



# WCNR-11 - 11th World Conference on Neutron Radiography

## Monday 03 September 2018

### Speaker Sessions and Seminars - Lighthouse Gallery (09:00-10:50)

time	[id] title	presenter
09:00	[140] Pulsed neutron imaging	KIYANAGI, Yoshiaki
09:50	[157] Imaging at the Spallation Neutron Source: Opportunities and Challenges	BILHEUX, Hassina
10:10	[121] Wavelength-resolved neutron imaging on IMAT	Dr KOCKELMANN, Winfried
10:30	[89] Current Status of The Energy-Resolved Neutron Imaging System, RADEN, at J-PARC MLF	Dr SHINOHARA, Takenao

### Speaker Sessions and Seminars - Lighthouse Gallery (11:10-12:30)

time	[id] title	presenter
11:10	[11] Novel scintillation screen with significantly improved radiation hardness and very high light output	WALFORT, Bernhard
11:30	[164] Daniel	
11:50	[162] Volume Graphics	

### Speaker Sessions and Seminars - Lighthouse Gallery (13:30-15:10)

time	[id] title	presenter
13:30	[16] Development of energy-selective and element-sensitive imaging using a compact D-D fast neutron generator	Mr SOUBELET, Benoit
13:50	[28] Recent Advances in Neutron Imaging using a High-Flux Accelerator-Based Neutron Generator	Mr TAYLOR, Michael
14:10	[40] HIGH RESOLUTION HIGH ENERGY NEUTRON COMPUTED TOMOGRAPHY AT LANSCE-WNR	HUNTER, James
14:30	[56] Evaluation of micro-strain, dislocation density and crystallite size from broadening of multiple Bragg-edges observed by pulsed neutron transmission imaging	Dr SATO, Hirotaka
14:50	[34] Experimental Validation of the Model Connecting Time, Contrast Wavelength and Spatial Resolution	Mr GROSSE, Mirco

### Speaker Sessions and Seminars - Lighthouse Gallery (15:30-16:50)

time	[id] title	presenter
15:30	[10] Energy-resolved Neutron Imaging of Materials for Nuclear Energy	MYHRE, Kristian
15:50	[12] Dynamic Lithium Diffusion in Lithium Batteries studied by Rapid Neutron Tomography	Mr ZIESCHE, Ralf
16:10	[95] In-situ diagnostics of crystal growth by energy-resolved neutron imaging	TREMSIN, Anton

**Speaker Sessions and Seminars - Lighthouse Gallery (17:10-18:10)**

time	[id] title	presenter
17:10	[54] Pareto Optimal Solutions for a Neutron Radiography Collimator	NSHIMIRIMANA, Robert
17:30	[103] Jupyter Notebooks for Neutron Radiography Data Processing Analysis	Dr BILHEUX, Jean
17:50	[124] Analyzing neutron imaging data – an open-source collaboration	KAESTNER, Anders

## Tuesday 04 September 2018

### Speaker Sessions and Seminars - Lighthouse Gallery (09:00-10:00)

time	[id] title	presenter
09:00	[46] Official or Illegal? Tomographic analysis of plated silver coins from Ancient Greece.	OLSEN, Scott Dr SHEEDY, Ken
09:20	[112] Neutron Radiology Terminology in Imaging	Prof. STROBL, Markus
09:40	[70] Development of kfps bright flash neutron imaging for rapid, transient processes	Prof. ZBORAY, Robert

### Speaker Sessions and Seminars - Lighthouse Gallery (09:00-10:50)

time	[id] title	presenter
09:00	[96] Studying early stage pedogenesis using on-the-fly bimodal tomography	KAESTNER, Anders
09:20	[99] Neutron radiography of water imbibition in a smooth-walled fracture within sandstone	Dr XUE, Shanbin
09:40	[122] INVESTIGATION OF HYDROMECHANICAL PROCESSES IN POROUS ROCK USING 4D NEUTRON IMAGING	ETXEGARAI, Maddi
10:00	[153] Neutron imaging of hydrogen diffusion in polycrystalline forsterite aggregates	Mr PATABENDIGEDARA, Sarath
10:20	[146] Highlights from the CONRAD-2 beamline at HZB	Dr KARDJILOV, Nikolay

### Speaker Sessions and Seminars - Lighthouse Gallery (11:10-12:30)

time	[id] title	presenter
11:10	[58] New insights into the tooth structure of pelycosaurs by means of neutron tomography	LAAß, Michael
11:30	[110] Neutron micro-CT as a non-destructive tool for Palaeontology in Australia	BEVITT, Joseph
11:50	[139] 289 Million year old terrestrial vertebrate community revealed	Prof. REISZ, Robert
12:10	[21] Influence of varnish materials on the spatial and time-dependent moisture sorption dynamics of wood used for musical instruments studied by neutron imaging	Ms LÄMMLEIN, Sarah L.

