

# **FAST/IOTA Collaboration Meeting**

## **Report of Contributions**

Contribution ID: 1

Type: **not specified**

# Welcome and Logistics

*Monday, 15 June 2020 10:00 (10 minutes)*

**Presenters:** VALISHEV, Alexander (Fermilab); LOPEZ, Lisa (Fermilab)

**Session Classification:** Overview

Contribution ID: 2

Type: **not specified**

## **FAST/IOTA Research and the Fermilab Program**

*Monday, 15 June 2020 10:10 (15 minutes)*

**Presenter:** LYKKEN, Joseph (Fermilab)

**Session Classification:** Overview

Contribution ID: 3

Type: **not specified**

## Accelerator Science Program

*Monday, 15 June 2020 10:25 (20 minutes)*

**Presenter:** NAGAITSEV, Sergei (FNAL)

**Session Classification:** Overview

Contribution ID: 4

Type: **not specified**

## **Research at FAST/IOTA: Strategy and Priorities**

*Monday, 15 June 2020 10:45 (25 minutes)*

**Presenter:** VALISHEV, Alexander (Fermilab)

**Session Classification:** Overview

Contribution ID: 5

Type: **not specified**

## **Planning and Conducting Experiments at IOTA/FAST**

*Monday, 15 June 2020 11:10 (20 minutes)*

**Presenter:** STANCARI, Giulio (Fermilab)

**Session Classification:** Overview

Contribution ID: 6

Type: **not specified**

## Facility Overview and FAST Linac Performance

*Monday, 15 June 2020 11:30 (30 minutes)*

**Presenter:** BROEMMELSIEK, Daniel (FNAL/AD/AST/FAST Facility Department)

**Session Classification:** Facility and Operations

Contribution ID: 7

Type: **not specified**

## **Run 2 Operations, Shutdown Activities and Planning for Run 3**

*Monday, 15 June 2020 13:00 (30 minutes)*

**Presenter:** SANTUCCI, James (Fermilab)

**Session Classification:** Facility and Operations



Contribution ID: 8

Type: **not specified**

## **Commissioning and Performance of the IOTA Ring**

*Monday, 15 June 2020 13:30 (30 minutes)*

**Presenter:** ROMANOV, Aleksandr (Fermilab/AD/IOTA)

**Session Classification:** Facility and Operations

Contribution ID: 9

Type: **not specified**

## **IOTA Proton Source Status and Plans**

*Monday, 15 June 2020 14:00 (30 minutes)*

**Presenter:** EDSTROM, Dean (AD/APC/FAST)

**Session Classification:** Facility and Operations

Contribution ID: **10**

Type: **not specified**

## **Long-Range and Short-Range Wakefield Effects in TESLA-Type Cavities (LRW/SRW)**

*Monday, 15 June 2020 15:30 (30 minutes)*

**Presenter:** LUMPKIN, Alex (Fermilab)

**Session Classification:** Experiment Reports from Runs 1 and 2

Contribution ID: 11

Type: **not specified**

# Generation, Transport and Diagnostics of High-Charge Magnetized Beams

*Monday, 15 June 2020 15:00 (30 minutes)*

**Presenter:** FETTERMAN, Aaron

**Session Classification:** Experiment Reports from Runs 1 and 2

Contribution ID: 12

Type: **not specified**

## **Introduction to Nonlinear Integrable Optics Experiments**

*Tuesday, 16 June 2020 10:00 (15 minutes)*

**Presenter:** VALISHEV, Alexander (Fermilab)

**Session Classification:** Experiment Reports from Runs 1 and 2

Contribution ID: 13

Type: **not specified**

# Nonlinear Integrable Optics: Implementation and First Results

*Tuesday, 16 June 2020 10:15 (25 minutes)*

**Presenter:** KUKLEV, Nikita

**Session Classification:** Experiment Reports from Runs 1 and 2

Contribution ID: 14

Type: **not specified**

## **Measurements with the Danilov-Nagaitsev Magnet (NIO)**

*Tuesday, 16 June 2020 10:40 (20 minutes)*

**Presenter:** SZUSTKOWSKI, Sebastian

**Session Classification:** Experiment Reports from Runs 1 and 2

Contribution ID: 15

Type: **not specified**

## **Nonlinear Optics Measurements and Correction (NL-OMC)**

*Tuesday, 16 June 2020 11:00 (30 minutes)*

**Presenter:** HOFER, Michael (CERN)

**Session Classification:** Experiment Reports from Runs 1 and 2



Contribution ID: 16

Type: **not specified**

## **Instability Thresholds with Octupole Channel (NIOLD)**

*Tuesday, 16 June 2020 11:30 (30 minutes)*

**Presenter:** EDDY, Nathan (Instrumentation)

**Session Classification:** Experiment Reports from Runs 1 and 2

Contribution ID: 17

Type: **not specified**

## **Understanding Lifetimes, Beam Sizes and Scattering in IOTA (IBS\_Study)**

*Tuesday, 16 June 2020 13:00 (30 minutes)*

