

## Preliminary Program of ITMNR-8

**Sunday September 4, 2016**

13:30-21:00	Registration
16:00-18:00	ISNR Board Meeting
18:30-20:30	Reception

**Monday September 5, 2016**

08:20-08:40	Opening ceremony, Chair: Zhiyu Guo			
08:40-10:10	Session MO1 Industrial Applications - 1, Chair: Yasushi Saito			
08:40-09:10	MO11	ID1	LEHMANN, E	Recent Applications of Neutron Imaging Methods
09:10-09:30	MO12	ID69	GARBE, U	Industrial Application Experiments on the neutron imaging instrument DINGO
09:30-09:50	MO13	ID34	DE BEER, F	PEM Water Electrolysis : Preliminary Investigations Using Neutron Radiography
09:50-10:10	MO14	ID71	TAKETANI, A	Observation of water distribution on under-film corroded steels by using RIKEN compact neutron source
10:10-10:50	Break and Group Photo			
10:50-12:30	Session MO2 Scientific Applications - 1, Chair: Ulf Garbe			
10:50-11:10	MO21	ID25	STROBL, M	Neutron Imaging: An Advanced Neutron Scattering Tool For Material Science
11:10-11:30	MO22	ID95	ARIF, M	NIST's capabilities for materials science research using neutron imaging
11:30-11:50	MO23	ID3	TRTIK, P	High-resolution neutron tomography of superconducting multifilament MgB <sub>2</sub> wires
11:50-12:10	MO24	ID57	SATO, H	Mapping of inverse pole figure of crystalline grains by pulsed neutron transmission
12:10-12:30	MO25	ID65	BROOKS, A	A Comparison of X-ray and Neutron Grating-Based Interferometry of Batteries, Crystals, and Additive Manufacturing Samples
12:30-13:40	Lunch			
13:40-15:20	Session MO3 Industrial Applications - 2, Chair: Daniel Hussey			
13:40-14:00	MO31	ID56	TREMSIN, A	Microstructure of additive manufactured and conventional engineering materials studied by energy resolved neutron imaging
14:00-14:20	MO32	ID80	KAMIYAMA, T	Structural Change of Carbon Anode in a Lithium-ion Battery Product Associated with Charging Process Observed by Neutron Transmission Bragg-edge Imaging
14:20-14:40	MO33	ID6	OIKAWA, K	A comparative study of the crystallite size of bent steel plates using Bragg-edge transmission imaging, TOF neutron diffraction, and EBSD
14:40-15:00	MO34	ID86	ITO, D	Visualization of solidification process in lead-bismuth eutectic
15:00-15:20	MO35	ID32	WEI, G	Quantitative analysis of the hydrogen concentration in Zr alloy claddings by neutron imaging
15:20-16:20	Break & Posters			
16:20-18:00	Session MO4 Software & Simulations, Chair: Anders Kaestner			
16:20-16:40	MO41	ID10	SCHILLINGER, B	A freeware path to neutron computed tomography
16:40-17:00	MO42	ID8	WANG, H	Limited-view Reconstruction of Dynamic Process by Neutron Tomography
17:00-17:20	MO43	ID18	HO, E	Overcoming the challenges in producing accurate quantification of neutron images
17:20-17:40	MO44	ID60	SATO, H	Further improvement of the RITS code for pulsed neutron Bragg-edge transmission imaging: correction of crystallite size analysis result and consideration of background noise due to scattered neutrons
17:40-18:00	MO45	ID118	RADEBE, M	Towards evaluation of spatial resolution of digital neutron radiography and tomography facilities