### Speaker Sessions and Seminars - Lighthouse Gallery (11:10-12:30)

time	[id] title	presenter
11:10	[1] 1" CCD CAMERAS FOR NEUTRON & X-RAY IMAGING	Dr HEWAT, Alan
11:30	[97] Recent achievements and activities in neutron imaging at FRM II	SCHULZ, Michael
11:50	[7] Development of scintillator for a compact fast neutron imaging equipment at INPC of CAEP	Dr LI, hang
12:10	[31] A quadruple multi-camera neutron computed tomography system at MLZ	SCHILLINGER, Burkhard

### Speaker Sessions and Seminars - Lighthouse Gallery (13:30-15:10)

time	[id] title	presenter
13:30	[82] Overview of the Conceptual Design of the Upgraded Neutron Radiography Facility (INDLOVU) at the SAFARI-1 Research Reactor in South Africa.	Mr DE BEER, Frikkie
13:50	[52] The ODIN Project at the European Spallation Source	LERCHE, Michael
14:10	[43] MODERN FACILITY FOR NEUTRON RADIOGRAPHY AND TOMOGRAPHY FOR APPLIED RESEARCH ON THE BASE OF THE VVR-K REACTOR	MUKHAMETRULY, Bagdaulet
14:30	[105] Recent developments from NeXT-Grenoble, the Neutron and X-ray Tomograph in Grenoble	TENGATTINI, Alessandro
14:50	[5] Development of Neutron Imaging Facility at Dhruva research reactor, India	Dr ROY, Tushar

### **Speaker Sessions and Seminars - Lighthouse Gallery (13:30-15:10)**

time	[id] title	presenter
13:30	[41] Investigation of ancient copper-alloy and ferrous artefacts from South-eastern Arabia	Mr STEPANOV, Ivan
13:50	[68] Comparison of crystallographic structures of Japanese swords in Muromach and modern periods by using pulsed neutron imaging	KIYANAGI, Yoshiaki
14:10	[84] Imaging investigation of Chinese bimetallic sword fragment from 2nd-1st century BCE	FEDRIGO, Anna
14:30	[118] Neutron imaging, a key scientific analytical tool for the Cultural Heritage project at ANSTO	SALVEMINI, Filomena
14:50	[144] Comparative study: X-ray and neutron CT on a mummified votive offering	Ms RAYMOND, Carla

### **Speaker Sessions and Seminars - Lighthouse Gallery (15:30-17:10)**

time	[id] title	presenter
15:30	[25] Flow visualization of heavy oil in packed bed reactor by neutron radiography	Dr SHOJI, Eita
15:50	[73] High-frame rate neutron imaging of bubble behavior in air-water two-phase flow	ITO, Daisuke
16:10	[127] Neutron Imaging for Fuel Cells: Yesterday, Today and Tomorrow	Dr BOILLAT, Pierre
16:30	[128] Evaluation of fast neutron imaging scintillators	Mr CHUIRAZZI, William
16:50	[145] 3D Velocity Vector Measurements in a Liquid-metal by Using Image Unsharpness in Neutron Transmission Images	Prof. SAITO, Yasushi

### **Speaker Sessions and Seminars - Lighthouse Gallery (15:30-17:10)**

time	[id] title	presenter
15:30	[59] First neutron computed tomography with digital neutron imaging systems in a high-radiation environment at the 250 kW Neutron Radiography Reactor at Idaho National Laboratory	CRAFT, Aaron
15:50	[9] A preliminary experimental study on neutron holography technique at CMRR	Mr CAO, Chao
16:10	[66] Development of event-type neutron imaging detectors at the energy-resolved neutron imaging system RADEN at J-PARC	PARKER, Joseph

16:30	[65] Construction of a Quasi-Monoenergetic Neutron Source for Fast-Neutron Imaging	JOHNSON, Micah
16:50	[156] Performance and resolution upgrade on DINGO at OPAL	GARBE, Ulf

## Wednesday 05 September 2018

### Speaker Sessions and Seminars - Lighthouse Gallery (09:00-10:50)

time	[id] title	presenter
09:00	[64] Energy resolved imaging using the GP2 detector: progress in instrumentation, methods and data analysis	Dr POOLEY, D.E
09:20	[51] Development of a compact accelerator-based pulsed neutron source and simulation of the neutron beam performance and Bragg edge imaging	Dr KINO, Koichi
09:40	[76] Modern Detector Concepts for Fast-Neutron Radiography	Mr REISENHOFER, Florian
10:00	[108] Fibre-optics taper for high resolution neutron imaging	MORGANO, Manuel
10:20	[165] D.Hussey	

### Speaker Sessions and Seminars - Lighthouse Gallery (11:10-12:30)

time	[id] title	presenter
11:10	[50] Fission Neutron Tomography of a 280-L Waste Package	Dr BÜCHERL, Thomas Dr LIERSE VON GOSTOMSKI, Christoph
11:30	[163] WCNR-12 Presentation	

