

NCPTT IN BRIEF



U.S. Department of the Interior
National Park Service

National Center for Preservation Technology & Training • Technology Serving the Future of America's Heritage



Lee H. Nelson Hall
Home of NCPTT

NCPTT advances the application of science and technology to historic preservation. Working in the fields of archeology, architecture, landscape architecture and materials conservation, the Center accomplishes its mission through training, education, research, technology transfer and partnerships.

NCPTT was created by Congress in 1992 to develop and disseminate preservation technologies and to train practitioners in new technologies. NCPTT promotes preservation technologies in the fields of archeology, historic architecture, historic landscapes, and materials conservation.

NCPTT emphasizes preservation technology research. We support the use of innovative technologies in the preservation of cultural properties and the transfer of technology from arenas not readily identified within historic preservation.

Technology Serving the Future of America's Heritage

NCPTT conducts preservation technology research

NCPTT undertakes research at its in-house laboratories, which include an environmental chamber that allows researchers to test the effects of pollutants on cultural materials. More widely, the Center stimulates new research through its nationwide grants program.



NCPTT provides grants, creates partnerships

NCPTT maintains a broad partnership base that includes National Park Service sites; other federal agencies; state and tribal historic preservation offices; universities; private corporations; and local, state, national and international non-profit organizations. The Center provides direct and competitive grants to promote research and training opportunities in preservation technology.

NCPTT serves as a trainer and convener

The Center develops and conducts regional seminars



and workshops on topics like cemetery monument conservation. NCPTT promotes excellence in preservation by promoting historic preservation training and education opportunities for professionals through projects like the NCPTT Preservation Engineers Initiative.

NCPTT serves as a Clearinghouse and Web Portal



NCPTT's website and publications enable the Center to deliver the latest news about preservation technologies to a variety of audiences. Also, NCPTT supports the distribution of preservation information through its grants and partnerships.

NCPTT teaches preservation for future generations

Heritage Education – Louisiana conveys to our youngest citizens the power of place and the stories behind our irreplaceable treasures. The program administers competitive mini grants and holds teacher workshops to enhance the educational experience by teaching students the value of their local heritage. The program also serves as a national model for heritage education.

NCPTT IS CURRENTLY FOCUSED ON SEVEN RESEARCH PRIORITIES:

1. Protect cultural resources against vandalism, looting, terrorism, and natural disasters
2. Conserve architectural materials of the "recent past"
3. Develop appropriate technologies to preserve houses of worship and cemeteries
4. Monitor and evaluate preservation treatments
5. Study environmental effects of pollution on cultural resources
6. Document and preserve threatened cultural landscapes
7. Develop innovative techniques in dating, monitoring, analysis, and remote sensing of archeological sites and artifacts

Materials Research Program

National Center for Preservation Technology and Training



EXPERIENCE
YOUR
AMERICA

NCPTT's Materials Research Program consists of a group of researchers within the National Park Service who work in partnership with parks, laboratories, government agencies, universities and others to understand how cultural objects deteriorate with time. The program's goals are (1) to understand cultural resources decay, (2) to develop and evaluate new treatments to protect cultural resources and (3) to disseminate scientific results and preservation technologies through presentations, publications, and training for preservation professionals nationwide. A special interest within the program is the study of outdoor air pollution effects on cultural materials. Research projects are developed internally at the NCPTT Environmental Exposure Facility located on the campus of Northwestern State University, Natchitoches, Louisiana, and externally through cooperative and interagency agreements, contracts, and grants.

Partnering to Protect

The Materials Research Program seeks partnerships within both the public and private sector to collaborate on projects of mutual interest that advance preservation technology. For example, The U.S. General Services Administration (GSA) is responsible for Federal Properties across the country including many historic buildings. Currently they are establishing policies for the maintenance and treatment of terrazzo flooring found in many of these buildings. They lack the expertise to scientifically evaluate treatments. Together, the Materials Research Program and the GSA have joined to study and evaluate treatments such as vitriciation of terrazzo floors.

In order to understand the complex interactions of air pollution with materials, the Materials Research Program helped to develop a unique recirculating exposure chamber that allows us to expose materials such as stone or metal samples to air pollution under controlled conditions. Using this chamber, the uptake of pollution on surfaces can be measured. Researchers can look at how different features of the material affect pollution deposition and develop new treatments to minimize damage to materials. Currently, the program has initiated partnerships with organizations like DuPont Corporation to test new treatments for limestone and marble. The treatments may include stone strengtheners, pollutant repellents, or surface protectants.

