

Scientific Programme

Tuesday, October 15, 2019

08.00 - 09.00 Registration and check-in at "Museo Diocesano"

09.00 - 09.10 Opening Remarks

09.10 - 11.00 *S1: Methods and Instrumentation - Session Chair: Koen Janssens*

| | | |
|---------------|---|------|
| 9.10 - 9.40 | <p>Rapid Scanning XRF of Cultural Materials at the Australian Synchrotron's XFM Beamline</p> <p>Daryl Howard</p> | INV1 |
| 9.40 - 10.00 | <p>Depth-resolved MA-XRPD: possibilities and limitations</p> <p>Frederik Vanmeert, Steven de Meyer, Ermanno Avranovich, Nouchka de Keyser, Annelies van Loon, Abbie Vandivere and Koen Janssens</p> | O1 |
| 10.00 - 10.20 | <p>Development of a new MA-XRF instrument integrating UV PhotoLuminescence and Reflectance spectrometry</p> <p>Thomas Calligaro, Laurent Pichon, Brice Moignard, Raphaël Moreau and Didier Gourier</p> | O2 |
| 10.20 - 10.40 | <p>On the interaction of X-rays and samples by quantification of energy deposition</p> <p>Timo Wolff, Roald Tagle, Falk Reinhardt and Ulrich Waldschläger</p> | O3 |
| 10.40 - 11.00 | <p>A new automated XRF background subtraction method for MA-XRF technique</p> <p>Paula R. P. Allegro, David Ciro and Marcia De Almeida Rizzutto</p> | O4 |

11.00 - 11.25 COFFEE BREAK

11.30 - 13.10 S2: Paintings - Session Chair: Joris Dik

| | | |
|---------------|---|----|
| 11.30 - 11.50 | New Light on Verrocchio's Paintings: Spectral Imaging John Delaney, Kathryn Dooley, Francesca Gabrieli, Costanza Cucci and Marcello Picollo | 05 |
| 11.50 - 12.10 | Tudor court portraiture before Holbein: Unprecedented insights achieved with MA-XRF scanning Christine Slottved Kimbriel, Claudia Caliri, Giulia Privitera and Francesco Paolo Romano | 06 |
| 12.10 - 12.30 | Sorting the Palettes of Rembrandt – Three New Approaches to Cluster MA-XRF Data Matthias Alfeld, Joan Belder, Barend Thijsse, Joris Dik, Thomas Höllt, Anna Vilanova and Robert Erdmann | 07 |
| 12.30 - 12.50 | Amedeo Modigliani's Woman in a yellow dress: non-invasive analysis using macro X-ray fluorescence imaging Marco Nervo, Claudia Caliri, Anna Piccirillo, Sara Abram, Melissa David, Daniele Demonte, Michela Cardinali, Laura Cantone and Francesco Paolo Romano | 08 |
| 12.50 - 13.10 | Buy one get one free. Hidden compositions revealed in authenticity studies of paintings by MA-XRF Steven Saverwyns and Alexia Coudray | 09 |

13.10 - 14.25 LUNCH

14.30 - 16.00 S3: Paintings & Methods - Session Chair: Matthias Alfeld

| | | |
|---------------|--|------|
| 14.30 - 15.00 | <p>Imaging secondary reaction products at the surface of Vermeer's Girl with the Pearl Earring by means of macroscopic X-ray powder diffraction scanning</p> <p>Steven De Meyer, Frederik Vanmeert, Rani Vertongen, Annelies Van Loon, Victor Gonzalez, Abbie Vandivere, Geert van der Snickt and Koen Janssens</p> | INV2 |
| 15.00 - 15.20 | <p>The "Scream" by Edvard Munch (1910): non-invasive integrated spectroscopic investigations of the painting materials</p> <p>Laura Cartechini, Sandu, Francesca Rosi, Chiara Grazia, Letizia Monico, Aldo Romani, Renato Pereira de Freitas, Godzimirska, Chan, Landro, Tvei, Pettersen and Costanza Miliani</p> | O10 |
| 15.20 - 15.40 | <p>Identification and investigation of the fading of eosin lakes in oil paints: an analytical review</p> <p>Alba Alvarez Martin, Ivan Susakov, Sabine van Doorslaer, Stijn Legrand, Geert van der Snickt, Timothy P. Cleland, Asher Newsome and Koen Janssens</p> | O11 |
| 15.40 - 16.00 | <p>Picasso's Acrobat Family: an integrated non-invasive study of materials, techniques and state of preservation</p> <p>David Buti, Laura Cartechini, Francesca Rosi, Aldo Romani, Marco Raffaelli, Alice Dal Fovo, Aurélie Tournié, Anne Michelin, Christine Andraud, Eva Nygård and Mariateresa Pullano</p> | O12 |

