Training on application of Optical Coherence Tomography (OCT) to structural analysis

CHARISMA workshop organized by the Nicolaus Copernicus University, Toruń, Poland

PROGRAMME

Thursday 27 June 2013
Location: Institute of Physics, Centre for Quantum Optics, Nicolaus Copernicus University Toruń, Grudziądzka Street 5, Toruń, Poland

9:00 Opening remarks

Session chair: Mei-Li Yang

9:15 *Introduction to the OCT technique*
Piotr Targowski
Institute of Physics, Nicolaus Copernicus University, Toruń, Poland

10:00 *High resolution Fourier domain optical coherence tomography for resolving thin layers in painted works of art*
Chi Shing Cheung, Haida Liang
Nottingham Trent University, UK

10:20 *Application of Optical Coherence Tomography to the examination of varnish layers on the Ghent altarpiece*
Hélène Dubois
KIK IRPA - Royal Institute For Cultural Heritage, Brussels, Belgium

10:40 coffee break

Session chair: Claudia Daffara

11:10 *Next Generation OCT for Art Conservation, Art History & Archaeology*
Haida Liang[1], Chi Shing Cheung[1], Masaki Tokurakawa[2], Jae M.O. Daniel[2], W. Andrew Clarkson[2], Marika Spring[3], Dawid Thickett[4]
[1]School of Science & Technology, Nottingham Trent University, Nottingham, UK, [2]Optoelectronics Research Centre, University of Southampton, Highfield, UK, [3]Scientific Department, National Gallery, London, UK, [4]English Heritage, London, UK

11:55 *Laser ablation monitoring with OCT*
Paraskevi Pouli[1], Kristalia Melessanaki[1], Magdalena Iwanicka[2], Łukasz Ćwikliński[3], Piotr Targowski[3]
[1]Institute of Electronic Structure and Laser, Foundation for Research and Technology-Hellas, Heraklion, Crete, Greece; [2]Institute for the Study, Restoration and Conservation of Cultural Heritage, N. Copernicus University, Torun, Poland; [3]Institute of Physics, N. Copernicus University, Torun, Poland

12:15 *Ultra-high resolution, full-field, time domain OCT in the visible range and multi-spectral camera. Cross-checking and complementarity of the images*
Mady Elias
Evry University, France

13:00 lunch (provided on-site)

Session chair: Mady Elias

14:30 *Using Optical Coherence Tomography to Examine the Structure of Ancient ChineseGlaze and Jade*
Mei-Li Yang
National Tsing Hua University, Taiwan

15:15 *Combined LIBS/OCT technique for examination of paintings*
Ewa A. Kaszewska[1], Marcin Sylwestrzak[1], Jan Marczak[2], Wojciech Skrzeczanowski[2], Magdalena Iwanicka[3], Elżbieta Szmit-Naud[3], Demetrios Anglos[4,5], and Piotr Targowski[1]

[1]Institute of Physics, Nicolaus Copernicus University, Torun, Poland; [2]Institute of Optoelectronics, Military University of Technology, Warsaw, Poland; [3]Institute for the Study, Restoration and Conservation of Cultural Heritage, Nicolaus Copernicus University, Torun, Poland; [4]Institute of Electronic Structure & Laser, Foundation for Research and Technology – Hellas, Heraklion, Crete, Greece; [5]Department of Chemistry, University of Crete, Heraklion, Crete, Greece

15:35 *From confocal microscopy to confocal OCT*
Raffaella Fontana[1], Marco Barucci[1], Enrico Pampaloni[1], Luca Pezzati[1], Claudia Daffara[2]

[1]INO-CNR, Istituto Nazionale di Ottica, Firenze, Italy; [2]Università degli Studi di Verona, Verona, Italy

15:55 coffee break

Session chair: Haida Liang

16:25 *Assessing the potential of OCT for the non-invasive examination of varnish layers; a survey of paintings in the National Gallery London*
Marika Spring[1] and Haida Liang[2]

[1]The National Gallery, London, UK; [2]School of Science & Technology, Nottingham Trent University, Nottingham, UK

17:10 *Tracing of past restorations of 'Madonna dei Fusi' by Leonardo da Vinci (school)*
Magdalena Iwanicka[1], B.J. Rouba[1], P. Targowski[2], M. Sylwestrzak[2], Ewa A. Kaszewska[2], Cecilia Frosinini[3]

[1]Institute for the Study, Restoration and Conservation of Cultural Heritage, Nicolaus Copernicus University, Torun, Poland; [2]Institute of Physics, Nicolaus Copernicus University, Torun, Poland; [3]Opificio delle Pietre Dure e Laboratori di Restauro, Firenze, Italy;

17:30 *Sweep Source Optical Coherence Tomography (SS-OCT) for the examination of dry and waterlogged "heritage" wood*
Dimitris Tsipotas[1], Alexandros Diamantoudis[2]

[1]Technological Educational Institute of Larisa, Greece; [2]University Ecclesiastical Academy of Thessaloniki, Greece

17:50 *Parallel processing of OCT data for monitoring of restoration procedures*
Marcin Sylwestrzak, Ewa A. Kaszewska, Magdalena Iwanicka, Łukasz Ćwikliński, Piotr Targowski

Institute of Physics, Nicolaus Copernicus University, Torun, Poland

18:10 END OF THE SESSION

Friday 28 June 2013
Location: Institute of Physics, Centre for Quantum Optics, Nicolaus Copernicus University Toruń, Grudziądzka Street 5, Toruń, Poland

Session chair: Marika Spring

9:00	*Examination of structure and properties of historic glass with OCT* **Piotr Targowski**[1], Paweł Karaszkiewicz[2], Bogumiła J. Rouba[3], Dariusz Markowski[3], Ludmiła Tymińska-Widmer[3], Magdalena Iwanicka[3], Ewa A. Kaszewska[1], Marcin Sylwestrzak[1] [1]Institute of Physics, Nicolaus Copernicus University, Toruń, Poland; [2]Academy of Fine Arts, Kraków, Poland; [3]Institute for the Study, Restoration and Conservation of Cultural Heritage, Nicolaus Copernicus University, Toruń, Poland
9:20	*Examination of reverse painting on glass (Hinterglasmalerei) with OCT* **Magdalena Iwanicka**[1], Ludmiła Tymińska-Widmer[1], Bogumiła J. Rouba[1], Ewa A. Kaszewska[2], Marcin Sylwestrzak[2], and Piotr Targowski[2] [1]Institute for the Study, Restoration and Conservation of Cultural Heritage, Nicolaus Copernicus University, Toruń, Poland; [2]Institute of Physics, Nicolaus Copernicus University, Toruń, Poland
9:40	*Introduction to NCU OCT instruments* Tomasz Bajraszewski, Łukasz Ćwikliński, Iwona Gorczyńska, Michalina Góra, Ewa A. Kaszewska, Marcin Sylwestrzak, Maciej Szkulmowski, Anna Szkulmowska, **Piotr Targowski** Institute of Physics, Nicolaus Copernicus University, Toruń, Poland
10:00	*Introduction to Thorlabs OCT instruments* **Martin Krah** Thorlabs, Germany
10:20	coffee break
10:50	hands-on training
13:00	lunch (provided on-site)
14:30	hands-on training
16:00	coffee break
16:30	hands-on training
18:00	Final remarks
18:10	END OF THE SESSION