



Preserving the Past

Structures that have stood for thousands of years are now crumbling because of air pollution. Mathematicians are using models that incorporate factors such as humidity, temperature, and the level of pollution to better understand the degradation process (which occurs when pollutants reacting with water vapor transform the outer surface of stone into a vulnerable layer of porous gypsum). The models, based on differential equations, can point to better strategies for restoring ancient monuments, perhaps preventing their destruction.



Image by Mario Lapid, courtesy of Sacred Destinations, www.sacred-destinations.com.



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