16.00 - 16.25 COFFEE BREAK

16.30 - 18.10 S4: New objects - Session Chair: Piet Van Espen

| | | |
|---------------|--|-----|
| 16.30 - 16.50 | <p>MA-XRF imaging to feature Tibetan Thangka</p> <p>Jessica Brocchieri, Carlo Sabbarese, Marion Boyer and Laurence de Viguerie</p> | O13 |
| 16.50 - 17.10 | <p>MA-XRF imaging of Bronze Age wall-painting pigments</p> <p>Andreas Karydas, Claudia Caliri, Vasiliki Kantarelou, Francesco Paolo Romano, Eleni Kokiasmenou and Hariclia Brekoulaki</p> | O14 |

| | | |
|---------------|---|-----|
| 17.10 - 17.30 | <p>Neskhonsuennekhy's coffin lid. A study case by combining MA-XRF, multispectral imaging and micro-sampling</p> <p>Paola Buscaglia, Claudia Caliri, Tiziana Cavaleri, Enrico Ferraris, Marco Nervo and Francesco Paolo Romano</p> | O15 |
| 17.30 - 17.50 | <p>The use of X-ray fluorescence imaging for the distinction of iron-gall ink inscriptions on artefacts from Stradivari's workshop</p> <p>Marie Radepont, Oulfa Belhadj, Hortense De la Codre, Jean-Philippe Echard, Stéphane Vaiedelich and Véronique Rouchon</p> | O16 |
| 17.50 - 18.10 | <p>MA-XRF analysis of metal objects from the archaeological site of Ferento</p> <p>Giorgia Agresti, Giuseppe Bonifazi, Giuseppe Capobianco, Elisabetta De Minicis, Claudia Pelosi and Silvia Serranti</p> | O17 |

18.10 - 19.10 POSTER SESSION

Scientific Programme

Wednesday, October 16, 2019

8.30 - 10.20 *S5: Paintings - Session Chair: Paolo Romano*

| | | |
|---------------|---|------|
| 8.30 - 9.00 | 'Operation Night Watch': Macro-X-ray Fluorescence Imaging of Rembrandt's Largest Painting Annelies van Loon | INV3 |
| 9.00 - 9.20 | Caravaggio's painting technique and the contribution of Ma-XRF imaging. Some case-studies Marco Cardinali, Beatrice De Ruggieri, Matteo Positano, Geert van der Snickt, Koen Janssens, Matthias Alfeld, Claudia Caliri, Danilo Pavone, Francesco Paolo Romano | O18 |
| 9.20 - 9.40 | Combining MA-XRF and OCT in the investigation of the dark background of Vermeer's Girl with a Pearl Earring Joris Dik, Guusje Hartevelde, Tom Callewaert, Jeroen Kalkman, Abbie Vandivere and Annelies van Loon | O19 |
| 9.40 - 10.00 | Comparative scanning on two versions of Head of Medusa by P.P. Rubens Nouchka De Keyser, Stijn Legrand, Geert Van der Snickt, Gerlinde Gruber, Petr Tomášek and Koen Janssens | O20 |
| 10.00 - 10.20 | Venus and Mars beneath Caravaggio's David with the Head of Goliath Katharina Uhlir, Gudrun Swoboda, Elke Oberthaler, Ingrid Hopfner, Michael Eder, Stefan Weppelmann and Martina Griesser | O21 |

10.20 - 10.45 **COFFEE BREAK**

10.50 - 12.50 S6: Paintings - Session Chair: John Delaney

| | | |
|---------------|--|-----|
| 10.50 - 11.10 | <p>Combining XRF and Vis-NIR Imaging Spectroscopic techniques: its potentials showcased in the analysis of Marco D'Oggiono panel paintings</p> <p>Marcello Picollo, Costanza Cucci, Andrea Casini, Lorenzo Stefani, Francesco Paolo Romano, Claudia Caliri, Monica Gulmini, Anna Piccirillo, Paola Buscaglia and Elena D'Elia</p> | O22 |
| 11.10 -11.30 | <p>A journey into Gauguin's Poèmes Barbares: using MA-XRF and Spectral Imaging instrumentation to map a hidden landscape</p> <p>Marc Walton, Katherine Eremin, Emeline Pouyet, Georgina Rayner, Kate Smith and Gianluca Pastorelli</p> | O23 |
| 11.30 - 11.50 | <p>Rogier van der Weyden's Lamentation: combining MA-XRF and reflectance imaging spectroscopy</p> <p>Carol Pottasch, Annelies van Loon, John K. Delaney and Kathryn A. Dooley</p> | O24 |
| 11.50 - 12.10 | <p>Modigliani's studio practice revealed by MA-XRF and non-invasive spectral imaging techniques</p> <p>Anaïs Genty-Vincent, Marie-Amélie Senot and Michel Menu</p> | O25 |
| 12.10 - 12.30 | <p>Complementary use of MA-XRF micro-Raman and AFM for investigating Leonardo da Vinci</p> <p>Marina Bicchieri, Paola Biocca, Claudia Caliri and Francesco Paolo Romano</p> | O26 |
| 12.30 -12.50 | <p>Complementary Non-Invasive Imaging Techniques to Study the Painting Technique of Pieter de Hooch</p> <p>Anna Krekeler, Francesca Gabrieli, Victor Gonzalez, Anneliese Földes, John Delaney and Annelies van Loon</p> | O27 |