### Speaker Sessions and Seminars - Lighthouse Gallery (13:30-15:10)

time	[id] title	presenter
13:30	[32] Epithermal neutron radiography and tomography on large and strongly scattering samples	SCHILLINGER, Burkhard CRAFT, Aaron
13:50	[37] Applications of Fast Neutron Radiography to Fluid Flow and Tumbling Media	Mr DANIELS, Graham
14:10	[81] Development of a Line-Pair Gauge and Standard Test Method for Measuring Basic Spatial Resolution of Neutron Imaging Systems	CRAFT, Aaron
14:30	[60] Holography with a neutron interferometer	SARENAC, Dusan
14:50	[61] Phase Grating Moire Interferometry	SARENAC, Dusan

### Speaker Sessions and Seminars - Lighthouse Gallery (15:30-17:10)

time	[id] title	presenter
15:30	[15] Neutron imaging of Li-ion batteries with fission and thermal neutrons	Dr ZIMNIK, Samantha
15:50	[30] Review and Prospect of hydraulic behavior research of rhizosphere, xylem and leaves using neutron imaging	SIM, Cheul Muu
16:10	[152] Large area MCP-based neutron imagers	DUARTE PINTO, Serge
16:30	[83] Designing a Fast-Gated Scintillator-Based Neutron and Gamma Imaging System	Dr GEPPERT-KLEINRATH, Verena
16:50	[113] 'Neutron Microscope' instrument at PSI – recent upgrades and the first users experiments	Dr TRTIK, Pavel

## Thursday 06 September 2018

### Speaker Sessions and Seminars - Lighthouse Gallery (09:00-10:50)

time	[id] title	presenter
09:00	[90] Bragg-edge Neutron Strain Tomography	Mr GREGG, Alexander Dr WENSRICH, Christopher
09:20	[143] Materials Research at CONRAD-2/HZB: Recent Developments and Outlook	Dr MANKE, Ingo
09:40	[151] Functional 3D structures made by additive manufacturing	Prof. DING, Jun
10:00	[155] Permeability changes when using waste materials to generate acid resistant mortars, neutron investigations.	Prof. CLARK, Malcolm
10:20	[166] Strobi	

### Speaker Sessions and Seminars - Lighthouse Gallery (11:10-12:30)

time	[id] title	presenter
11:10	[98] High-resolution neutron depolarization microscopy of the ferromagnetic transitions in Ni <sub>3</sub> Al and HgCr <sub>2</sub> Se <sub>4</sub> by using Wolter mirrors	Dr SCHULZ, Michael
11:30	[131] Diffusion coefficients of H in Zirconium alloys at operating temperatures by neutron imaging	MARIN, Julio
11:50	[137] Time-resolved in-operando neutron imaging of lithiation and delithiation process in custom-built rechargeable Li-ion batteries	LACATUSU, Monica-Elisabeta
12:10	[142] Comparison of porosity in coke like materials determined using traditional techniques and neutron tomography	Dr REID, Mark

### Speaker Sessions and Seminars - Lighthouse Gallery (13:30-15:10)

time	[id] title	presenter
13:30	[86] Magnetic field induced neutron phase contrast imaging with grating interferometry	VALSECCHI, jacopo
13:50	[94] Laue Multi-Grain Indexing with Neutrons	Mr RAVENTOS, Marc
14:10	[116] Development of Quantitative Crack Analysis Techniques Using Neutron-Absorbing Liquid Penetrants	Prof. KING, Jeffrey
14:30	[123] An experimental approach for quantitative scattering correction in neutron imaging.	CARMINATI, Chiara
14:50	[126] An Experimental Trial of 3D Synergy Modeling from X-ray CT and Neutron Radiograms	Dr KAMIYAMA, Takashi

### Speaker Sessions and Seminars - Lighthouse Gallery (15:30-17:10)

time	[id] title	presenter
15:30	[138] Current developments and research applications of the NIST NeXT system	Dr LAMANNA, Jacob M.

15:50	[106] Recent progress of neutron imaging facility and applications at China Advanced Research Reactor	WU, meimei
16:10	[135] Design and Construction of Grating-Based Interferometers for the Oak Ridge National Laboratory, High-Flux Isotope Reactor, CG-1D Tomography Beamline	Prof. BUTLER, Leslie G
16:50	[111] Neutron Radiography at SARAF: from Reactor to Accelerator	HALFON, Shlomi

## Friday 07 September 2018

### Speaker Sessions and Seminars - Lighthouse Gallery (09:00-10:50)

time	[id] title	presenter
09:00	[47] Conceptual design of a thermal neutron imaging facility at the Jordan Research and Training Reactor (JRTR) optimized by Monte Carlo neutron ray-tracing simulations	Mr SUAIFAN, Mahmoud
09:20	[17] Qualification and development of fast neutron imaging scintillator screens	ZBORAY, Robert
09:40	[67] Implementation of thermal neutron radiography at medium and low power research reactors in Iran	Dr CHOOPAN DASTJERDI, Mohammad Hossein
10:00	[167] The upgraded neutron grating interferometer at ANTARES – Design, Performance and Applications -	Mr NEUWIRTH, Tobias
10:30	[4] What Future in Neutron Imaging?	Dr LEHMANN, Eberhard