Coherence Workshop Program (tentative)

2012/6/12

17th June

17:00 – 19:00 **Registration**

18th June

7:30 – 8:15 **Registration**

8:30 – 9:55 **Opening & Plenary**

8:30	8:35	Opening address	T. Ishikawa	RIKEN
8:35	8:55	In memoriam of David Sayre	J. Miao	UCLA
8:55	9:15	Single-particle XFEL imaging: recent success and future goals	A. Martin	Melbourne Univ.
9:15	9:35	X-ray holography: beyond encoding a single picture	S. Eisebitt	TU Berlin
9:35	9:55	Ptychographic reconstructions of mixed states	A. Menzel	PSI

9:55 – 10:30 *Coffee break*

10:30 – 12:10 **XFEL Topics**

10:30	10:50	Cryogenic CXDI of non-crystalline particles at SACLA	M. Nakasako	Keio Univ.
10:50	11:10	Coherence properties of individual femtosecond pulses of free-electron lasers	A. Singer	DESY
11:10	11:30	Limitations of coherent diffractive imaging of single objects due to their damage by intense X-ray radiation	Z. Jurek	DESY
11:30	11:50	Cryptotomography with X-ray free electron lasers	N.D. Loh	SLAC
11:50	12:10	Biological structure determination using free electron lasers	A. Barty	DESY

12:10 – 13:30 *Lunch*

13:30 – 15:30 **Ptychography (1)**

13:30	13:50	Holo-ptychography: simultaneous phase retrieval and wavefront reconstruction for inline holography	M. Stockmar	TU München
13:50	14:10	Applications of X-ray Bragg ptychography	P. Fuoss	ANL
14:10	14:30	High-resolution X-ray ptychography using focused hard X-ray beam	Y. Takahashi	Osaka Univ.
14:30	14:50	Three-dimensional high-resolution quantitative microscopy of extended crystals	P. Godard	CNRS
14:50	15:10	Three-dimensional microscopy of shape, density and strain in a nano-structured crystal using Bragg ptychography: methodological aspects	V. Chamard	CNRS
15:10	15:30	Hard X-ray imaging of bacterial cells: ptychographic reconstructions in 3D	R.N. Wilke	University of Göttingen

15:30 – 16:00 *Coffee break*

16:00 – 17:40 **Ptychography (2)**

16:00	16:20	Translation position correction in ptychography	F. Zhang	University College London
16:20	16:40	Possibilities and limits of ptychography applied to biological tissues	F. Berenguer	Synchrotron Soleil
16:40	17:00	Pink beam ptychography	B. Enders	TU München
17:00	17:20	Ptychographic reconstructions using shared data sets	I. Zanette	TU München
17:20	17:40	Ptychographic electron diffraction imaging at atomic resolution	C. Putkunz	Melbourne Univ.

19th June **Workshop Tour**

Outdoor Discussion

20th June

8:30 – 9:50 **X-ray Photon Correlation Spectroscopy and X-ray Cross Correlation Analysis (1)**

8:30	8:50	X-ray cross-correlation analysis applied to disordered two-dimensional systems	I.A. Vartaniants	DESY
8:50	9:10	High contrast X-ray speckle from atomic-scale order in liquids and glasses	S.O. Hruszkewycz	ANL
9:10	9:30	Multi-speckle XPCS as a probe of heterogeneous and anisotropic dynamics	A. Madsen	European XFEL
9:30	9:50	Detecting local order beyond the structure factor in hard sphere glasses	F. Lehmkühler	DESY

9:50 – 10:20 *Coffee break*

10:20 – 11:40 **X-ray Photon Correlation Spectroscopy and X-ray Cross Correlation Analysis (2)**

10:20	10:40	Statics and dynamics of charged colloidal systems	F. Westermeier	DESY
10:40	11:00	Observation of dynamics of nanoparticles in rubber with X-ray photon correlation spectroscopy	Y. Shinohara	Tokyo Univ.
11:00	11:20	Cross-correlation based 2D structure determination from multi-particle scattering images	B. Pedrini	PSI
11:20	11:40	Ab initio imaging from correlated fluctuations in X-ray scattering	R. Kirian	DESY

11:40 – 13:10 *Lunch*

13:10 – 15:10 **3D Coherent X-ray Imaging**

13:10	13:30	Structural principles of nanoparticles investigated by coherent X-ray diffraction	I. Robinson	University College London
13:30	13:50	Three-dimensional diffraction imaging with partial coherence	J.N. Clark	University College London
13:50	14:10	Three-dimensional structure of a single colloidal crystal grain studied by coherent X-ray diffraction	R. Dronyak	DESY
14:10	14:30	Applications of three-dimensional coherent X-ray diffraction microscopy in biomaterials	H. Jiang	Shandong Univ.
14:30	14:50	Hard X-ray imaging and tomography of cells and tissues	M. Bartels	University of Göttingen
14:50	15:10	Reconstruction of viruses from XFEL diffraction patterns	D.K. Saldin	Wisconsin Univ.