12.50 - 14.05 LUNCH

14.10 - 16.00 S7: Methods & Instrumentations - Session Chair: Thomas Calligaro

| | | |
|---------------|---|------|
| 14.10 - 14.40 | MA-XRF at the Northwestern University/Art Institute of Chicago Center for Scientific Studies in the Arts Emeline Pouyet | INV4 |
| 14.40 - 15.00 | Machine Learning Analysis of a Painting using Macro-XRF Mapping, Hyperspectral Imaging and Macro-Raman Mapping Luke Butler, Yu Li, Sotiria Kogou, Chi Shing Cheung and Haida Liang | O28 |
| 15.00 - 15.20 | Artifacts in X-ray spectra and how to deal with them Piet Van Espen, Stijn Legrand, Ana Cabal and Koen Janssens | O29 |
| 15.20 - 15.40 | New Computational Methods for the Correction of 3D Effects in Laboratory-based Scanning XRF Stephen Parsons, Seth Parker, Douglas MacLennan, Catherine Schmidt Patterson and Brent Seales | O30 |
| 15.40 - 16.00 | An automated combined analysis of MA-XRF and spectral imaging using machine learning methods Sotiria Kogou, Lynn Lee, Golnaz Shahtahmassebi and Haida Liang | O31 |

16.00 - 16.25 COFFEE BREAK

16.30 - 18.10 S8: New objects - Session Chair: Costanza Miliani

| | | |
|---------------|---|-----|
| 16.30 - 16.50 | The combined use of MA-XRF scanning and MRS point analyses to reveal different hands in the 15th century Breviary of Geraardsbergen Marina Van Bos, Lieve Watteeuw and Dominique Vanwijnsberghe | O32 |
|---------------|---|-----|

| | | |
|---------------|---|-----|
| 16.50 - 17.10 | <p>The Averbode's Evangeliary : MA-XRF and Hyperspectral imaging</p> <p>David Strivay, Aleuna Macarenko, Francois-Philippe Hocquet and Cécile Oger</p> | O33 |
| 17.10 - 17.30 | <p>The importance of being little: MA-XRF on manuscripts on a Venetian island</p> <p>Anna Mazzinghi, Chiara Ruberto, Lisa Castelli, Paola Ricciardi, Caroline Czelusniak, Lorenzo Giuntini, Pier Andrea Mandò, Lara Palla and Francesco Taccetti</p> | O34 |
| 17.30 -17.50 | <p>Analysis of MAXRF data with special consideration of overlapping peaks observed in the analysis of a group of paintings from the Princes Czartoryski collection</p> <p>Paulina Krupska, Julio M. del Hoyo-Meléndez, Michał Obarzanowski and Katarzyna Novlajković</p> | O35 |

17.50 - 19.15 POSTER SESSION + FINAL COCKTAIL

LIST OF POSTERS

- P1 Tomasz Fiutowski, Stefan Koperny, Paulina Krupska, Bartlomiej Lach, Agata Mendys, Bartosz Mindur, Alicja Sikorska, Piotr Wiacek, Pawel Wrobel and Wladyslaw Dabrowski.
Design and performance of a macro-XRF scanner based on GEM type gaseous detector
- P2 Marco Nervo, Francesco Paolo Romano, Claudia Caliri, Anna Piccirillo, Paolo Triolo, Alessandro Gatti, Eleonora Vergallo, Michela Cardinali and Marianna Ferrero
“Costruzione del viadotto”: MA-XRF in the pictorial executive technique of Agostino Bosia
- P3 Simone Cagno, Stijn Legrand, Geert Van der Snickt, Joost Caen and Koen Janssens.
MA-XRF imaging characterizes the 16th century heraldic stained-glass panels in the Sint-Baafs Cathedral (Gent)
- P4 Ermanno Avranovich Clerici, Steven Demeyer, Geert Van der Snickt, Letizia Monico, Costanza Miliani and Koen Janssens.
X-Ray powder diffraction examination of Giotto and Cimabue fragments
- P5 Kirsten Derks, Geert Van der Snickt, Koen Janssens and Katlijne Van der Stighelen.
MA-XRF analysis of 17th-century Brussels Artists: Michael Sweerts and Michaelina Wautier
- P6 Carol Sawyer, Barbi Nicholas, Harris Billings, Sydney Collins, John Delaney, Kathryn Dooley, Travis Fullerton, Francesca Gabrieli, Christina Kargol, Leo Mazow, David Stover, Bruce Suffield, Erich Uffelman and Meredith Watson.
Multiple Imaging Modalities Applied to a Robert Henri Painting at the Virginia Museum of Fine Arts: Key XRF Element Maps from a Bruker Crono
- P7 Anna Galli, Simone Caglio, Letizia Bonizzoni, Michele Gironda, Roberto Alberti and Marco Martini.
More than MA-XRF maps: the investigation of Chariot Race by de Chirico
- P8 Sergio Augusto Barcellos Lins, Giovanni Ettore Gigante, Roberto Cesareo, Stefano Ridolfi and Antonio Brunetti
Testing gold leaves thickness calculation’s accuracy through MC simulations and MA-XRF scanning
- P9 Ana Martins, Ellen Davis and Talia Kwartler
XRF vision: Another woman revealed in Max Ernst’s Woman, Old Man, and Flower (1923–24)

