8th Annual LLU Algorithm Workshop - Agenda

Time (PDT)	Monday, July 18, 2022	Tuesday, July 19, 2022	Wednesday July 20, 2022
5:30 AM	Coffee Klatsch	Coffee Klatsch	Coffee Klatsch
6:00 AM	Francisco Aragón Artacho: **Split minimization problems arising in IMRT tackled with superiorization with restarts**	George Dedes: **Methods for improving the precision of ion beam radiation therapy of cancer**	Cecile Ronckers: **Quantitative Modeling of Long-term Outcomes in Cancer Survivors treated with Radiation Therapy**
7:00 AM	Coffee Break/Breakout Groups	Coffee Break/Breakout Groups	Coffee Break/Breakout Groups
8:00 AM	Yair Censor: **Finding a Best Approximation Pair of Points for Two Polyhedra**	Alexander Pryanichnikov: **Development of Imaging Beam for Protom Synchrotron and Correlated Noise Properties Study in Iterative pCT**	Abdelkhalek Hammi: **The Impact of Ultra-High-Dose Rate (FLASH) Radiation Dose to Circulating Lymphocytes**
8:30 AM	Walaa Moursi: **How to project onto the intersection of a closed affine subspace and a hyperplane**	Stefanie Götz: **Evaluation of the impact of a scanner prototype on pCT and HeCT image quality and dose efficiency with Monte Carlo simulation**	Sonwabile: **An Investigation of Nanodosimetric Parameters Around a Proton Track**
9:00 AM	Joao Seco: **An update on preclinical FLASH research**	Adam Zieser **Reconstructed pCT Images Using Monte Carlo Simulations of a Scintillating Glass Detector**	Monika Mietelska: **Nanodosimetry based radiobiological outcomes prediction**
9:30 AM	Houda Kacem: **Impact of temporal structure of electron and proton beams on G°(H2O2), G(H2O2), DNA damage, and Zebrafish embryos**	Oscar Ariel Marti Villarreal: **A novel approach for beam characterization and online monitoring in particle therapy**	Adrianna Tartas : **Investigation of DNA damage repair dynamics of NBS1 foci in U2OS cells exposed to mixed beams**
10:00 AM	Ákos Sudár: **Searching for New Proton CT Image Reconstruction Techniques**	Karol Brzezinski: **Detecting range shifts in proton beam therapy using the J-PET scanner**	Irina Kempf: **Simulating and improving the compact ion-counting track structure detector**
10:30 AM	Max Aehle: **Design of a Modular CT Reconstruction Framework**	Ha Nguyen: **Finite Element Analysis of Customized Alternating Electric Field (AEF) Transducers for Small Animal Applications**	Natasha Le: **Gold Nanostars: Synthesis, Functionalization, & Application**
11:00 AM	Lunch/Dinner Break/Breakout Groups	Blake Schultze: **A unified frame work for pCT image analysis** (TBC)	João Canhoto: **Repair kinetics of DSB-foci induced by proton and helium ion microbeams of different energies**
11:30 AM		Lunch/Dinner Break/Breakout Groups	Hanh Nguyen: **A Deep Convolutional Neural Network Approach for Particle Recognition in Mixed Radiation Field**
12:00 PM			Lunch/Dinner Break/Breakout Groups
12:30 PM			
1:00 PM	Stefanie Kaser: **Updates and future plans of ion imaging at MedAustron**	Nils Krah: **Time-of-flight proton CT**	Cristina Oancea: **In-field and out-of-field microdosimetric characterization of proton beams using the Timepix3 detector**
1:30 PM	Sam Flynn: **Monitoring pencil beam scanned proton radiotherapy using a large format CMOS detector**	Ilaria Rinaldi: **Machine logfile-based patient QA via independent Monte Carlo fully replaces measurements in our proton therapy facility**	Sam Ingram: **PyFoci: A model-based approach to quantifying miscounting of radiation-induced double-strand break immunofluorescent foci**
2:00 PM	Ethan DeJongh: **First Test of pCT in a Gantry System: Results and Challenges**	Joseph Piet: **Using Chi Squared analysis for alignment of proton radiographs to planning CT**	Andrew Best: **Progress In Quantifying NTCP Reduction By Reducing Proton Range Uncertainty**
2:30 PM	Suart Rowland: **Motion Adapted Reconstruction**	Kirk Duffin: **Correcting Detector Plane Misalignment with Projective Geometry**	Lawrence Orijuela: **Definition of the 3D Position and Motion Status of the Moving Heart based on 2D Projections**
3:00 PM	Breakout Groups	Breakout Groups	Stephen Sampayan: **Linear induction accelerators as intense, high pulse rate, bremsstrahlung sources for FLASH-RT**
4:00 PM	Star Party	Star Party	Breakout Groups
4:30 PM			Star Party
5:00 PM		Proton Center Tour	