

Departmental Colloquium

Mathematicians Helping Art Historians and Art Conservators

Ingrid Daubechies (Duke University)

Abstract: Mathematics can help Art Historians and Art Conservators in studying and understanding art works, their manufacture process and their state of conservation. The presentation will review several instances of such collaborations in the last decade or so, and then focus on one particular example: virtual cradle removal.

Between the 12th to the 17th century, European artists typically painted on wooden boards. To remediate or prevent structural or insect damage, conservators in the 19th and first half of the 20th century first thinned the panels to a few mm, and then strengthened the much thinner wood structures by (permanently) attaching to their backs hardwood lattices called cradles. These cradles are highly visible in X-ray images of the paintings.

X-rays of paintings are a useful tool for art conservators and art historians to study the condition of a painting, as well as the techniques used by the artist and subsequent restorers. The cradling artifacts obstruct a clear "reading" of the X-rays by these experts. These artifacts can be removed, using a variety of mathematical tools, including Bayesian algorithms.

Professor Daubechies is the 2015-2016 UIC WISEST Distinguished Visiting Scholar. A reception will follow her scientific

Friday, February 26 at 3:00 PM in Cardinal Room 329 of Student Center East

lecture. The lecture and reception are taking place in Cardinal Room 329 on the 3rd floor of Student Center East, accessible by two escalators.

Friday, February 26 at 3:00 PM in Cardinal Room 329 of Student Center East