**Presenter:** LEBEDEV, Valeri (Fermilab)

**Session Classification:** Experiment Reports from Runs 1 and 2

Contribution ID: **18**

Type: **not specified**

## **Fluctuations in Undulator Radiation (URSSE and FUR)**

*Tuesday, 16 June 2020 13:30 (30 minutes)*

**Presenters:** LOBACH, Ihar; LOBACH, Ihar (The University of Chicago)

**Session Classification:** Experiment Reports from Runs 1 and 2

Contribution ID: 19

Type: **not specified**

## **Spatial and Temporal Correlations in Undulator Radiation (AMPUR)**

*Tuesday, 16 June 2020 14:00 (30 minutes)*

**Presenters:** ANGELICO, Evan; ANGELICO, Evan (University of Chicago)

**Session Classification:** Experiment Reports from Runs 1 and 2

Contribution ID: 20

Type: **not specified**

# Single-Electron Phase-Space Tomography from Synchrotron-Light Camera Images

*Tuesday, 16 June 2020 15:00 (30 minutes)*

**Presenter:** ROMANOV, Aleksandr (Fermilab/AD/IOTA)

**Session Classification:** Experiment Reports from Runs 1 and 2

Contribution ID: 21

Type: **not specified**

# Optical Stochastic Cooling Experiment

*Wednesday, 17 June 2020 10:00 (30 minutes)*

**Presenter:** JARVIS, Jonathan (Fermilab)

**Session Classification:** Run 3 and Beyond

Contribution ID: 22

Type: **not specified**

# **A Simple Variational Principle for Synchrotron Radiation with Applications to Small-Bunch Undulator Radiation**

*Wednesday, 17 June 2020 10:30 (20 minutes)*

**Presenter:** CHARMAN, Andrew (UC Berkeley Department of Physics)

**Session Classification:** Run 3 and Beyond

Contribution ID: 23

Type: **not specified**

# Nonlinear Integrable Optics Experiments Based on Symplectic Integrators

*Wednesday, 17 June 2020 10:50 (20 minutes)*

**Presenter:** BATURIN, Stanislav

**Session Classification:** Run 3 and Beyond



Contribution ID: 24

Type: **not specified**

# Nonlinear Integrable Dynamics and Space Charge

*Wednesday, 17 June 2020 11:30 (20 minutes)*

**Presenter:** MITCHELL, Chad (Lawrence Berkeley National Laboratory)

**Session Classification:** Run 3 and Beyond

Contribution ID: 25

Type: **not specified**

## Research with the IOTA Electron Lens

*Wednesday, 17 June 2020 11:10 (20 minutes)*

**Presenter:** STANCARI, Giulio (Fermilab)

**Session Classification:** Run 3 and Beyond

Contribution ID: 26

Type: **not specified**

## **Space-Charge Compensation, Booster Studies and the IOTA Program**

*Wednesday, 17 June 2020 12:50 (20 minutes)*

**Presenter:** SHILTSEV, Vladimir (FNAL)

**Session Classification:** Run 3 and Beyond

Contribution ID: 27

Type: **not specified**

## Experiments on Circular Modes in IOTA

*Wednesday, 17 June 2020 13:10 (20 minutes)*

**Presenter:** MOROZOV, Vasiliy (Jefferson Lab)

**Session Classification:** Run 3 and Beyond

Contribution ID: 28

Type: **not specified**

## **Accelerator Science and the Role of Test Facilities**

*Wednesday, 17 June 2020 15:30 (30 minutes)*

**Presenter:** YAKIMENKO, vitya (slac)

**Session Classification:** Conclusion

Contribution ID: 29

Type: **not specified**

## Conclusions and Outlook

*Wednesday, 17 June 2020 16:00 (15 minutes)*

**Presenter:** VALISHEV, Alexander (Fermilab)

**Session Classification:** Conclusion

Contribution ID: **30**

Type: **not specified**

## **Convergence of Data Science and Accelerator Systems: Status and Prospects**

*Wednesday, 17 June 2020 14:10 (20 minutes)*

**Presenter:** BIEDRON, Sandra

**Session Classification:** Run 3 and Beyond

Contribution ID: 31

Type: **not specified**

## **Nonlinear Magnet for a Rapid-Cycling Synchrotron at Fermilab**

*Wednesday, 17 June 2020 13:30 (20 minutes)*

**Presenter:** GADJEV, Ivan (RadiaBeam)

**Session Classification:** Run 3 and Beyond



Contribution ID: 32

Type: **not specified**

## **Resonant Control of Electron Bunches and Nonlinear Decoherence of Protons in IOTA**

*Wednesday, 17 June 2020 13:50 (20 minutes)*

**Presenter:** WEBB, Stephen (RadiaSoft, LLC)

**Session Classification:** Run 3 and Beyond

Contribution ID: 33

Type: **not specified**

## **FAST Linac Experiments for the Development of LCLS-II Injector Diagnostics**

*Monday, 15 June 2020 16:00 (15 minutes)*

**Presenter:** JACOBSON, Bryce (SLAC)

**Session Classification:** Experiment Reports from Runs 1 and 2