Sunday 31 August

15:30	EHPRG Committee Meeting (Hexagon Room)
17:00	Registration and Refreshments (Pier Eight Foyer)
19:00	Welcome Reception (Quays Bar)
20:30	End

Monday 1 September

08:30	Registration with Refreshments (Quays Bar)		
09:00	Opening Ceremony (Quays Theatre)		
09:30	Plenary I: Multigrain crystallography and its applications for studying deep mantle water cycle **Li Zhang**, Center for High Pressure Science & Technology Advanced Research, HPSTAR		
10:30	Coffee Break (Quays Bar)		
	Session 1a: Nanomaterials **(Quays Theatre)**		**Session 1b: Metals, metalloids and alloys** **(Studio 1)**
11:00	(Invited) Novel forms of carbon synthesized from fullerene C_{60} at high pressure **Alexander Soldatov**, Yanshan University	11:00	(Invited) Pressure dependence of alloy solution phase diagrams: Experiments and thermodynamic modeling **Guy Makov**, Ben-Gurion University of the Negev
11:30	(Invited) Pressure-Driven Moiré Potential Enhancement and Tertiary Gap Opening in Graphene/h-BN Heterostructure **Yupeng Wang**, University of Science and Technology of China	11:30	The mechanism of the A7 to sc phase transition in arsenic **Matteo Ceppatelli**, ICCOM-CNR and LENS
12:00	A glimpse into the high-pressure behaviour of metal nanoclusters: the case of Au_{25} **Camino Martín-Sánchez**, University of Geneva	11:50	Electrical Resistivity of Liquid Fe-16wt%S-2wt%Si at High Pressures with Implications for Heat Flow in Sub-Earth Exoplanets **Erin Lenhart**, University of Western Ontario
12:20	Strain Dependent Optical Properties of Core/Shell Nanoplatelets **River Leversee**, University of Colorado, Boulder	12:10	Thermal equation of state of rhodium characterized by resistively and laser heated diamond anvil cell **Jose Luis Rodrigo Ramon**, Universitat De Valencia
12:40	Lunch (Quays Bar)	12:30	Lunch (Quays Bar)

	Parallel Session 2a: Superconductivity (Quays Theatre)		Parallel Session 2b: Superhard and strongly bonded materials (Studio 1)
13:30	Predicting new high T_c superconductors **Julia Contreras**, Sorbonne Université / CNRS	13:30	Design of boron based nano-structured super hard material (BP, $B_{12}P_2$) **Hicham Moutaabbid**, Sorbonne University
13:50	Probing high-pressure superconductivity with NV centers in diamond **Jean-Francois Roch**, ENS Paris-Saclay	13:50	Towards predicting tough multi-functional materials recoverable from high-pressure synthesis: Symmetry and vectorisation as an efficient tool for configuration space navigation **Florian Trybel**, Linköping University
14:10	Superconductivity near room temperature in LaH_{10} thin-films at megabar pressures **Sam Cross**, University of Bristol	14:10	High-pressure behavior of binary nitrogen-halogen systems **James Spender**, University of Edinburgh
14:30	Tea Break (Quays Bar)		
15:00	Mikhail Eremets Memorial Lecture (Quays Theatre)		
16:00	EHPRG General Assembly (Quays Theatre)		
18:00	End		