**Tuesday September 6, 2016**

08:20-10:20		Session TU1			Facilities & Instrumentations - 1, Chair: Thomas Bücherl	
08:20-08:40	TU11	ID28	CHEN, D	Recent Progress of Neutron Imaging Facility and Applications at CARR		
08:40-09:00	TU12	ID2	KICHANOV, S	Neutron radiography and tomography facility on the reactor IBR-2: applied research		
09:00-09:20	TU13	ID37	LI, H	neutron imaging development at CMRR		
09:20-09:40	TU14	ID98	KING, J	Design and Upgrades to the Mines Neutron Radiography Facility		
09:40-10:00	TU15	ID61	KHAWEERAT, S	The early stage of neutron tomography for cultural heritage study in Thailand		
10:00-10:20	TU16	ID62	CHRISTENSEN, S	Neutron Radiography using a High-Flux, Compact, Neutron Generator		
10:20-10:50 Break						
10:50-12:30		Session TU2			Methods - 1, Chair: Eberhard Lehmann	
10:50-11:10	TU21	ID108	ABIR, M	Neutron focusing mirrors to enable high resolution neutron imaging at Idaho National Laboratory		
11:10-11:30	TU22	ID19	REIMANN, T	Diffractive imaging of Skyrmion nucleation in MnSi using a micro-channel plate		
11:30-11:50	TU23	ID42	SCHMIDT, S	3D Neutron Diffraction (3DND) methodology in time-of-flight mode		
11:50-12:10	TU24	ID26	GROSSE, M	Which resolution can be achieved in praxis in neutron imaging experiments? – A general view		
12:10-12:30	TU25	ID24	KHARFI, F	Affordable solution for better dynamic neutron imaging performance and capability		
12:30-13:40 Lunch						
13:40-15:20		Session TU3			Scientific Applications - 2, Chair: Frikkie de Beer	
13:40-14:00	TU31	ID102	GARBE, U	Combined neutron and x-ray imaging on a real life concrete core sample from the Pacific Highway Australia		
14:00-14:20	TU32	ID45	SIM, C	Neutron tomography procedure for diagnosing root pathology and water quantification measurement of root		
14:20-14:40	TU33	ID87	DANIELS, G	Observation of water absorption in dehydrated sand using fast neutron radiography		
14:40-15:00	TU34	ID96	SCHILLINGER, B	Neutron tomography reveals the presence of two distinct species of the mammalian forerunner Diictodon (Therapsida, Anomodontia) from the Late Permian of South Africa		
15:00-15:20	TU35	ID16	SCHILLINGER, B	Exploring hominin and non-hominin primate dental fossil remains with neutron microtomography		
15:20-16:20 Break & Posters						
16:20-18:00		Session TU4			Scientific Applications - 3, Chair: Winfried Kockelmann	
16:20-16:40	TU41	ID79	SALVEMINI, F	Archaeometric investigations on the neutron imaging station DINGO at ANSTO		
16:40-17:00	TU42	ID93	BEVITT, J	Neutron Tomography as a Non-Destructive Tool for Palaeontology in Australia		
17:00-17:20	TU43	ID58	GRAZZI, F	The ancient steel sword technology revealed through neutron imaging		
17:20-17:40	TU44	ID63	FEDRIGO, A	Characterisation of 'pattern-welded' swords from the Viking Age – a neutron imaging study		
17:40-18:00	TU45	ID109	KIYANAGI, Y	Crystallographic Analysis of a Japanese Sword by Using Bragg Edge Transmission Spectroscopy		
18:30-20:30 ISNR Board Meeting						

**Wednesday September 7, 2016**

<b>08:20-10:20</b>	<b>Session WE1</b>		<b>Facilities &amp; Instrumentations - 2, Chair: Markus Strobl</b>	
08:20-08:40	WE11	ID101	KOCKELMANN, W	IMAT: a new neutron imaging facility for materials science
08:40-09:00	WE12	ID103	STROBL, M	ToF Neutron Imaging at the ESS Testbeamline at HZB
09:00-09:20	WE13	ID74	CHEN, J	Neutron imaging research activities at China Spallation Neutron Source
09:20-09:40	WE14	ID84	SHINOHARA, T	Status of the Energy-Resolved Neutron Imaging System RADEN at J-PARC
09:40-10:00	WE15	ID77	KAESTNER, A	Bimodal imaging at ICON using neutrons and X-rays
10:00-10:20	WE16	ID22	MORGANO, M	Designing a guide system for neutron imaging: ODIN at ESS
10:20-10:50	Break			
<b>10:50-12:30</b>	<b>Session WE2</b>		<b>Industrial Applications - 3, Chair: Muhammad Arif</b>	
10:50-11:10	WE21	ID116	KARDJILOV, N	High-resolution and high-speed neutron imaging applications at the CONRAD-2 instrument
11:10-11:30	WE22	ID12	BÜCHERL, T	A Feasibility Study on Reactor Based Fission Neutron Radiography of 200-L Waste Packages
11:30-11:50	WE23	ID88	CRAFT, A	Applications of Neutron Radiography for the Nuclear Power Industry
11:50-12:10	WE24	ID73	SU, Y	Time-of-flight Neutron Transmission Imaging of Martensite Transformation in Bent Plates of a Fe-25Ni-0.4C Steel
12:10-12:30	WE25	ID104	SONG, G	Application of Time-Of-Flight Neutron Transmission at the Spallation Neutron Source to Characterize Additive Manufacturing Components
12:30-13:30	Lunch			
13:30-18:00	Excursion to the Great Wall			
18:30-21:00	Banquet			

