities.

The first chapter is concerned with the issue of 'Downtown is for People: Competing Visions of the Ideal American City.' The authors lay down the critical discussion which follows the work of Jane Jacobs in 1961 and her remarkable book 'The Death and Life of Great American Cities.' The basic axiom of Jacobs work is that older buildings and suburbs provide critical and necessary space for entrepreneurs, small businesses and a diversity of residents to thrive. The book is about how the 'urban renewal' movement started at this time and has grown and flourished. There is a strong argument that the Radiant City created by Le Corbusier is not necessarily the only model for urban development.

Chapter 2 espouses the principle of 'Older, Smaller and Better: How Older Buildings Enhance Urban Vitality.' This is supported by research carried out by the National Trust's Green Preservation Lab. This is important because it shows how projects can be made to work viable.

This leads into a chapter on 'Making it Work for Your City: Unleashing the Power and Potential of Urbanism.' In Chapter 3 the authors provide a series of steps by which the preservation of older suburbs can be achieved. The authors review strategies such as creating historic and conservation districts and better financial incentives.

Chapter 4 makes the arguments about 'Buildings Reborn: Keeping Historic Properties in Active Use.' The authors tell interesting stories about the early work on preservation of houses as House Museums. The early days of preservation involved the saving buildings of note such as Washington's house in Mount Vernon. Almost by accident the house struck a chord in the national interest in the heart of a passing South Carolina woman, why was the house of a former president allowed to become derelict? She formed a Ladies Association to raise funds to conserve the building (p 38). Hence, the House Museum became a way of conserving a notable building. Since then more ways of preserving buildings have developed including the adaptive reuse of buildings. There are many issues concerning what is preserved and what is retrofitted to accommodate the new uses.

Next, chapter 5 is a more reflective chapter on 'Our Diverse History: Towards a More Inclusive History of Communities' makes the point that 'our older suburbs mirror the growth of our nation; they tell the American story'.

Chapter 6 is 'Mitigating the Great Inversion: Problems of Affordability and Displacement.' The Great Inversion speaks of the changing housing costs where original working class areas are now seeing increasing housing costs and higher costs of living, which displaces the working class to other more affordable areas of the city. For example Jane Jacobs house originally values at $7000 sold in 2009 for $3.3 million (p 209).

Finally chapter 7, 'The Greenest Buildings: Preservation, Climate Change, and The Environment,' broadens the preservation debate to include environmental issues such as it is more cost effective to recycle a city that to rebuild it. Some of the case studies in this chapter make the point. The picture of the historic Farnsworth House in Plano, Illinois under water due to flooding through increased urbanisation and development.

In conclusion the authors reinforce the argument that older parts of the city provide a sense of identity to a community.

On a final note the authors have written the book in a style that brings history to life and makes the story so much more interesting. It's a good read.