



The Association for Preservation Technology International  
Association pour la préservation et ses techniques

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### **The *APT Bulletin*: Special Issue on Energy Performance and Historic Buildings**

This new issue of the *APT Bulletin: The Journal of Preservation Technology* focuses on energy-performance upgrades to historic buildings. In her introduction, Marilyn Kaplan, the guest editor, presents the questions and problems that drive this issue. As architects and engineers seek to improve energy efficiency and sustainability, they must also consider the potential risks of damaging historic structures with new and sometimes untested technologies.

The articles cover potential problems that can arise when upgrades are made to various materials and building types, scholarship on options available to practitioners, and analysis methods that can be used in the design-planning and post-design monitoring phases. As a group, the articles indicate that there is still much more research to be done to determine the best strategies for simultaneously upgrading energy performance and protecting historic structures.

A summary of APT's recent Summit on the Future of Codes and Historic Buildings, held in Philadelphia in April by Kaplan and her APT Codes and Standards Technical Committee co-chair, Mike Jackson, is also included.

“Applications and Validation of Building Performance Analysis for a Georgia Farmhouse” by Julie Arnold, Ramana Koti, Susan Turner, and Sandeep Ahuja focuses on the preservation of the Main House at Hardman Farm. The authors discuss the energy-modeling

approach that was taken in the computational analysis for this project to determine that a minimal mechanical intervention was the best course of action. Post-implementation monitoring at the house also features prominently in this article.

Richard Renaud and Brian S. Rose, in their article entitled “Combating Condensation at the National Air and Space Museum,” describe computational analysis methods relevant to condensation risks at the large glass atriums at the Smithsonian National Air and Space Museum in Washington, D.C. The article considers the impact of reintroducing humidification in glazed spaces with the additional challenge of protecting the various delicate materials and massive artifacts in the museum’s collection of historic aircraft.

“Insulating the Walls of Historic Buildings: A Systematic Review of Existing Guidance” by Daniel S. Castele and Amanda L. Webb provides an analysis of recent North American and European publications on wall insulation for historic buildings. Thirty-nine works are included in the study, which seeks to establish the state of this field, identify trends, and find holes in the existing scholarship. Tables organizing data by place of publication, wall type, and recommendation give readers a sense of the various approaches to wall-insulation issues.

David Artigas and Sean O’Brien, in “Energy, Hygrothermal, and Freeze-Thaw Considerations for Insulating Mass Masonry Walls,” focus their study of insulation on masonry walls, which are generally considered to have poor energy performance without insulation. This article explores the benefits and concerns of placing insulation on the interior of mass masonry walls. It details freeze-thaw deterioration, a major moisture-retention issue that can be caused by the addition of insulation.

This issue contains a new *Practice Point*, the eighteenth in the series: Thomas E. Boothby’s “Classical Structural Analysis Methods for Historic Structures,” which explores

nineteenth-century methods of structural analysis—empirical, analytical, and graphical. This is a useful feature for practitioners, as Boothby states, because “there is recognizable value in applying modern, better-understood analysis methods to the structural analysis of historic structures, there is similar value in reviewing the original design intent and the methods used to achieve these objectives.”

This issue also features *Toit. Bois. Bardeau. Guide technique*, the winner of the 2018 Lee Nelson Book Award. The book, published in French, is a technical guide to wood-shingle roofs and was written by Patrick Quirion and Mireille Brulotte. The piece included in the *APT Bulletin* briefly discusses the strategy behind creating this guide for a diverse audience and the importance of this roofing system, which is part of Québec’s cultural heritage.

The book reviews for this special issue were procured by book review editor Lesley M. Gilmore. *A Century of Design in the Parks: Preserving the Built Environment in National and State Parks, Santa Fe, New Mexico, June 21–23, 2016*, edited by Debbie Dietrich-Smith, David Driaspa, Kathryn Doyle, Frances Gale, and Lucy Lawliss, is reviewed by Sharon Park. Lesley M. Gilmore’s *Canyon Village in Yellowstone: The Model for Mission 66* is reviewed by John Feinberg. This issue also includes a Building Technology Heritage Library feature on energy performance and building envelopes prepared by Mike Jackson.

The Association for Preservation Technology is the only international organization dedicated solely to advancing appropriate traditional and new technologies to care for, protect, and promote the longevity of the built environment and to cultivate the exchange of knowledge throughout the international community. Founded in 1968 in Québec as a joint venture between Canadian and U.S. preservationists, APT provides members with benefits that include publications, networking opportunities, conferences, training courses, and student scholarships.

As a benefit of membership, APT members can, at no cost, search, browse, download, and print full-text PDF versions of past *Bulletin* articles on JSTOR, an international online digital archive. Visit <http://www.apti.org> for more information. Non-APT members also have the option of joining JSTOR's "Register and Read" program, which allows a user to read six articles online without charge each month.

The *APT Bulletin*, a peer-reviewed, scholarly journal, is a valued source for state-of-the-art information on preservation technology. Published three times a year by APT, the *Bulletin* examines all aspects of preservation technology in feature articles and book reviews, keeping readers at the leading edge of the field.

Mount Ida Press, which edits and produces the *APT Bulletin*, specializes in high-quality publications on history, architecture, and building technology. For further information about the *APT Bulletin*, please contact the editorial office in Albany, New York, at 518.426.5935 or at [info@mountidapress.com](mailto:info@mountidapress.com).

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Vol. 50:1, 64 pp., 48 illus.