

Date	Session	Session Chair	Time		Speakers	Title	Affiliation
Aug 21st	Opening Remarks	Svenja Karpppe	8:30-9:30	Welcome			
	session 1 (OPM-Enabling tech & Basic Research 1)	Arne Wickenbrock	8:40-9:20	talk 1 extended talk	Part I (15 min): Christopher Kiehl ¹ , María Hernández Ruiz ¹ , Cristina Sastre-Jachmicki ¹ , Vito Giovanni Lucivero ^{1,2} , Morgan W. Mitchell ^{1,3}	Cavity-Enhanced Readout for Miniaturized Optically Pumped Magnetometers	¹ ICFO - Institut de Ciències Fotòniques, The Barcelona Institute of Science and Technology, 08860 Castelldefels (Barcelona), Spain
					Part II (15 min): Andrea Zanon ³ , Kostas Moloudakis ² , Michael C.D. Taylor ² , Giacomo Cornelli ⁴ , Roberto Ossellame ⁴ , Morgan W. Mitchell ^{2,5} and Vito Giovanni Lucivero ^{1,2}	Laser-written vapor cells for chip-scale optical magnetometry	¹ Dipartimento Interateneo di Fisica, Università degli Studi di Bari Aldo Moro, 70126 Bari, Italy ² ICFO - Institut de Ciències Fotòniques, 08860 Castelldefels (Barcelona), Spain ³ Dipartimento di Fisica — Politecnico di Milano, Piazza Leonardo da Vinci 32, 20133 Milano, Italy ⁴ Istituto di Fotonica e Nanotecnologie (IFN) — Consiglio Nazionale delle Ricerche (CNR), Piazza Leonardo da Vinci 32, 20133 Milano, Italy ⁵ ICREA - Institució Catalana de Recerca i Estudis Avançats, 08010 Barcelona, Spain
					Part III (15 min): Diana Mender-Avalos ¹ , Aleksandra Serani ¹ , Theo Louzada Merelles ¹ , Santiago Tabares Graldo ¹ , Morgan W. Mitchell ¹	Quantum Noise and Quantum Enhancement in Hybrid and Miniaturized Optically Pumped Magnetometers	¹ ICFO - The Institute of Photonic Sciences, Barcelona, Spain ¹ ICREA - Institutio Catalana de Recerca i Estudis Avancats ³ Instituto de Fisica, Universidade de São Paulo, São Paulo, Brazil
			9:20-9:40	talk 2	Guzhi Bao ¹ , Ding Huang ¹ , Minwei Shi ¹ , Keyue Zhang ¹	Quantum-Enhanced Magnetometry via Spin Nonequilibrium Criticality	¹ Shanghai Jiao Tong University, Shanghai, China ² East China Normal University, Shanghai, China
			9:40-10:00	talk 3	Jia Kong	Quantum Noise Analysis and Suppression in Atomic Magnetometer	Hangzhou Dianzi University
	Group picture/coffee break		10:00-10:40				
	session 2 (OPM Applications- Biomag 1)	Jingwei Sheng	10:40-11:00	talk4	Line Kruse ¹ , Laura Bock Paulsen ¹ , Lauri Parkkonen ² , Lau Møller Andersen ^{1,3}	Fidelity of deep source localization in MEG with varying degrees of simultaneous cortical activity: a simulation study comparing SQUIDS and OPMs	¹ Department of Linguistics, Cognitive Science and Semiotics, Aarhus University, Denmark
			11:00-11:20	talk5	Svenja Karpppe ^{1,2} , George O'Neill ¹ , Orang Alemi ^{1,2x} , Tyler Maydew ¹ , Teresa Cheung	Evaluating Localization Accuracy and the Impact of Movement in the HEDiscan OPM-MEG System	FieldLine Medical, Colorado, USA
			11:20-11:40	talk6	Mikael Grön, Paavo Hietala, Olli Pikkarainen, Markus Henttonen, Eelis Eklund, Emmeli Luostarinen, Joonas Iivanainen, Lauri Parkkonen	OPM-MEG in a compact magnetic shield	Department of Neuroscience and Biomedical Engineering, Aalto University, Espoo, Finland
