# THE MARBLE VISITORS' BOOK

THE HIDDEN GRAFFITI OF SAN MARCO BASILICA IN VENICE

The basilica of Saint Mark in Venice is among the most iconic monuments in Europe and a centuries-old site of cult and pilgrimage. The basilica embodies the vocation of the city of Venice and its unique nature and position, between East and West, between the land and the sea. Such an impressive monument has always inspired a multitude of different feelings to visitors and pilgrims, preserved on the basilica's walls in the form of graffiti.

A preliminary survey in 2006, showed that the walls, pillars, columns, balustrades and plutea of the basilica are entirely covered with drawings and inscriptions. The graffiti have been invisible for centuries due to their faint traces, detectable only in specific lighting conditions. A first analysis of the visible material showed an unexpected variety of forms such as inscriptions in four different alphabets, human figures, ships, coats of arm, symbols. The plethora of graffiti animate the basilica interior with its walls now appearing as a book where the visitors registered their messages, feelings and prayers from the half of the 14th century – when the marble revetments were executed – until today.
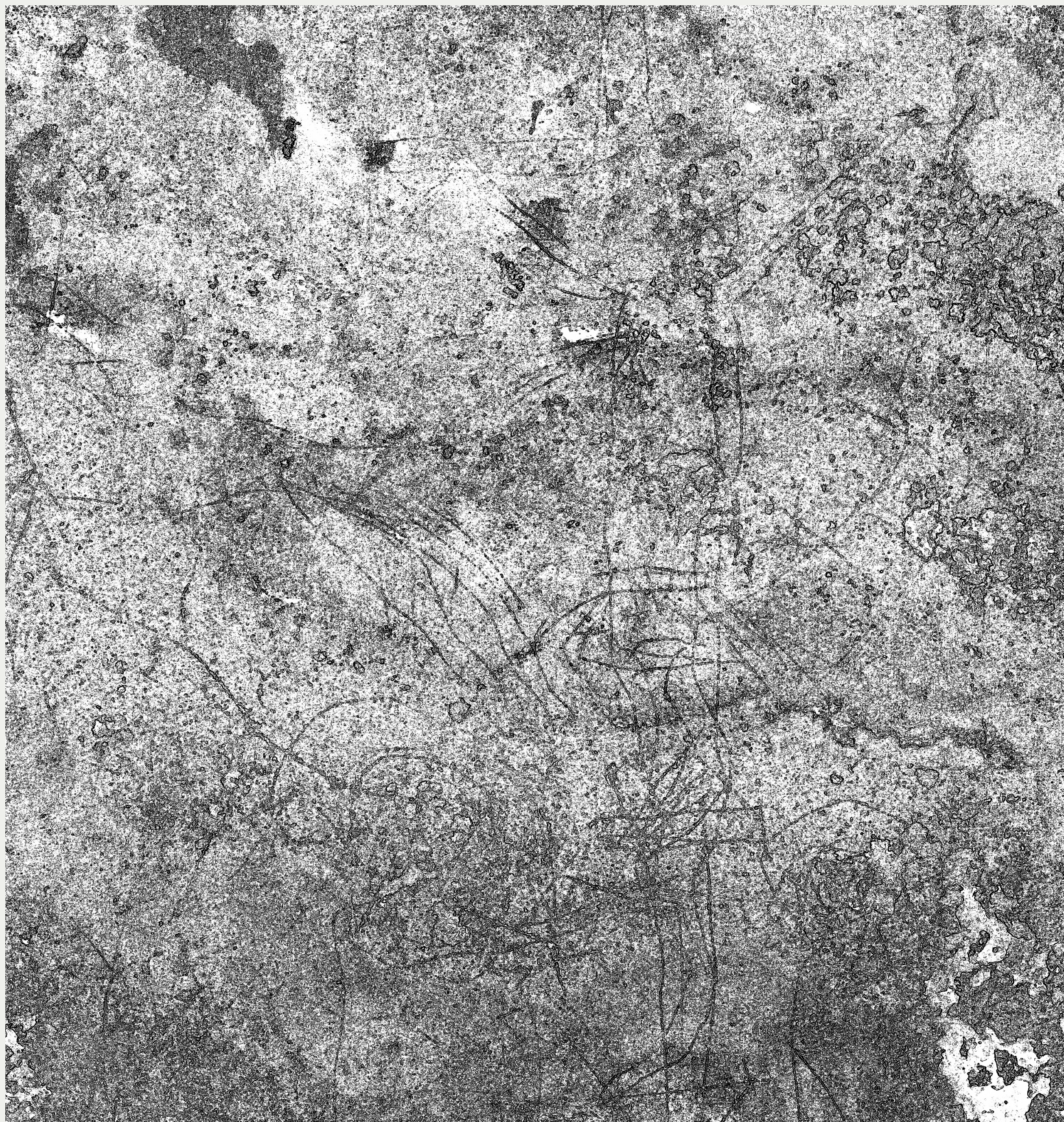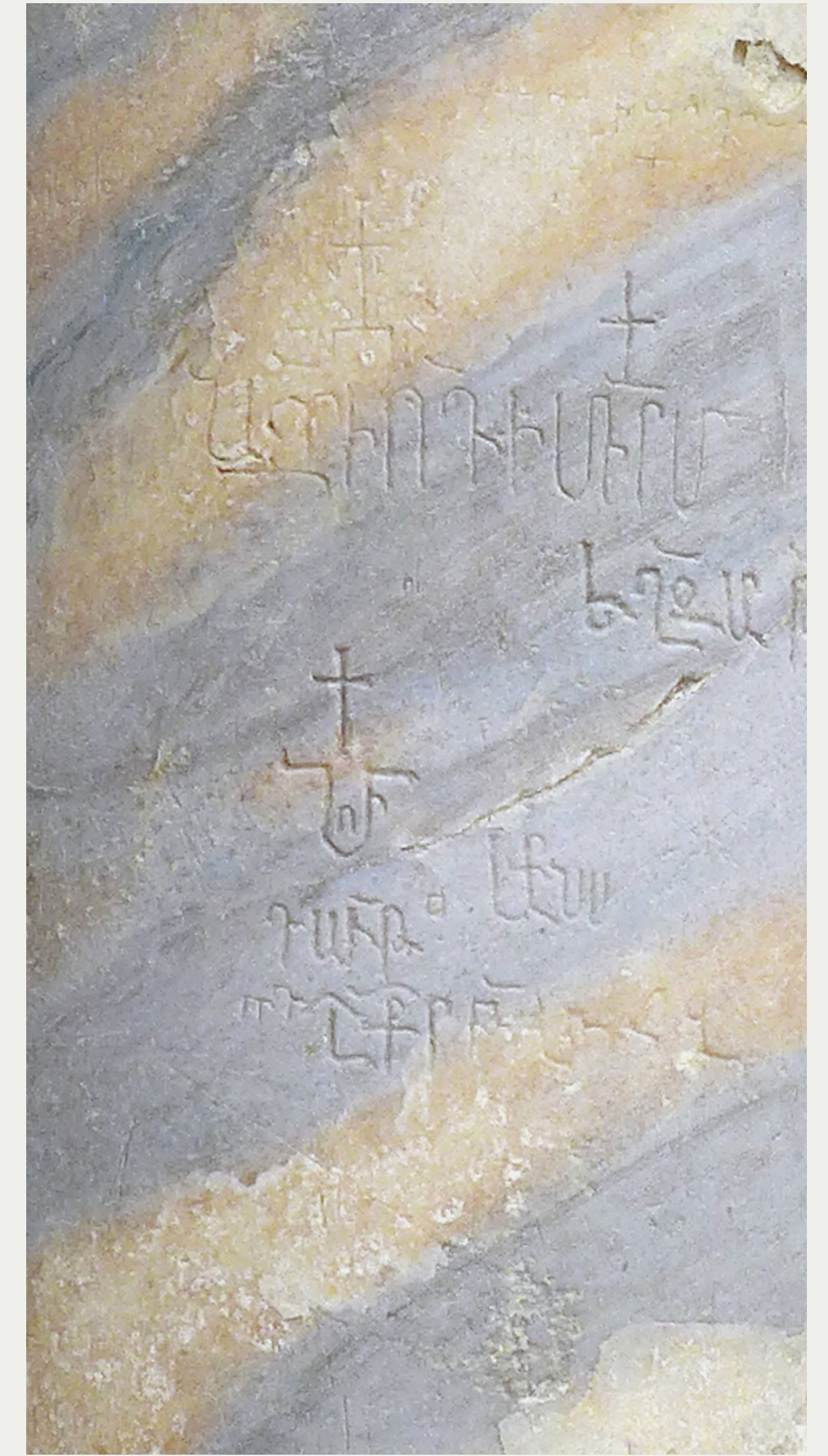
This rich heritage remained inaccessible until 2018 when an APAC Labs/ STARC team was able to document selected graffiti and to digitally visualize them. The successful application of photogrammetry on marble revetments presented challenges regarding the material's reflectivity and the related calibration of specialized cameras. These issues were solved by applying specialized technical imaging solutions, combining edge-detection and change-detection applications.

Overall, the aforementioned fieldwork experience at Saint Mark helped the definition of a methodological pipeline for the identification and documentation of non-visible graffiti. Furthermore, new needs in the study of graffiti were now identified. Once documented, graffiti should be situated in their spatial context and thus interpreted as such. The Advanced Visualization Lab and the Clower Open Source Data Management System group of the National Center for Supercomputing Applications (NCSA) of the University of Illinois at Urbana Champaign have generously supported the project by providing tools and a dedicated repository system able to manage graffiti information in their artistic, and architectural context. The application of digital technologies in the study of San Marco's inscriptions aims to provide a cutting-edge reliable and specific workflow for the documentation, analysis and visualization of historic graffiti.