Tuesday 2 September

08:30	Registration with Refreshments (Quays Bar)	
09:00	(Quays Theatre) Plenary II: Diamond anvil cell research at the European XFEL **Rachel Husband**, DESY	
10:00	Coffee Break (Quays Bar)	
	Parallel Session 3a: Optical spectroscopy methods (Quays Theatre)	**Parallel Session 3b: Geoscience and planetrary science (Studio 1)**
10:30	(Invited) How to Predict The Refractive Index of a Silicate Glass at High Pressure Based on The Chemical Composition? **Xiangdong Li**, Gfz Helmholtz Centre For Geosciences	10:30 (Invited) Insights into the fate of volatile species during the planetary life cycle from dynamic compression experiments **Alisha Clark**, University of Colorado Boulder
11:00	(Invited) Optical photothermal infrared spectroscopy of h-BN in diamond anvil cell **Francesco Capitani**, Synchrotron SOLEIL	11:00 Twin domain switching in neighborite ($NaMgF_3$) during oscillating deformation: potential implications for intrinsic seismic attenuation of the lower mantle **Simon Hunt**, University of Manchester
11:30	All-optical PVT EOS measurements in the diamond anvil cell **Reece O'Beirne**, University of Salford	11:20 Thermal conductivities of solid and molten silicates: Implications for dynamos in mercury-like proto-planets **Damien Freitas**, The University of Manchester at Harwell
11:50	High pressure reflectance characterization of YAB from mid infrared to the visible **Julio Pellicer-Porres**, University of Valencia	11:40 Structural changes in $CaSiO_3$ glass up to lower mantle pressures **Clemens Prescher**, Universität Freiburg, Geomaterialien und kristalline Werkstoffe
12:10	Measurement of the refractive index of samples in the diamond anvil cell using white light transmission microscopy only **John Proctor**, University of Salford	12:00 (Invited) High-pressure behavior Fe-O-H system in the deep Earth's interior **Elena Bykova**, Goethe-Universität Frankfurt

12:30	Lunch (Quays Bar)		
	Women in High Pressure (Quays Theatre)		
	Parallel Session 4a: Inorganic Materials (Quays Theatre)		**Parallel Session 4b: Liquids (Studio 1)**
13:30	(Invited) Pyramidal inversion in $Ba(IO_3)_2 \cdot H_2O$ **Robin Turnbull**, University of Valencia	13:30	(Invited) X-ray Raman scattering spectroscopy elucidates the microscopic structure of water at high pressure **Simo Huotari**, Department of Physics, University of Helsinki
14:00	SiV centers of diamond as quantum sensors under pressure **Grégoire Le Caruyer**, Lumin, ENS Paris Saclay	14:00	Dynamic diamond anvil cell for time-resolved study: Application on Water **Florian Dembele**, CEA
14:20	Effect of uniaxial pressure on transport properties of MnTe **Karel Vyborny**, Fzu - Inst. Of Physics, Acad Sci Czech Rep	14:20	High-Pressure Structural Invariance in Liquid Bismuth Across the Melting Curve **Shir Ben Shalom**, Ben Gurion University of The Negev
14:40	Neutrons don't lie: The case of ReO_3 under pressure **Stefan Klotz**, IMPMC, Sorbonne University	14:40	Is there a Liquid-Liquid transition in realgar (As_4S_4) under Extreme Conditions? A Comprehensive Synchrotron study **Rajaji Vincent**, Institut de Minéralogie, de Physique des Matériaux et de Cosmochimie (IMPMC), Sorbonne Université
15:00	Full energy structure of the Cr3+ activator in $Cs_2(Ag,Na)InCl_6$ double halide perovskite hosts under pressure **Tadeusz Lesniewski**, University of Gdansk	15:00	The Frenkel line of nitrogen and an empirical equation for the coordination number of real fluids **Ciprian Pruteanu**, University of Edinburgh
15:30	Poster Session 1 with Coffee (Studio 2 and 3)		
17:00	End		

Wednesday 3 September

08:30	Registration with Refreshments (Quays Bar)
09:00	(Compass Room) EHPRG Award Lecture: When crystallography meets planetary science: insights into large icy moons of Jupiter and Saturn **Anna Pakhomova**, European Synchrotron Radiation Facility
10:00	Coffee Break (Quays Bar)