			11:40-12:00	talk7	Jing Xiang ^{1*} , Fawen Zhang ² , Jiang Yang ³ , Elena Harris ¹	AI-Driven Adaptive Noise and Artifact Mitigation for Wearable OPM-MEG	¹ Cincinnati Children's Hospital Medical Center, Cincinnati, OH, USA
	lunch break		12:00-13:45				
	session 3 (OPM Applications - Other 1)	Svenja Karpppe	13:45-14:05	talk8	Yao Chen, Libo Zhao	Chip-Scale Atomic Magnetometers for Ultra-Weak Magnetic Field Measurement From MEG to Ultra-Low Field NMR	School of Instrument Science and Technology, Xi'an Jiaotong University State Key Laboratory for Manufacturing Systems Engineering, Xi'an Jiaotong University
			14:05-14:25	talk9	Huanghui Deng ¹ , Haoyu Liu ¹ , Xueke Wang ¹ , Jiang He ¹ , Wei Gao ¹ , Kai Liu ¹ , Bing Mao ¹ , Dong Shen ¹ , Yuning Wang ¹	A robust and rapid Dual-Frequency Counter for FID magnetometers and CoMagnetometers	University of Science and Technology of China, Hefei, China ¹
			14:25-14:45	talk10	Peyuan Liu ¹ , Zhiyuan Jiang ¹ , Jianan Qin ¹	Helium-3 Magnetometry for Ultra-Weak Magnetic Field Measurement and Uncertainty Evaluation	¹ National Institute of Metrology, China
			14:45-14:55	talk11	Tarantian Zhang, Dmbiri Grigorev, Konstantin Kalamadze, Hiteswar Prasad, Philip Verweeg, Tringyng Luo, Raquel Flores, Karsten Pyka, Rafael Rothganger de Paiva, Rene Reimann	Developing Optically Pumped Magnetometers for GNSS-Aided Navigation	Sorbonne University Abu Dhabi
	coffee break		14:55-15:20				
	session 4 (OPM- Vector OPM)	Vito Giovanni Lucivero	15:20-15:40	talk12	Ana Neves ¹ , Aryadine de Souza ¹ and Hans Marin Florez ^{1*}	Single probe beam W-axis optically pumped magnetometer based on Voigt rotation in cells with gas buffer	Centro de Ciências Naturais e Humanas, Universidade Federal do ABC, Avenida dos Estados 5001, 09210-580 Santo André, São Paulo, Brazil
			15:40-16:00	talk13	Jiang He ¹ , Xueke Wang ¹ , Huanghui Deng ¹ and Dong Sheng ¹	A Sensitive Dead-Zone-Free FID Vector Magnetometer	¹ University of Science and Technology of China, Hefei, China
			16:00-16:20	talk14	Xiaoyuan Zhang ¹ , Zhiyin Sun ¹ , Lili Li ¹	Omnidirectional Diamond-Based Vector Magnetometers	¹ Harbin Institute of Technology, Harbin, China
	Poster session		16:20-18:20				
	Aug 21st				Syed Mohammad Suhail ¹ , Samuel Leouch ² *, Michael Holynak ²	Beyond the Conventional Readout: Triaxial Magnetic Field Reconstruction using Single-Axis OPMs	¹ School of Engineering, University of Birmingham, United Kingdom ² School of Physics and Astronomy, University of Birmingham, United Kingdom
					Pragati Chettri ¹ , Yasin Taheri Mazinan ¹ , R. van Vlijmen ¹ , Vincenzo Tamborra ¹	Femtosecond laser writing and welding of water level all glass vapor cells	¹ 10SENSATO Srl, Via Giovanni Amendola 173, 70126 Bari, Italy ² Dipartimento Interuniversitario di Fisica, Università degli Studi di Bari Aldo Moro, 70126 Bari, Italy
					Vito Giovanni Lucivero ^{1, 2, 3}		¹ ICFO Institut de Ciències Fotòniques, The Barcelona Institute of Science and Technology, 08860, Castelldefels, Barcelona, Spain ² 3CFO Institut de Ciències Fotòniques, The Barcelona Institute of Science and Technology, 08860, Castelldefels, Barcelona, Spain ³ State Key Laboratory for Manufacturing Systems Engineering, Xi'an Jiaotong University, Xi'an, Shaanxi, China
