

CPO-10

October 17 Wed

10/17 Wed

9:00	10:30	Plenary Session, Grand Ballroom		Chair: Berz, Martin (MSU)
9:00	9:15	Berz, Martin	MSU	CPO-10 Opening Remarks
9:15	9:45	(I) Wollnik, Hermann	New Mexico SU	Time-of flight mass spectrographs and the precise determination of masses of ions
9:45	10:15	(I) Mankos, Marian	Electron Optica	Electron optics for a multi-pass transmission electron microscope
10:15	10:30	(I) Lyman, Charles	MSA	For the promotion of microscopy and microanalysis in all relevant scientific disciplines: the Microscopy Society of America

10:30	Break	(In Honor of Microscopy Society of America)
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10/17 Wed

11:00	12:15	Session 1, Grand Ballroom		Chair: Lyman, Charles (MSA)
11:00	11:15	Kruit, Pieter	TU Delft	Double mirror aberration corrector
11:15	11:30	Tamaki, Hirokazu	Hitachi	Accurate measurement and correction of image distortion in TEM without reference
11:30	11:45	Pranesh, Balamuniappan	NU Singapore	Wide-angle annular electron beam focusing column
11:45	12:00	Oral, Martin	ISI CAS	Simulation of motion of many ions in a linear Paul trap
12:00	12:15	Nishi, Ryuji	Osaka U	Investigation of electromagnetic-SYLC for chromatic aberration correction

10/17 Wed

11:00	12:15	Session 2, Fiesta Key		Chair: Wollnik, Hermann (New Mexico SU)
11:00	11:15	Fujita, Shin	Shimadzu	Elucidation of ion motion in quadrupole mass filter by Bloch function: improved pre-rod design for efficient ion injection
11:15	11:30	Shchepunov, Vyacheslav	Shimadzu	A high resolution multi-turn TOF mass analyzer
11:30	11:45	Stewart, Hamish	Thermo Fisher	Drift control in isochronous multi-reflection ToF analyzer with elongated ion mirrors
11:45	12:00	Murata, Hidekazu	Meijo U	Electron ray tracing in a cylindrical deflector analyzer for field emission spectroscopy
12:00	12:15	Asai, Hiroataka	Meijo U	A high brightness field emitter by use of noble metal coated nano scale pyramid formed on tungsten tip

12:15	Lunch
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October 17 Wed

10/17 Wed

14:00	15:30	Plenary Session, Grand Ballroom		Chair: Kruit, Pieter (TU Delft)
14:00	14:30	(I) Kahl, Frank	CEOS	Design of a high-performance post-column imaging energy filter for (S)TEM Instruments
14:30	15:00	(I) Hoang, Hung Quang	Luxembourg IST	Correlative microscopy based on secondary ion mass spectrometry for high-resolution high-sensitivity nano-analytics
15:00	15:30	(I) McClelland, Jabez	NIST	Cold atom ion sources

15:30	Coffee
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10/17 Wed

16:00	17:00	Session 1, Grand Ballroom		Chair: Mankos, Marian (Electron Optica)
16:00	16:15	Ose, Yoichi	Hitachi	Simulation for the development of precise auto-focusing of SEM lenses
16:15	16:30	Jiruse, Jaroslav	TESCAN	Detection systems in scanning electron microscope
16:30	16:45	Ogawa, Takashi	Korea RI SS	Evaluation of a monochromator with offset cylindrical lenses for electron microscopy
16:45	17:00	Bimurzaev, Seitkerim	Almaty U PET	Lens-mirror objective for transmission electron microscope

10/17 Wed

16:00	17:00	Session 2, Fiesta Key		Chair: Stewart, Hamish (Thermo Fisher)
16:00	16:15	Khursheed, Anjam	NU Singapore	A low-energy spread graphene coated nickel electron source for low-voltage scanning electron microscopy
16:15	16:30	Guo, Xiaoli	TU Delft	Electron optics of a multi-beam source (MBS)
16:30	16:45	Shchepunov, Vyacheslav	Shimadzu	FFT and TOF operational modes of a hybrid mass analyzer

CPO-10

October 18 Thu

10/18 Thu

9:00	10:30	Plenary Session, Grand Ballroom		Chair: Shchepunov, Vyacheslav (Shimadzu)
9:00	9:30	(I) Herfurth, Frank	GSI	Deceleration of heavy ions, HITRAP and CRYRING@ESR
9:30	10:00	(I) Fujita, Shin	Shimadzu	Generalization of paraxial trajectory method for the analysis of non-paraxial rays: electron gun designs in terms of optical parameters
10:00	10:30	(I) Grinfeld, Dmitry	Thermo Fisher	Orbitrap mass spectrometry and nonlinear space charge dynamics

10:30	Break
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10/18 Thu

11:00	12:00	Session 1, Grand Ballroom		Chair: Ose, Yoichi (Hitachi)
11:00	11:15	Turchetti, Marco	MIT	Development of a diagnostic setup for quantum electron microscopy
11:15	11:30	Seidling, Michael	FAU E-N	Towards a microwave based beam splitter for a quantum electron microscope
11:30	11:45	Kruit, Pieter	TU Delft	Some designs for quantum electron microscopy
11:45	12:00	Khan, Sameen Ahmed	Dhofar U	Quantum charged-particle beam optics