	Parallel Session 5a: Molecular systems and mixtures (Compass Room)		**Parallel Session 5b: Hydrides and magnetic materials (Studio 1)**
10:30	(Invited) Phase Stability and Stimulated Reactivity of Methane **Miriam Pena-Alvarez**, University of Edinburgh	10:30	High-Pressure Synthesis and Characterization of the Novel Potassium Superhydride KH_9 **Tomas Marqueño Villanueva**, University of Edinburgh
11:00	(Invited) The emptied hydrate: from the high pressure synthesis to the recovered functional material **Leonardo del Rosso**, CNR - Institute of Applied Physics "Nello Carrara"	10:50	Ternary Sulfur Hydride Compounds **Israel Osmond**, Centre For Science at Extreme Conditions, University of Edinburgh
11:30	Large compositional variability in water-ammonia solid mixtures at high pressure and temperature **Sandra Ninet**, Sorbonne Université - IMPMC	11:10	Formation of Molybdenum Deuteride at High Pressure: A Neutron Diffraction Study **Zhongsheng Wei**, STFC - ISIS Neutron and Muon Source
11:50	High Temperature properties of methane-hydrogen inclusion compounds **Leopoldine Parczanny**, The University of Edinburgh	11:30	High Pressure Synthesis of Cesium Superhydrides **Mikhail Kuzovnikov**, University of Edinburgh
12:10	Quantum Diamond Magnetometry : High-Pressure Sensing for High-T_c Superconductivity **Claire Roussy**, Université Paris-Saclay	11:50	Imaging magnetic fields using NV centers as quantum sensors - study of the magnetic transition of UH_3 under high pressure **Valentin Schmidt**, CEA, DAM, DIF

		12:10	High-pressure modulation of breathing kagome lattice: Lifshitz transitions and evolution of the electronic structure **Marcos Vinicius Goncalves Faria**, Helmholtz-Zentrum Dresden-Rossendorf
12:30	Lunch (Quays Bar)		
	Parallel Session 6a: Central Facilities (Compass Room)		**Pressure Scale Workshop (Studio 1)**
13:30	(Invited) Developing the High Pressure Science Programme at the ISIS Neutron and Muon Source **Craig Bull**, ISIS Neutron and Muon Source		
14:00	(Invited) Dynamic compression experiments at the HED-HiBEF scientific instrument at European XFEL **Karen Appel**, European XFEL GmbH		**Parallel Session 6b: Geoscience and planetary science (Studio 1)**
14:30	Developing Neutron Techniques at Extreme Conditions: the High Pressure Neutron Diffractometer at China Spallation Neutron Source (CSNS) **Jinlong Zhu**, Department of Physics, Southern University of Science And Technology	14:30	(Invited) High-pressure data quality in today's data-centric world **Kamil Dziubek**, University of Vienna
14:50	High-pressure research at the HPCAT beamlines following the APS Upgrade **Maddury Somayazulu**, Argonne National Laboratory	15:00	Synthesis of chemically simple carbonates at moderate pressures and temperatures **Dominik Spahr**, Goethe University Frankfurt
15:10	Structural investigations of iron by X-ray heating and Diamond Anvil Cells at European Free Electron Laser **Zuzana Konopkova**, European XFEL GmbH	15:20	
15:30	Poster Session 2 with Coffee (Studio 2 and 3)		
17:00	End		
19:00	Conference Dinner (The Midland Hotel)		