15:10 – 15:40 *Coffee break*

15:40 – 17:40 **Coherent Diffractive Imaging (1)**

15:40	16:00	Orientation determination in single particle X-ray coherent imaging	O.M. Yefanov	DESY
16:00	16:20	Selective coherent X-ray diffractive imaging of strains in compound nanostructure systems	A.A. Minkevich	KIT
16:20	16:40	Imaging clusters and aggregates of nanoparticles	L. Shemilt	University College London
16:40	17:00	From single to several dislocations probed by coherent X-ray diffraction	V.L.R. Jacques	ESRF
17:00	17:20	Berry-phase X-ray translation inside monotonous bend and hetero-epitaxial crystal	Y. Kohmura	RIKEN
17:20	17:40	Coherent X-ray diffraction imaging of weak phase objects with the aid of reference signals	D.Y. Noh	GIST

21st June

8:30 – 10:10 **Coherent Diffractive Imaging (2)**

8:30	8:50	Computational study of novel X-ray focusing optics with zooming function for X-ray diffraction microscopy	T. Kimura	Hokkaido Univ.
8:50	9:10	Coherent diffraction imaging of quantitative height profile using a focused hard X-ray	S. Kim	RIKEN
9:10	9:30	Impact of electronic damage on single-particle coherent diffraction imaging experiments	U. Lorenz	DESY
9:30	9:50	How to take X-ray snap-shots of materials without lenses	J.J. Turner	SLAC
9:50	10:10	Noise-model dependent iterative algorithms for coherent diffractive imaging with low counting rate	M. Allain	Aix-Marseille Univ.

10:10 – 10:30 *Coffee break*

10:30 – 11:50 **Coherent Diffractive Imaging (3)**

10:30	10:50	Pinning and depinning process of an incommensurate charge density wave as revealed by coherent X-ray diffraction	D. Le Bolloc'h	CNRS
10:50	11:10	Time-resolved coherent X-ray diffraction imaging of ultra-fast strain dynamics at the nanoscale	M.C. Newton	Hokkaido Univ.
11:10	11:30	Coherent X-ray scattering to study nanostructure and dynamics	H. Kim	Sogang Univ.
11:30	11:50	Quantitative visualization of sample thickness and p-n junction using electron diffractive imaging	J. Yamasaki	Nagoya Univ.

11:50 – 13:10 *Lunch*

13:10 – 14:50 **Instrumentation**

13:10	13:30	X-ray photon correlation spectroscopy: from storage rings to X-ray free electron lasers	A. Robert	SLAC
13:30	13:50	P10 holography endstation of PETRA Ⅲ-Propagation based phase contrast X-ray imaging of Caenorhabditis elegans	M. Bartels	University of Göttingen
13:50	14:10	Hard X-ray diffraction imaging of cells and organelles at SPring-8	C. Song	RIKEN
14:10	14:30	Recent developments for coherent X-ray diffraction imaging at the ESRF	Y. Chushkin	ESRF
14:30	14:50	The hard X-ray delay line at the XCS instrument at LCLS	G. Grübel	DESY

14:50 – 15:15 *Coffee break*

15:15 – 16:20 **SACLA Session (1): Facility**

15:15	15:20	Introduction	T. Ishikawa	RIKEN
15:20	15:35	Light source in SACLA Session (1) : Facility	H. Tanaka	RIKEN
15:35	15:50	Status and future of SACLA Beamline	M. Yabashi	RIKEN
15:50	16:05	End stations of SACLA : Experimental instruments and photon diagnostic systems	K. Tono	JASRI
16:05	16:20	Detector and data acquisition system for SACLA	T. Hatsui	RIKEN

16:20 – 16:30 *Short break*

16:30 – 17:30 **SACLA Session (2): Application & Closing**

16:30	16:50	Nanofocusing and wavefront analysis of SACLA	K. Yamauchi	Osaka Univ.
16:50	17:10	Possible solution to the experimental observation of fast relaxation in amorphous materials	E. Matsubara	Kyoto Univ.
17:10	17:30	SACLA future plan: application for biology	S. Iwata	Kyoto Univ.
17:30		Closing remark	K. Nugent	Melbourne Univ.

Poster Session

24 papers (as of June 12)