- P10 Barbara Łydzba-Kopczyńska, Magdalena Kowalska, Marco Colombo, Magdalena Iwanicka and Piotr Targowski
Combining Macro-XRF and OCT techniques in the authentication studies of the painting attributed to Michael Willmann
- P11 Giovanni Buccolieri, Alfredo Castellano, Vito Iacobellis, Fabrizio Vona and Alessandro Buccolieri
The Medieval door in Monte Sant'Angelo: characterization by EDXRF analyses
- P12 Marta Manso, Camila Mortari, António Dias, Lurdes Esteves, Alexandre Pais and Maria Luísa Carvalho
μXRF-scanning in the study of Portuguese decorative tiles
- P13 Marco Colombo, Brunhilde Thybusch, Friederike Schuett, Samuel Fickinger, Leslie Zimmermann, Jochen Sander, Peter Hoffmann and Wolfgang Ensinger
Georg Flegel under the lens of non-invasive techniques
- P14 Gwen Tauber, Annelies van Loon, Susan Smelt, Rob Erdmann, Francesca Gabrieli, Victor Gonzalez, John Delaney, Ernst van de Wetering and Peter Schatborn
The Genesis of Rembrandt's 'Denial of St. Peter': a complementary analytical approach
- P15 Joaquim Assis, Danilo Mansur, Diogo Costa, Raysa Nardes, Ramon Santos, Tiago Andrade, Marcelo Lemos, Marcio Miquelino and Marcelino Anjos
Pigment analysis of a nineteenth century prayer book (lithography) using the XRF technique
- P16 Jaroslav Valach, Jan Bryscejn and Michal Vopálenký
A simple adaptation of a handheld XRF device for mapping applications in artwork analysis and documentation
- P17 Dimitrios Anagnostopoulos, Stefanos Papagiannis, Anastasios Asvestas and Anastasia Tzima
Scanning XRF for coins characterization
- P18 Marcie Wiggins, Aniko Bezur, Roxane Sperber and Robert Wheeler
MA-XRF imaging of a Japanese lacquer tray to identify metal alloys and an annular eclipse

- P19 Gianluca Poldi, Michele Gironda, Falk Reinhardt and Roald Tagle
XRF-mapping to detect metalpoints in drawings. A study on Leonardo da Vinci and his pupils
- P20 David Giovannacci, Marie Radepont, Oulfa Belhadj, Anne Michelin, Kilian Laclavetine, Aurélie Tournié, Christine Andraud, Kamel Mouhoubi, Jean-Luc Bodnar and Witold Nowik
XRF and IR imaging study of superimposed paintings on wooden vault of the church in Le Quillio (France)
- P21 Kristina Mösl, Matthias Alfeld and Ina Reiche
Variable blue and yellow pigments used by Caspar David Friedrich in different creative periods revealed by in situ XRF imaging
- P22 Catherine Defeyt, Manon Rigoreau, Taos Guyot, Francisca Vandepitte and David Strivay
Survey on current artists daylight fluorescent paints
- P23 Paola Croveri, Claudia Caliri, Gianna Ferraris, Valentina Gucciardi, Laura Guidorzi, Alessandro Lo Giudice, Paolo Luciani, Anna Mazzinghi, Marco Nervo, Alessandro Re, Francesco Paolo Romano, Chiara Ruberto, Francesco Tacetti and Silvia Tagliante
Non-invasive Macro X-ray Fluorescence Scanning analysis of lacquered oriental and japanning artworks furniture from Piedmont Castles
- P24 Stijn Legrand, Geert Van der Snickt, Natalia Ortega Saez and Koen Janssens
Possibilities and limitation of MA-XRF examination during the examination of unusual artefacts