Meeting the Needs of Preservation

In addition to our laboratory research, we actively look at preservation issues in the field. For example, the program is examining technical issues associated with the preservation of historic cemetery monuments. New technical approaches in cemetery preservation range from advances in databases and geographical information systems to new treatments to deter biological growth on stone. As we evaluate new treatments and methodologies, we seek field test sites for further trials. Based on our research, we offer cemetery monument conservation workshops advancing the latest knowledge in cemetery preservation.

Contact Information

Mary F. Striegel, 645 College Avenue, Natchitoches, LA 71457; telephone 318/356-7444; facsimile 318/356-9119; e-mail: Mary_Striegel@nps.gov; website: www.ncptt.nps.gov.

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NCPTT's National Initiative in Cemetery Preservation

In 2001, NCPTT identified the need for new technologies to protect and preserve cemeteries and houses of worship as one of six research priorities. In addition to developing new technologies there was a need to transfer and disseminate preservation technologies to preservation professionals and grassroots cemetery enthusiasts.

NCPTT has developed a suite of specialized training workshops for a wide range of audiences. The flagship workshops are the Cemetery Monument Conservation series that has been on-going since 2003. These three-day regional workshops provide professionals with the latest trends and techniques for conserving historic cemeteries and emphasize hands-on participation. In addition, each workshop devotes special sessions to topics of significance to that region. These workshops included:

- The Southern Regional Workshop, American Cemetery, Natchitoches, La., May 2003, with emphasis on biological growth
- The Mid-Atlantic Regional Workshop, Congressional Cemetery, Washington, DC, May 2004, with emphasis on masonry vaults
- The Midwest Regional Workshop, Prospect Hill Pioneer Cemetery, Omaha, Neb., May 2005, with emphasis on zinc and other metal monuments
- The Southwest Regional Workshop, Virginia City, Nev., Silver Terrace, Catholic Cemetery, September 2006, with emphasis on wooden grave markers and fences

Beginning in 2004, NCPTT recognized the need for basic cemetery preservation training geared towards cemetery enthusiasts and individuals associated with small family cemeteries. The first efforts to reach this larger audience



Participants learn monument repair skills during the Cemetery Monument Conservation workshop.

began in 2004 when NCPTT co-sponsored a one-day cemetery preservation seminar at the Historic Arkansas Museum in Little Rock. This effort grew into the Basics in Cemetery Conservation workshops, first offered in June 2005 at the Old Anacoco Baptist Church Cemetery, La. This one-day workshop provided participants with tools they need to make informed decisions in everyday maintenance of their local cemeteries. Lectures and demonstrations included an overview of the types of materials found in cemeteries, and problems associated with these materials. Participants learned about appropriate ways to clean headstones and damaging techniques to avoid. Other topics included iconography and symbolism found in cemeteries. In March 2006 the Basics workshop was offered at Fairlawn Cemetery, Oklahoma City, Ok.

Based on requests from workshop participants yearning for more in-depth hands-on efforts and a wider range of techniques, NCPTT offered its first Advanced Techniques in Cemetery

Preservation workshop in July 2006 at American Cemetery, Natchitoches, La. This five day hands-on workshop allowed participants in small groups to work from start to finish on a complex and multi-stage monument repair. Participants learned about stone monument cleaning, adhesive repair, color matched fills, historic lime stucco, lime mortar brick masonry and lime wash through hands-on activities.

Through NCPTT's core mission of developing and evaluating new technologies, scientists and conservators at the Center continue to focus on new research activities to answer pressing questions facing historic cemeteries. Through a joint effort with the National Cemetery Administration, NCPTT is evaluating the long-term effects of commercially available chemical cleaners for use in cemeteries. This nationwide effort looks at the effectiveness of different products for removing biological growth from federally-issued headstones. Additionally, researchers evaluate possible changes to the stones after cleaning. The results of this research effort will be recommendations that provide professionals with safe choices for cleaning headstones without long-term damage.

New tools are continually being developed at NCPTT, from guidelines for disaster response in cemeteries to rapid cemetery condition assessment forms. NCPTT provides preservation professionals and cemetery enthusiasts with a full range of tools for the long-term care of our nation's final resting places.

FOR MORE INFORMATION

Dr. Mary F. Striegel
Chief,
Materials Research Program
mary_striegel@nps.gov
318/356-7444