					Pan Chen ^{1,2} , Yintao Ma ^{1,2*} , Yu Guo ^{1,4} , Yao Chen ^{1,2} , Yabin Wang ^{1,4} , Mingchi Yu ^{1,2} , Ping Yao ^{1,4} , Qiling Lin ^{1,2,3} , Libo Zhao ^{1,2,3*}	A Miniaturized Rydberg Atom Electrometer Enabled by On-chip MEMS Alkali Vapor Cell	Hangzhou Institute of National Extremely-Weak Magnetic Field Infrastructure, Hangzhou, China
					Yanyang Lian, Yimeng Zhai, Wenkai Luo, Hongyu Wang, Luchang	Suppression of Complex Environmental Magnetic Interference in Open Magnetocardiography (MCO) Based on OPM Sensors	Ningbo University, Ningbo, China
					Yafen Cai, Deng Pan, Kun Yang, Xiangyan Kong	In-situ field compensation with high resolution for the SERF magnetometer	Beihang University, Beijing, China
					Yangning Dai ¹ , Chenlu Xu ¹	Small Atomic Magnetometer Based on Modular Concept	University of Science and Technology of China, Hefei, China ¹
					Wei Gao ¹ , Huanghui Deng ¹ , Haoyu Liu ¹ , Xueke Wang ¹ , Jiang He ¹ , Kai Liu ¹ , Bin Mao ¹ , Dong Shen ¹ , Yuning Wang ¹	Non-Contact Detection of Third-Harmonic Magnetic Fields from Insulators Using an FID Atomic Electrometer	1Zhejiang Key Laboratory of Micro-Nano Quantum Chips and Quantum Control, School of Physics, Zhejiang University, Hangzhou 310027, China
					Xiaona Liu ¹ , Yajie Sun ^{1,*} , Zhaoxing Wang ^{1,2,*}	Polarization-gradient optical pumping in an atomic magnetometer	¹ Shanxi University, Shanxi Province, China
					Yongbiao Yang ¹ , Zhengyu Su ¹ , Yang Li ¹ , Yanhua Wang ¹ , Jun He ¹ , Xiaojun Jia ¹ , Junmin Wang ¹	The Bell-Bloom-type optically pumped FID Rubidium atomic magnetometer with a multi-casimir orifice beam and two counter-propagating pump beams	¹ Korea Research Institute for Standards and Science, Republic of Korea
					Seong-min Hwang ¹ and Jeong Hyun Shim ¹	In-situ field compensation with high resolution for the SERF magnetometer	Hangzhou Dianzi University, Hangzhou, China ² The Barcelona Institute of Science and Technology, Barcelona, Spain
					Yihan Wang ¹ , Xiaofeng Jin ¹ , Yuchuan Ming ¹ , Jianming Mao ¹ , Xiao-Ming Liu ¹ , M. W. Mitchell ² , and Jia Kong ¹	Adaptive Real-Time Magnetic Field Tracking beyond Prior Waveform Constraints	¹ State Time Service Center, Chinese Academy of Sciences, Xi'an 710600, China
					Qingchang Li ^{1,2,3} , Weyu Wang ^{1,2,3} , Erwei Li ^{1,2,3} and Guobin Liu ^{1,2,3*}	Generation of Magnetic Frequency Comb via Pulse Feedback Rb-Xe Spin Mixer	Department of Physics, University of Basel, Switzerland
					M. M. Saeed ¹ , M. Fadel ² , A. Serati ³ , G. Tassew ³ , P.J. Nache ³ , A. Sinagra ³ , and P. Teyssie ¹	Towards optical quantum control of nuclear spins in a Helium-3 gas	¹ Beihang University, Beijing, China
					Chenlu Xu ¹ , Jiayu Jiang ¹ , Yangning Dai ¹ , Bin Zhang ¹ , Haifeng Dong ¹	A new method to measure the spin polarization of synchronous optical pumping Development and Performance Evaluation of MEMS B-planar Coils for Interfered Chip-Scale Atomic Magnetometers	¹ School of Instrument Science and Technology, Xi'an Jiaotong University, Xi'an, China
