Message from the Program Director

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Faculty News Continued

John O'Neill Associate Professor of Paper Conservation, is on sabbatical leave in 2010. He is spending his time catching up on long-overdue reading as well as carrying out research in several subject areas. John's primary research interest is the early history of machine-coated papers, and a research trip to New Brunswick, New Jersey in July was useful in uncovering information on this littleknown segment of paper history. John is planning to attend the 30th congress of the International Paper Historians in Angoulême, France, an area with a very long history of papermaking. The congress will include visits to several museums and paper mills in the area, including the Moulin du Verger, where paper has been made continuously since 1635. While in France, John will also visit the paper mill at Brousses et Villaret, near Carcassonne.

Krysia Spirydowicz Director of the Art **Conservation Program and Associate Professor** of Artifacts Conservation, has been awarded a professional placement in the UK next summer at the Birmingham Museums and Art Gallery. Krysia will work with other museum professionals on the conservation treatment of the Staffordshire Hoard. The Staffordshire Hoard is the most valuable treasure hoard ever discovered in the UK, worth £3.3 million. The Hoard consists of more than 1,500 beautifully crafted gold and silver objects from the 7th century Anglo-Saxon kingdom of Mercia. The Hoard was discovered in July 2009 by a local metal detector enthusiast. The find is likely to spark decades of debate among archaeologists, historians and the public. As Leslie Webster, Former Keeper of the Department of Prehistory and Europe, British Museum, comments: "This is going to alter our perceptions of Anglo-Saxon England... as radically, if not more so, than the Sutton Hoo discoveries. Absolutely the equivalent of finding a new Lindisfarne Gospels or Book of Kells."

For standard FTIR analysis, a beam of infrared radiation is passed through a sample which absorbs infrared light at wavelengths characteristic of the molecules in it. An infrared spectrum is obtained in the form of a graph of wavelength versus percent transmission or absorption. Comparison of the spectrum of a material of unknown composition with spectra from a data base of known materials is used to identify the compounds present in the sample. The instrument is equipped with an attenuated total (internal) reflectance (ATR) sampling accessory. Infrared spectra are obtained by reflection at the interface between a sample material and a material with a higher refractive index such as diamond. This device uses very small amounts of sample and requires no sample preparation. It gives infrared spectra similar to transmission spectra.

The X-ray fluorescence analyser is a portable hand-held instrument containing a small x-ray tube that produces ionizing radiation. The x-ray beam is directed through a window at the front of the device on to a sample where it excites electrons from the inner core K (or L shells) of atoms of elements heavier than silicon. Replacement of the ejected electrons by those from higher L (or M shells) gives rise to x-ray emission (fluorescence). The emitted x-rays pass through the same window and are detected and analysed in the instrument. The results are displayed on the screen of an iPAQ pocket PC 0(e18 BDC BT/T1_0rrhe iu)] 322 sougs heahe results