10/18 Thu

11:00	11:45	Session 2, Fiesta Key		Chair: Kazantseva, Erika (TU Darmstadt)
11:00	11:15	Greenzweig, Yuval	Intel	Cs and Rb ion coldbeams suitability for circuit edit
11:15	11:30	Hoque, Shahedul	Hitachi	Spherical aberration correction with in-lens N-fold symmetric line currents
11:30	11:45	Tarazona, David	MSU	Muon losses from betatron resonances at the muon g-2 experiment at Fermilab

13:00	Excursion
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CPO-10

October 19 Fri

10/19 Fri

9:00	10:30	Plenary Session, Grand Ballroom		Chair: Khursheed, Anjam (NU Singapore)
9:00	9:30	(I) Radlicka, Tomas	ISI CAS	Differential algebraic method in electron optical design
9:30	10:00	(I) Kozak, Martin	Charles U	Ponderomotive generation and detection of attosecond electron pulses
10:00	10:30	(I) Maxson, Jared	Cornell U	Ultrafast electron diffraction using the CBETA photoinjector

10:30	Break		
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10/19 Fri

11:00	12:15	Session 1, Grand Ballroom		Chair: Radlicka, Tomas (ISI CAS)
11:00	11:15	Shadman, Khashayar	Electron Optica	An algorithm for characterizing the geometric optics of charged particle instruments
11:15	11:30	Valetov, Eremey V.	MSU	Analytic aberration formulas and transfer maps of electrostatic deflectors
11:30	11:45	Shirasaki, Yasuhiro	Hitachi	Robustness calculation of magnetic sectors using differential algebraic method
11:45	12:00	Munro, Eric	MEBS	A new simulation program for electron mirrors using the boundary element method
12:00	12:15	Weisskopf, Adrian	MSU	Computation and consequences of high-order amplitude and momentum dependent tune shifts in the muon g-2 ring

10/19 Fri

11:00	12:00	Session 2, Fiesta Key		Chair: Wieland, Marco (Mapper Lithography BV)
11:00	11:15	Rosenbusch, Marco	RIKEN	Recent successes of multi-reflection devices at RIKEN's RIBF facility and some thoughts about highly accurate mass calibration using ion traps
11:15	11:30	Katsap, Victor	NuFlare Tech	On significance of 50 kV e-beam shot noise in lithography application
11:30	11:45	Neustock, Lars Thorben	Stanford U	Adjoint variable method for rapid design optimization of electrostatic lens systems
11:45	12:00	Webb, Stephen	Radiasoft	A transverse envelope macroparticle method for modeling high-gain free electron lasers

12:15	CPO-10 only Group Photos		Weather permitting
	Lunch		

CPO-10

October 19 Fri

10/19 Fri

14:00	15:30	Plenary Session, Grand Ballroom		Chair: Wollnik, Hermann (New Mexico SU)
14:00	14:30	(I) Krivanek, Ondrej	Nion	Correction of aberrations in electron monochromators and spectrometers
14:30	15:00	(I) Kim, Jongwon	IBS	Considerations on beam optics of superconducting heavy ion Linacs for a rare isotope beam facility
15:00	15:30	(I) Luiten, Jom	TU Eindhoven	Longitudinal phase space manipulation of electron beams using microwave cavities

15:30	Coffee
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10/19 Fri

16:00	17:00	Session 1, Grand Ballroom		Chair: Munro, Eric (Munro's Electron Beam Software)
16:00	16:15	Kruit, Pieter	TU Delft	Nano aperture ion source
16:15	16:30	Carneiro, Jean-Paul	FNAL	Longitudinal beam dynamics studies at the PIP-II Injector test facility
16:30	16:45	Edwards, David Jr	IJL RC	The order 4 algorithm for cylindrically symmetric electrostatics
16:45	17:00	Bimurzaev, Seitkerim	Almaty U PET	Planar multireflective time-of-flight mass spectrometer of a simple design

10/19 Fri

16:00	17:00	Session 2, Fiesta Key		Chair: Wan, Weishi (ShanghaiTech U)
16:00	16:15	Fedurin, Mikhail	BNL	Advanced beam optic options for Brookhaven National Laboratory accelerator test facility beamline
16:15	16:30	Tsoupas, Nicholas	BNL	The eRHIC spin rotator and the beam optics of the 400 MeV transfer line to RCS
16:30	16:45	Qin, Bin	Huazhong UST	Comparison of beam optics for normal-conducting and superconducting gantry beamline applied to the proton therapy system
16:45	17:00	Watts, Adam	FNAL	Transverse phase space tomography in beamlines