					Yanjie Zhang ¹ , Jiayu Wang ¹ , Ruoyang Guo ¹ , Yabin Wang ¹ , Yao Chena ¹	An affordable method to reduce residual DC magnetic field in a magnetically shielded room using dry cells	¹ Kanazawa Institute of Technology, Ishikawa, Japan ² Institute of Science Tokyo, Tokyo, Japan ³ Sumitomo Heavy Industry, Tokyo, Japan
					Yoshiaki Adachi ¹ , Shigeru Kawabata ² , Takanori Kato ³	Compact Mz Atomic Magnetometer and Its Applications in Biomagnetic Signals Measurement	Ningbo University, Ningbo, China
					Chuangzhen Guo, Kun Yang, Chenghui Zhen, Yafen Cai and Xiangyan Kong ¹	Neural Network Enhanced Extraction of Fetal Magnetocardiography from Single-Channel Noncontact Bioelectricity	Ningbo University, Ningbo, China
					Ziyan Zhou, Kun Yang, Yafen Cai, Yu Xin and Xiangyan Kong	Portable Ultra-Low Field NMR Analysis System Based on MEMS Optically Pumped Magnetometer	School of Instrument Science and Technology, Xi'an Jiaotong University, Xi'an, 710049, China
					Lun Zoua, Ruoyang Guoa, Yanjie Zhanga, Yao Chena ¹	Low-power consumption SERF OPM for MEG	¹ Peking University, Beijing, China ² Changping Laboratory, Beijing, China
					Zehuan Zhao ¹ , Kaiyan He ² , Yuyao Cai ¹ , Rui Yang ¹ , Yingchun Zhao ¹ , Zhao Jin ¹ , Li-Xiao Chen ¹ ²	Movement-Related Magnetic Interference in Simultaneous OPM-MEG and fNIRS Motor Recordings	¹ Institute of Mathematics, Physics and Mechanics, Ljubljana, Slovenia
					Urban Marhi ¹ , Pichaya Tappayuthphajant ² , Stanislaw Wojtkiewicz ² , Piotr Sawczak ² , Adam Liebert ³ , Timothee Sanchez ² , Vito Giovanni Lucivero ¹	All-optical measurement of the diffusion coefficient via vector light shift	¹ Peking University, Beijing, China ² Helmholtz Institute, Mainz, Germany
					Xingxing Jin ¹ , Wenlong Luo ¹ , Yida Sha ¹ , Shuyuan Chen ^{1,2} , Xiang Peng ¹	Long-term Stable 3-Axis Vector Atomic Magnetometer Using a Commercial Rubidium Ammonia and Direct Absorption Frequency Lock	Okayama University of Science, Okayama Japan
					Yantel Leng, Minoru Kawamura	Millisecond-scale 3D OPM tracking for optically-blind droplet flows	¹ North University of China, Taiyuan, Shanxi, China ² Beihang University, Beijing, China
					Xinlin He ¹ , Haifeng Dong ¹ , Chenlu Xu ² , Jun Tang ¹ , Zongmin Jun ¹ , Jun Liu ¹	Dual-Axis Decoupling Method for OPM Based on Longitudinal Modulation	¹ Beihang University, Beijing, China ² Hangzhou Institute of Extremely-Weak Magnetic Field
					Wen Luo ¹ , Ziqi Yuan ² , Shudong Lin ¹ , Yujian Ma ¹ , Guangshu Yu ¹ , Junjian Tang ¹ , Yuesang Zhai ¹	Multi-Channel SERF Atomic Magnetometer Array Based on Optical Diffraction Devices	Ningbo University, Ningbo, China
					Chenghui Zheng, Kun Yang, Chuangzhen Guo, Yafen Cai and Xiangyan Kong	Towards actively shielded MEG using zero-field optically pumped magnetometers	¹ Aalto University, Espoo, Finland
					Emmeli Luostarinen ¹ and Joonas Iivanainen ¹		¹ School of Physics, Nanjing University of Science and Technology, Nanjing, China ² Department of Physics & Astronomy, University College London, London, UK