**Thursday September 8, 2016**

<b>08:20-10:20</b>	<b>Session TH1</b>		<b>Facilities &amp; Instrumentations - 3, Chair: Nikolay Kardjilov</b>	
08:20-08:40	TH11	ID40	LEHMANN, E	Status and Perspectives of Neutron Imaging Facilities
08:40-09:00	TH12	ID23	HUSSEY, D	A Far-field Neutron Interferometer
09:00-09:20	TH13	ID66	SEKI, Y	Development of Pulsed Neutron Phase Imaging at J-PARC
09:20-09:40	TH14	ID110	ZHOU, J	A novel large area nTHGEM-based neutron imaging detector with time resolution
09:40-10:00	TH15	ID13	YANG, Y	Research on a large area neutron sensitive microchannel plate detector
10:00-10:20	TH16	ID72	NAGANAWA, N	Toward ultra high resolution position sensitive neutron detector using fine-grained nuclear emulsion
10:20-10:50	Break			
<b>10:50-11:50</b>	<b>Session TH2</b>		<b>Methods - 2, Chair: Dongfeng Chen</b>	
10:50-11:10	TH21	ID21	RAVENTOS, M	Image Subtraction: A method for scattering quantification and correction
11:10-11:30	TH22	ID90	SCHULZ, M	Neutron Depolarization Imaging on weak ferromagnets
11:30-11:50	TH23	ID67	KAI, T	Reliability Estimation of Neutron Resonance Thermometry using Tantalum and Tungsten
11:50-12:30	Closing Session, Chair: Dongfeng Chen			
12:30-13:30	Lunch			
13:30-17:00	Optional Lab Tour to CARR at CIAE			

## Posters

PA		Industrial and Scientific Applications	
PA1	ID91	SCHULZ, M	Neutron imaging applications for energy research
PA2	ID46	KIM, T	Research on dynamic Behavior in Heat pipe by neutron imaging technique at Dingo, ANSTO
PA3	ID114	SATO, H	Microstructural Information Mapping of a Plastic-deformed Alpha-iron Plate during Tensile Tests using Pulsed Neutron Transmission
PA4	ID17	JIN, J	A preliminary characterization of reservoir rocks using Neutron and X-ray computed tomography systems
PA5	ID27	HE, L	Investigation of the Filtration of Oil in Sands by Real-time Neutron Tomography at CARR
PA6	ID29	HE, L	Void Fraction Distribution Measurement in Annular Two-Phase Flow by Real-Time Neutron Radiography at CARR
PA7	ID113	SCEPANSKIS, M	Dynamic Neutron Radiography Visualization of Intense Liquid Metal
PA8	ID47	PARK, S	Investigation on hidden relics using 3D neutron imaging technique at Dingo, ANSTO
PA9	ID53	MANNES, D	Gemmological investigations on pearls and emeralds using neutron
PA10	ID68	HIROI, K	Magnetic imaging of an AC field applied electric steel using polarized pulsed neutrons at J-PARC/MLF
PA11	ID117	DHIMAN, I	Investigate the water uptake by plant roots using neutron radiography