Thursday 4 September

08:30	Registration with Refreshments (Quays Bar)		
09:00	(Compass Room) Plenary III: The iron phase diagram at multiple timescales **Sébastien Merkel**, Univ Lille, France		
10:00	Coffee Break (Quays Bar)		
	Parallel Session 7a: Instrumentation and experimental methods (Compass Room)		**Parallel Session 7b: General Interest Talks (Studio 1)**
10:30	(Invited) A New X-ray Transparent Internally Heated Pressure Vessel for High-Pressure and High-Temperature in-situ view experiments **Barbara Bonechi**, The University of Manchester	10:30	(Invited) From between diamonds to the centres of planets – large scale impacts from tiny samples **Helen Maynard-Casely**, Australian Centre For Neutron Scattering
11:00	Pressure gradients inside the hydrostatic cavity of DACs loaded with silicone oil and methanol-ethanol 4:1 as pressure transmitting media **Ignacio Hernandez**, Universidad De Cantabria	11:00	(Invited) Crystallising phase relations of Earth's outer core **Tetsuya Komabayashi**, School of GeoSciences, University of Edinburgh
11:20	Imaging in (Laser-Heated) Diamond Anvil Cells: From Phase Diagrams to Material Properties **Bernhard Massani**, University of Edinburgh	11:30	Engaging Students in High-Pressure Physics Through Sapphire Anvil Cell Experiments **Ilia Sholin**, Independent Researcher
11:40	Optimized Sample Geometry for X-ray Diffraction Experiments under Laser Heating in Diamond Anvil Cells.S **Gunnar Weck**, CEA	11:50	(Invited) How plastic water is? **Livia Eleonora Bove**, CNRS Paris & Università La Sapienza Roma
12:00	(Invited) Study of high pressure properties of geomaterials using time-resolved diagnostics **Guillaume Morard**, IMPMC-CNRS		

12:30	Lunch (Quays Bar)		
	Parallel Session 8a: Melting curves and phenomena (Compass Room)		**Parallel Session 8b: General Interest Talks (Studio 1)**
13:30	Can we compute high-pressure melting curves without knowledge of the crystalline structure? **Stanimir Bonev**, Lawrence Livermore National Laboratory	13:30	(Invited) Life under extreme conditions **Judith Peters**, Univ. Grenoble Alpes
13:50	Melting at Extreme Conditions: X-ray diffraction Meets Phase-Contrast Imaging **Emma Ehrenreich-Petersen**, Deutsches Elektronen-Synchrotron (DESY)	14:00	(Invited) From Snails to Fitting High-Pressure Raman Data **David Dunstan**, Queen Mary University of London
14:10	Grain-size, grain-growth and melting under extreme conditions: A novel approach to melt identification **Tara R McElhinney**, University of Manchester		
14:30	Excursions / Free Time		

Friday 5 September

08:30	Registration with Refreshments (Quays Bar)		
09:00	(Compass Room) Plenary IV: Will hydrogen-based superconductors come out of the DAC? **Ion Errea**, University of The Basque Country		
10:00	Coffee Break (Quays Bar)		
	Parallel Session 9a: Chemical Bonding (Compass Room)		**Session 9b: Theoretical and computational methods (Studio 1)**
10:30	Molecular orbital theory for bonding in high-pressure boron and hydrogen clusters **Harry Morgan**, University of Manchester	10:30	(Invited) Elastic constants with anharmonic corrections using quasiparticle theory **Ernesto J Blancas**, University of Oviedo
10:50	(Invited) Pressure-Induced Multicenter Bonding in $CsIO_3$: A New Perspective on Main-group Perovskite Formation Mechanism **Francisco Javier Manjón**, Universitat Politecnica De Valencia	11:00	Formation of new hydro-carbonitrides under pressure: kinetics versus thermodynamics **Andreas Hermann**, The University of Edinburgh
11:20	Machine learned interatomic potential study of NH_3-H_2O-CH_4 mixture under extreme pressures and temperatures **Gracie Chaney**, Sorbonne University	11:20	AIASSE - Ab Initio Augmented Structure Solving Engine: A Hybrid Approach to Atomic and Electronic Structure Characterization of Disordered Materials **Ayobami Daramola**, University of Edinburgh
		11:40	Powder-Diffraction-Based Structural Comparison for Crystal Structure Prediction Under Pressure **Alberto Otero De La Roza**, University Of Oviedo
12:00	Closing Ceremony (Compass Room)		
12:30	Lunch and Depart (Quays Bar)		

Poster Session 1

(Studio 2 and 3)