CPO-10 & ICAP'18 Joint Sessions

October 20 Sat

10/20 Sat CPO-10 & ICAP'18 Joint

9:00	10:45	Plenary Session, Grand Ballroom		Chair: Makino, Kyoko (MSU)
9:00	9:15	Makino, Kyoko	MSU	ICAP'18 Opening Remarks
9:15	9:45	(P) Qiang, Ji	LBNL	Advances in simulation of high brightness/high intensity beams
9:45	10:15	(P) Valishev, Alexander	FNAL	The FAST/IOTA project at Fermilab
10:15	10:45	(I) Wieland, Marco	Mapper Litho	Massively parallel charged particle optics enabled by MEMS fabrication techniques

10:45	Break			
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10/20 Sat CPO-10 & ICAP'18 Joint

11:00	12:30	Plenary Session, Grand Ballroom		Chair: Wollnik, Hermann (New Mexico SU)
11:00	11:30	(I) Hornung, Christine	JLU Giessen	High-precision mass measurements with MR-TOF-MS
11:30	12:00	(I) Berg, Georg Peter	U Notre Dame	The ion-optical design of the high rigidity spectrometer HRS for FRIB
12:00	12:30	(I) Kazantseva, Erika	TU Darmstadt	High-order aberrations of large aperture magnets and applications to the Super-FRS project at GSI

12:30	CPO-10 & ICAP'18 Joint Group Photos		Weather permitting	
	Lunch			

10/20 Sat CPO-10 & ICAP'18 Joint

14:00	15:45	Session 1, Grand Ballroom		Chair: Valishev, Alexander (FNAL)
14:00	14:30	(I) Erdelyi, Bela	NIU	Normal form approach to and nonlinear optics analysis of the IOTA ring
14:30	14:45	Boine-Frankenheim, Oliver	GSI	Beam dynamics simulations and challenges for the FAIR SIS100 synchrotron
14:45	15:00	Venturini, Marco	LBNL	Mode-analysis methods for the study of collective instabilities in electron-storage rings
15:00	15:15	Kramer, Patrick	CERN	HOM mitigation for future SPS 33-cell 200 MHz accelerating structures

10/20 Sat CPO-10 & ICAP'18 Joint

14:00	15:45	Session 2, Fiesta Key		Chair: Snopok, Pavel (IIT)
14:00	14:30	(I) Li, Yongjun	BNL	Genetic algorithm enhanced by machine learning for dynamic aperture optimization
14:30	15:00	(I) Appel, Sabrina	GSI	Optimization of heavy-ion synchrotrons using evolutionary algorithms and machine learning
15:00	15:15	Neveu, Nicole	IIT	Comparison of model based and heuristic optimization algorithms applied to photoinjectors using libEnsemble
15:15	15:30	Jensen, Aaron	Leidos	Single objective genetic optimization of an 85% efficient klystron
15:30	15:45	Hesam M. Nezhad, Neda	TU Delft	Multi-electrode lens system optimization using genetic algorithms

16:00	Open Bar, Casa Marina Beach			
17:00	Banquet, Casa Marina Beach			

CPO-10 & ICAP'18 Joint Sessions

October 21 Sun

10/21 Sun CPO-10 & ICAP'18 Joint

9:00	10:30	Session 1, Grand Ballroom		Chair: Kruit, Pieter (TU Delft)
9:00	9:30	(I) Metral, Elias	CERN	Space charge and transverse instabilities at the CERN SPS and LHC
9:30	10:00	(I) Zhang, He	JLab	Fast multipole methods for multiparticle simulations
10:00	10:15	Stopka, Jan	ISI CAS	Statistical Coulomb Interactions in multi-beam SEM
10:15	10:30	Russenschuck, Stephan	CERN	Challenges in extracting pseudo-multipoles from magnetic measurements

10/21 Sun CPO-10 & ICAP'18 Joint

9:00	10:30	Session 2, Fiesta Key		Chair: Van de Walle, Jarno (IBA)
9:00	9:30	(I) Huggins, Anthony	HHU Düsseldorf	Design and simulation of high momentum acceptance gantries for ion beam therapy
9:30	9:45	Liu, Xu	Huazhong UST	Beam alignment simulation on the beamline of a proton therapy facility
9:45	10:00	Trbojevic, Dejan	BNL	Optical design of the fixed field permanent magnet gantry for the proton cancer therapy
10:00	10:15	Nesteruk, Konrad P.	PSI	Large momentum acceptance beam optics of a superconducting gantry for proton therapy
10:15	10:30	Hernalsteens, Cedric	IBA	Optimization of hadron therapy beamlines using a novel fast tracking code for beam transport and beam-matter interactions

10:30	Break			
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10/21 Sun CPO-10 & ICAP'18 Joint

11:00	12:15	Plenary Session, Grand Ballroom		Chair: Berz, Martin (MSU)
11:00	11:30	(P) Ryne, Robert D	LBNL	Computational accelerator physics: On the road to exascale
11:30	12:00	(I) Tromp, Rudolf	IBM	Computation and measurement of aberrations for aberration corrected electron microscopy
12:00	12:15	Berz, Martin	MSU	Closing of CPO-10