PB		Facilities & Instrumentations	
PB1	Id14	MUEHLBAUER,	The Thermal Neutron Beam Option for NECTAR at MLZ
PB2	ID92	SAHA, S	Upgrade of the Neutron Imaging Facility at 3 MW TRIGA Reactor at AERE, Bangladesh
PB3	ID55	WU, M	The progress of new cold neutron imaging at CARR
PB4	ID52	TARTAGLIONE, A	The design of a cold neutron imaging instrument for the future Argentinean research reactor RA10
PB5	ID85	DINCA, M	Status of the Imaging Facility INUS at INR
PB6	ID33	TAN, Z	Fast neutron resonance radiography with white neutron beamline at
PB7	ID36	OH, S	Sub-millimeter Resolution Fast Neutron Radiography
PB8	ID82	MATSUMOTO, Y	Recent progress of radiography and tomography in energy-resolved neutron imaging system RADEN
PB9	ID99	SUN, Y	Development of Indirect Neutron Radiography Facility for U-10Zr Alloy Fuel and Experiment
PB10	ID107	WON, M	Current status of an accelerator based neutron source in KBSI
PB11	ID4	TRTIK, P	100 Hz neutron radiography at BOA beamline using parabolic focusing
PB12	ID49	MANNES, D	Design and applications of a climatic chamber for in-situ neutron imaging experiments
PB13	ID20	REIMANN, T	The new neutron grating interferometer at the ANTARES beamline- Design, Principle and Applications -
PB14	ID81	HAYASHIDA, H	Development of an in-situ SEOP <sup>3</sup> He neutron spin filters for magnetic imaging techniques
PB15	ID54	BÜCHERL, T	Systematic Study of Scintillation Screen Options for Fission Neutron Radiography at NECTAR (MLZ)
PB16	ID59	SOLTES, J	Performance of Self-developing Radiography Films in LVR-15's Neutron Beams
PB17	ID31	WANG, Y	A study on the new type BN/ZnS(Ag) neutron imaging scintillator
PB18	ID11	SCHILLINGER, B	Quadruple axis neutron computed tomography
PB19	ID39	SCHILLINGER, B	The signal chain - how the removal of an image intensifier at the AERE reactor in Dhaka, Bangladesh, improves neutron imaging
PB20	ID9	SCHILLINGER, B	A simple controller for neutron computed tomography that interfaces nearly every camera
PB21	ID112	WONGLEE, S	Investigation of the Performance of the Compact Neutron Camera for Neutron Imaging at Thai Research Reactor
PB22	ID78	YOU, H	Fast Neutron Direction Camera Based on Two Staged Plastic
PB23	ID83	MOCHIKI, K	Camera Detectors for Small Pulsed Neutron Sources and Application

PC		Methods	
PC1	ID50	LEHMANN, E	Methodical Progress in Neutron Imaging
PC2	ID76	KAESTNER, A	Samples to determine the resolution of neutron radiography and
PC3	ID5	TRTIK, P	Mechanical Adaptors for Simultaneous Neutron Computed Tomography of Multiple Samples
PC4	ID15	JI, Z	Calibration and correction method of the deflection angle of rotation axis on neutron CT
PC5	ID41	ROGERS, J	Effects of Image Processing on Achievable Measurement Accuracy in Neutron and X-ray Radiography
PC6	ID43	LAMANNA, J	Simultaneous Neutron and X-ray Tomography for Quantitative Composition and Structure Analysis
PC7	ID75	KIM, Y	Dark-field imaging of Electric steel at Cold Neutron Facility NG6 of NIST
PC8	ID100	ITO, D	Pulsed neutron imaging for non-destructive testing using simulated nuclear fuel samples
PC9	ID89	CRAFT, A	Conversion from Film to Image Plates for Transfer Method Neutron Radiography of Nuclear Fuel
PC10	ID38	CAO, C	Primary research of polarized neutron radiography in CAEP
PC11	ID48	WANG, S	Study of Signal to Noise Ratio of Coded Source Neutron Imaging with Analysis Method, Numerical Simulation and Experimental Method
PC12	ID7	LEE, Y	A Feasibility of Fast-Neutron Imaging on KSTAR Tokamak

PD		Software & Simulations	
PD1	ID64	WU, H	Wolter Mirrors for Neutron Imaging
PD2	ID51	LEHMANN, E	Edge enhancement investigations by means of experiments and
PD3	ID30	WANG, Y	A study on inhomogeneous neutron intensity distribution origin from neutron guide transportation
PD4	ID111	JAMRO, R	Monte Carlo Simulation for Designing Nuclear Malaysia Neutron Radiography Collimator
PD5	ID115	NSHIMIRIMANA, R	ImageJ Plugin for Simulation and Optimization of the Geometry Parameters for a Neutron Collimator
PD6	ID44	KIYANAGI, Y	A Design Study of a Neutron Source for Pulsed Neutron Imaging at Kyoto University Research Reactor Institute Linac
PD7	ID70	HASEMI, H	Optimization of Moderator Size of Thermal and Epithermal Neutron Source based on a Compact Accelerator for Neutron Imaging