P1	Dispersion of the KCl refractive index at high pressure **Reece O'Beirne**, University of Salford
P3	High-Pressure Phase Evolution of Bi–Ga Alloys Driven by Polymorphism, Anomalous Melting, and Liquid Miscibility Gap **Shir Ben Shalom**, Ben Gurion University of The Negev
P5	Melting curve of Phosphorus: Evidence for a solid-liquid-liquid triple point **Frédéric Datchi**, IMPMC, Sorbonne Université, CNRS & MNHN
P7	Heat capacity and other thermodynamic properties of hcp-CrH **Mikhail Kuzovnikov**, University of Edinburgh
P9	Investigating the Stability of High Entropy Sulphides at High Pressures: Delineation of Solid-State Phase Transformations **Josh Littleton**, University of Manchester
P11	The pressure response of the K2[Ru(bipy)(CN)4]·3H2O coordination polymer studied by Raman and photoluminescence spectroscopy **Olga Karabinaki**, Faculty of Engineering, Aristotle University of Thessaloniki
P13	Structural- and valence-state changes in EuT_2X_2 **Jiří Prchal**, Charles University, Faculty of Mathematics and Physics
P15	Clathrate-like CeB_{12} with Superior Hardness **Bole Chen**, Chongqing University of Posts and Telecommunications
P17	Comparing DFT calculated P-V equation of states of high-pressure hydrides to experimental XRD results **Milo Dixon**, University of Edinburgh
P19	Novel Chromium Silicides $MoSi_2$-type $CrSi_2$ and $PdGa_5$-type $CrSi_5$ Synthesized under High-Pressure **Takuya Sasaki**, Department of Materials Physics, Nagoya University
P21	Phase transitions in ferroelectric van der Waals crystals under pressure **Nada Alghofaili**, School of Physics & Astronomy, University of Nottingham
P23	Electrical Resistivity of Liquid Fe-16wt%S-2wt%Si at High Pressures with Implications for Heat Flow in Sub-Earth Exoplanets **Erin Lenhart**, University of Western Ontario

Poster Session 2

(Studio 2 and 3)

P2	New instrumentation at P02.2, PETRA III, DESY employing Soller slits for structural measurements of non-crystalline materials at extreme conditions **Christoph Otzen**, University of Freiburg, Institute of Earth and Environmental Sciences
P4	Softening of fcc and hcp metals at high homologous temperatures contribute to effective elastic softening in the inner-core **Tara R McElhinney**, University of Manchester
P6	Bonding changes in solid nitrogen under high pressure and temperature **Gordon Scholz**, TU Dortmund / Experimentelle Physik Ia
P8	Phase Transitions of Solid and Liquid Fe-Si Alloys with Applications to Planetary Core Composition and Dynamo Processes **Ben Kalman**, University of Western Ontario
P10	Pressure-Induced Occupancy Changes in Methane Hydrate II: Implications for Planetary Ices **Cerian Robertson**, The University of Edinburgh
P12	Styrkja: a pressure intensifier for miniature HP-HT devices for 4D synchrotron X-ray microtomography **Damien Freitas**, The University of Manchester at Harwell
P14	Li-Battery Cathode Materials: Investigating the High Pressure-Temperature Phase Stability Field of Olivine-Structured Li(Fe,Ni,Mn)PO_4 **Josh Littleton**, University of Manchester
P16	Effect of high-pressure processed apple on human gut microbiota, phenolic metabolites and short chain fatty acids by using a dynamic in vitro colonic fermentation system **Begoña De Ancos**, ICTAN-CSIC
P18	Metadynamics study of kinetic pathways of coesite densification **David Vrba**, Comenius University
P20	High Energy Scattering Capabilities at Beamline I15 **Dominik Daisenberger**, Diamond Light Source
P22	Digital temperature controller for the externally heated diamond anvil cell **Ivan Badger Holmes**, University of Salford
P24	High Pressure Hydrogen capabilities at ISIS Neutron and Muon Facility **Ian Hickman**, ISIS Neutron and Muon Source

P25 Strain Dependent Optical Properties of Core/Shell Nanoplatelets

River Leversee, University of Colorado, Boulder