

## **6<sup>th</sup> Microbunching Workshop, 6-8 October 2014: Program**

### **Monday 6**

#### **Session Mo-1: Codes – I**

**Chair: S. Di Mitri (Elettra)**

8:15– 8:45 *Registration*

8:45 *Opening by M. Svandrlík (Elettra Sincrotrone Trieste)*

9:00 M. Venturini (LBNL), *“High-resolution microbunching instability studies in the presence of 3D effects”*

9:30 R. Li (JLAB), *“Update on 2D CSR effects”*

10:00 Discussion

10:30 Coffee Break

#### **Session Mo-2: Codes – II**

**Chair: L. Giannessi (Elettra & ENEA)**

11:00 G. Bassi (BNL), *“CSR and microbunching in bunch compressors”*

11:30 J. Esberg (CERN), *“1D CSR with shielding in the PLACET code”*

12:00 B. Terzic (Old Dominion Univ.), *“High-performance CSR simulations on GPUs”*

12:30 Discussion

13:00 Lunch

#### **Session Mo-3: CSR and Microbunching in Arcs** **Chair: M. Cornacchia (Elettra)**

14:30 Y. Jiao (IHEP), *“Controlling CSR-induced emittance growth in DBAs”*

15:00 D. Douglas (JLAB), *“Controlling CSR-induced emittance growth and microbunching instability in ERL arcs”*

15:30 C. Hall (Colorado State Univ.), *“CSR and MBI effects in the JLAB ERL driven FEL”*

16:00 Discussion

17:00 End of Works

## **Tuesday 7**

### **Session Tu-1: Injector and Laser Heater**

**Chair: A. Cianchi (INFN)**

9:00 X. Yang (BNL), *“Seeding, controlling, and benefiting from the microbunching instability”*

9:30 S. Bettoni (PSI), *“Pulse stacking and microbunching instability: simulations and measurements at the SwissFEL Injector”*

10:00 Discussion

10:30 Coffee Break

11:00 M. Dohlus (DESY), *“Simulation of the trickle heating effect at the EuXFEL”*

11:30 E. Ferrari (Elettra), *“Benefits of the laser heater induced energy spread for COTR and high harmonic conversion in HGHG FEL”*

12:00 Discussion

12:30 Lunch

### **Session Tu-2: LSC Amplifiers**

**Chair: A. Meseck (HZB)**

14:00 C. Lechner (Hamburg Univ.), *“Experimental studies on FEL gain controlled by laser-induced longitudinal space charge amplification”*

14:30 K. Hacker (TU Dortmund Univ.), *“Longitudinal space charge assisted Echo-seeding of a free-electron laser with laser-spoiler noise suppression”*

15:00 A. Gover (Tel Aviv Univ.), *“Short wavelength limits for control and measurement of collective micro-dynamic noise-suppression/gain”*

15:30 Discussion

16:30 End of Works

19:00 *Social Dinner at the Savoia Hotel*

## **Wednesday 8**

### **Session We-1: Diagnostics**

**Chair: S. Biedron (CSU)**

- 8:30 P. Krejcik (SLAC), *"Diagnostics for measuring and mitigating femtosecond microbunches at the LCLS"*
- 9:00 T. Maxwell (SLAC), *"MBI studies with the LCLS X-band transverse deflector"*
- 9:30 G.L. Orlandi (PSI), *"Overview of transverse profile monitors in SwissFEL"*
- 10:00 Discussion
- 10:30 Coffee Break

### **Session We-2: Microbunching Instability in Rings** Chair: M. Venturini (LBNL)

- 11:00 C. Evain (CNRS), *"Microbunching instability in rings"*
- 11:30 A. Chao (SLAC), *"Steady-state microbunched beam in a storage ring for EUV radiation"*
- 12:00 Discussion
- 12:30 Chairs Summaries (20' total). *End of the Workshop.*
- 13:00 *Transfer to Elettra Sincrotrone Trieste*
- 13:30 Buffet Lunch at the Elettra Canteen
- 14:45 Visit to the FERMI FEL facility
- 17:30 *Trip back to Trieste downtown*