					Han Yao ¹ , Longjie Zhao ² , Ferruccio Renzoni ²	High-sensitivity Operation of Unshielded Radio-Frequency Atomic Magnetometers	¹ Faculty of Education, Institute of Human and Social Sciences, Kanazawa University, Kanazawa, Japan
					Yuko Yoshimura ^{1,2,3} , Takashi Reda ^{2,3} , Eichi Okumura ^{2,3} , Chiaki Hasegawa ⁴ , Mitsuru Kikuchi ^{2,3,5}	OPM-MEG for pediatric speech processing: Voice-evoked responses in children and adults and comparison with SQUID-MEG	¹ Aalto University, Department of Neuroscience and Biomedical Engineering, Espoo, Finland
					Olli Pikkarainen ¹ , Paavo Hietala ¹ , Markus Henttonen ¹ , Joonas Iivanainen ¹ and Lauri Parkkonen ¹	Demagnetization procedure for a person-sized magnetic shield	¹ Department of Linguistics, Cognitive Science and Semiotics, Aarhus University, Denmark ² Department of Clinical Medicine, Center of Functionally Integrative Neuroscience, Aarhus University, Denmark
					Laura Bock Paulsen ¹ , Lau Møller Andersen ^{1,2}	Cerebellar tactile expectations measured using OPM-MEG	¹ Department of Linguistics, Cognitive Science and Semiotics, Aarhus University, Denmark ² Department of Clinical Medicine, Center of Functionally Integrative Neuroscience, Aarhus University, Denmark
					Guoan Cai ¹ , Chenyao Zhan ¹ , Zhaoxing Wang ^{1,2}	Research on atomic magnetometers based on vortex beam	¹ Zhejiang Key Laboratory of Micro-Nano Quantum Chips and Quantum Control,

Date	Session	Session Chair	Time		Speakers	Title	Affiliation
Aug. 22	session 5 (Basic OPM Researches II)	Dong Sheng	8:50-9:10	talk 15	Eric Elzenheimer ^{1,2} , Silvia Knappe-Grüneberg ² , Hartmut Matz ² , Jan Zerfowski ^{2,3} , Surjo R. Soekadar ³ , Michael Höft ¹ , Robert Bieger ¹ , Jens Voigt ²	Metrological Foundations for Benchmarking OPMs	¹ Kiel University, Dept. of Electrical and Information Engineering, Kiel, Germany
			9:10-9:30	talk 16	Liwei Lei ¹ , Teng Wu ¹ , Hong Guo ¹	Unification of Sensitivity Limits in Magnetometry	¹ Beijing Key Laboratory of Quantum Sensing and Precision Measurement, Peking University, Beijing 100871, China
			9:30-9:50	talk 17	Daniel Gavilan-Martin ¹ , Z. 3, Grzegorz Lukasiwicz ^{2,4} , Vincent Kai Schäfer ¹ , 2, Mikhail Padniuk ⁶ , Adam Stefański ⁴ , Adam Węgliński ⁴ , Emmanuel Klinger ⁷ , 7 Szymon Pustelny ^{4,8} , Derek F. Jackson Kimball ⁹ , Dmitry Budker ¹ , 2, 3, 10 and Arne Wickenbrock ¹ , 2, 3	Floquet engineering of spin-spin interactions in a hybrid atomic system	¹ Johannes Gutenberg-Universität Mainz, 55128 Mainz, Germany ² Helmholtz Institute Mainz, 55099 Mainz, Germany
			9:50-10:10	talk 18	Nan Zhao, Kezheng Yan, Jinbo Hu & Feng Tang	Magnetic Resonance Line-width of Alkali-metal Atoms in Vapor Cells	Beijing Computational Science Research Center
	coffee break		10:10-10:40				
	session 6 (OPM Applications - Biomag 2)	Lauri Parkkonen	10:40-11:00	talk 19	Itsuki Hamada ¹ , Kohei Fujisawa ² , Jion Tominaga ³ , Yuki Ushijima ⁴ , Rikuma Itabashi ⁴ , Atsushi Shimojo ⁵ , Hayato Watanabe ^{5,6} , Koichi Yokosawa ⁵ , Shinji Nishimoto ^{5,7} , and Hiromu Sakai ^{1,8}	Time-resolved MVPA decoding performance comparison between OPM-MEG and SQUID-MEG in a picture-naming task	¹ Graduate School of Advanced Science and Engineering, Waseda University, Tokyo, Japan;
			11:00-11:20	talk 20	Tengyue Long ¹ , Yaxiang Wang ² , Yan Dai ² , Lu Zhang ²	Ghost Harmonics in OPM-Based SSVEP Brain-Computer Interfaces	¹ Beihang University, Beijing, China ² Hangzhou Lingci Medical Equipment Company, Hangzhou, China
			11:20-11:40	talk 21	Yijie Song ¹ , Chaofeng Ye ^{1*}	Frequency-Response Fusion for Wideband Magnetomyography Measurement Using SERF Optically Pumped Magnetometers	ShanghaiTech University, Shanghai, China ^{1*} ShanghaiTech University, Shanghai, China
			11:40-12:00	talk 22	Xiao Yang ¹ , Yicheng Wang ¹ , Teng Wu ^{1,2} , and Hong Guo ^{1,2,1}	Unshielded magnetoencephalography source imaging	Beijing Key Laboratory of Quantum Sensing and Precision Measurement
	lunch break		12:00-13:45				
	session 7 (Basic OPM Researches 3 and Applications - other 2)	Ling Liu	13:45-14:05	talk 23	Yida Sha ¹ , Kaiwen Yi ¹ , Xingqing Jin ¹ , Matteo Fadel ² , Xiang Peng ¹	Observation of alignment tensor effects in metastability-exchange collisions with highly polarized ³ He ensembles	¹ Peking University, Beijing, China ² ETH Zürich, Zürich, Switzerland
			14:05-14:25	talk 24	Shuying Wang ^{1,2} , Jixi Lu ^{1,2} , Yibo Qi ^{1,2}	Portable sub-femtotesla-sensitivity OPM with three-axis feedback for dynamic environments	¹ Beihang University, Beijing, China ² Hefei National Laboratory, Hefei, China
			14:25-14:45	talk 25	Wenqiang Zheng ^{1,2} , Kan Li ^{1,2} , Shengran Su ²	New OPM development for nondestructive testing	¹ Zhejiang University of Technology, China ² Mag-inspection Technology Co., Ltd., China
			14:45-15:05	talk 26	Chenlu Xu ¹ , Jiayu Jiang ¹ , Yangning Dai ¹ , Bin Zhang ¹ , Haifeng Dong ¹	A new method to measure the spin polarization of synchronous optical pumping	¹ Beihang University, Beijing, China
	coffee break		15:05-15:35				
	session 8 (OPM Applications - Biomag 3)	Tilmann Sander	15:35-15:55	talk 27	Wenyu Gu ¹ , Jingwei Sheng ¹	Multi-frequency source localization accuracy of OPM-MEG versus SQUID-MEG	¹ Quanmag Healthcare, Peking, China
			15:55-16:15	talk 28	A.M. Razorenov ^{a,b,d,#} , A.B. Butorin ^{a,b} , E.S. Skidchenko ^b , D.A. Medvedev ^{a,c} , N.P. Fedosov ^{c,e} , A.E. Ossadchik ^{a,c} , N.A. Kosheva ^{a,b}	Individualized OPM-MEG helmets with active magnetic shielding for task-specific cortical source localization	^a LLC "LIFT Center," Moscow, Russia ^b Skolkovo Institute of Science and Technology, Moscow, Russia.
			16:15-16:35	talk 29	Zihua Liang ¹ , Yaxiang Wang ² , Yan Dai ² , Lu Zhang ²	A Unified SERF-OPM System for Simultaneous MCG and MEG Measurements	¹ Hangzhou Institute of Extremely-Weak Magnetic Field Hangzhou, China ² Hangzhou Zero Magnetic Medical Equipment Co., Ltd., Hangzhou, China
	coffee break		16:35-17:05				
	session 9 (Educational session)	Lauri Parkkonen	17:05-17:45	invited talk 1			
			17:45-18:30	invited talk 2			
	Closing Remarks	Svenia Knappe	18:30-18:35				
			A survey				