

# 5<sup>th</sup> MicroTCA Workshop for Industry and Research



Wednesday, 7<sup>th</sup> December 2016

Thursday, 8<sup>th</sup> December 2016

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|---------------|---|
| 09:00 - 09:15 | <b>Welcome to DESY</b><br><i>Helmut Dosch, DESY</i>   |
| 09:15 - 09:30 | <b>Introduction</b><br><i>Holger Schlarb, DESY</i>  |
| 09:30 - 10:30 | <b>Session 1</b><br><i>Chair: Ray Larsen, SLAC</i>  |
| 09:30 - 09:45 | The large Scale European XFEL MicroTCA Installation<br><i>Kay Rehlich, DESY</i>   |
| 09:45 - 10:00 | MicroTCA systems at ESS<br><i>Simone Farina, ESS</i>  |
| 10:00 - 10:15 | Development Activities of MicroTCA-based Systems at the<br>SPRING-8 Accelerator Complex<br><i>Takashi Ohshima, SPRING-8</i>                               |
| 10:15 - 10:30 | Applications of MTCA in SuperKEKB and KEK Facilities<br><i>Tetsuya Kobayashi, KEK</i>   |
| 10:30 - 11:00 | <b>Coffee &amp; Posters</b>   |
| 11:00 - 12:30 | <b>Session 2</b><br><i>Chair: Dietmar Mann, Pentair Technical Solutions GmbH</i>  |
| 11:00 - 11:30 | <b>Keynote 1: Image Processing in Banknote Printing<br/>Applications, Technology and Trends</b><br><i>Carsten Diederichs, KBA-NotaSys AG &amp; Co. KG</i> |
| 11:30 - 11:45 | MicroTCA.4 at FAIR<br><i>Tobias Hoffmann, GSI</i>   |
| 11:45 - 12:00 | xTCA relative development at IHEP Beijing<br><i>Zhen-An Liu, IHEP</i>   |
| 12:00 - 12:15 | LLRF system installation for the European XFEL<br><i>Julien Branlard, DESY</i>  |
| 12:15 - 12:30 | LLRF system for the European Spallation Source<br><i>Anders J. Johansson, ESS</i>   |
| 12:30 - 14:00 | <b>Lunch</b>  |
| 12:30 - 13:30 | <b>DESY/European XFEL Tour #2</b>   |
| 14:00 - 15:30 | <b>Session 3</b><br><i>Chair: Thomas Holzappel, powerBridge</i>   |
| 14:00 - 14:15 | MicroTCA Hardware Standards and Software Guidelines for<br>Physics and General Applications: A Progress Overview<br><i>Raymond Larsen, SLAC</i>           |
| 14:15 - 14:30 | Standard Hardware API for MicroTCA.4 Systems<br><i>Bruno Fernandes, European XFEL GmbH</i>  |
| 14:30 - 14:45 | Benefits and Management of a second backplane in MTCA.4<br>systems (upcoming MTCA.4.1 standard)<br><i>Heiko Körte, N.A.T. GmbH</i>                        |
| 14:45 - 15:00 | MicroTCA platform enhancements<br><i>Ian Shearer, Vada Tech Ltd</i>   |
| 15:00 - 15:15 | Pentair MTCA.4 system product portfolio<br><i>Christian Ganninger, Pentair Technical Solutions GmbH</i>   |
| 15:15 - 15:30 | Intelligent Data Acquisition Board Including Epics Support<br><i>Iván García-Alfonso, IOxOS</i>   |
| 15:30 - 16:00 | <b>Coffee</b>   |
| 16:00 - 17:15 | <b>Session 4</b><br><i>Chair: Heiko Körte, N.A.T.</i>   |
| 16:00 - 16:15 | RackPak/M5-1, the next step MTCA.4 chassis<br><i>Thomas Holzappel, PowerBridge</i>  |
| 16:15 - 16:30 | High Bandwidth Data Acquisition (HBDQ) MTCA.4.1 Platform<br><i>Vollrath Dirksen, N.A.T. GmbH</i>  |
| 16:30 - 16:45 | New SP Devices MTCA Digitizers designed for fast electronics<br>applications in Physics<br><i>Laurent Weber, SPDevices</i>                                |
| 16:45 - 17:00 | Kintex Ultrascale based MTCA digitizer cards, the SIS8300-KU<br>and beyond<br><i>Matthias Kirsch, Struck</i>  |
| 17:00 - 17:15 | „MicroTCA Technology Lab“ at DESY: Status Update and<br>Outlook<br><i>Thomas Walter, DESY</i>   |
| 19:00 - 22:30 | <b>Workshop Dinner</b>  |

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| 09:00 - 10:15 | <b>Session 5</b><br><i>Chair: Tobias Hoffmann, GSI</i>  |
| 09:00 - 09:30 | <b>Keynote 2: How to build your own 3GHz spectrum<br/>analyzer and achieve -155dBm/Hz noise floor</b><br><i>Kai Rohm, Analog Devices</i>          |
| 09:30 - 09:45 | MTCA.4 Usage in the Femtosecond-synchronization System at<br>European XFEL<br><i>Matthias Felber, DESY</i>  |
| 09:45 - 10:00 | Beam-based Arrival Time Feedback at FLASH<br><i>Marie Kristin Czwalińska, DESY</i>  |
| 10:00 - 10:15 | MicroTCA.4 based LLRF System for the RFQ of C-ADS<br>Injector I<br><i>Xinpeng Ma, IHEP</i>  |
| 10:15 - 11:00 | <b>Coffee &amp; Posters</b>   |
| 11:00 - 12:15 | <b>Session 6</b><br><i>Chair: Ian Shearer, VadaTech Ltd</i>   |
| 11:00 - 11:15 | A build system for DAMC-FMC25 Board Support Package<br><i>Jan Marjanovic, CAEN ELS d.o.o.</i>   |
| 11:15 - 11:30 | How to make sure that your crate works like expected<br><i>Christian Ganninger, Pentair Technical Solutions GmbH</i>                              |
| 11:30 - 11:45 | Advances using Intel processor technology<br><i>Nigel Forrester, Concurrent Technologies</i>  |
| 11:45 - 12:00 | A Low-Cost MicroTCA Crate for use in Low-End Machine<br>Control Systems<br><i>Ofir Shefer Shalev, DESY</i>  |
| 12:00 - 12:15 | High Voltage Power Module Pluggable to NAT RTM Power<br>Supply Carrier<br><i>Konrad Przygoda, DESY</i>  |
| 12:15 - 13:45 | <b>Lunch</b>  |
| 12:15 - 13:15 | <b>DESY/European XFEL Tour #3</b>   |
| 13:45 - 15:15 | <b>Session 7</b><br><i>Chair: Anders J. Johansson, ESS</i>  |
| 13:45 - 14:15 | <b>Keynote 3: Error Prevention for <math>\mu</math>-Components on Circuit<br/>Boards</b><br><i>Rainer Taube, Taube Electronics</i>                |
| 14:15 - 14:30 | Mezzanine style RTMs, optical detector example<br><i>Ian Shearer, VadaTech Ltd and Armin Reichold, University of<br/>Oxford</i>                   |
| 14:30 - 14:45 | High Speed Optical Line Detector for MTCA.4 Systems<br><i>Aleksander Mielczarek, RIKEN</i>  |
| 14:45 - 15:00 | Application of MicroTCA in ADS Proton Linac Injector I at IHEP<br><i>Rong Liu, IHEP</i>   |
| 15:00 - 15:15 | MicroTCA.4-based Beam Charge Measurement for XFEL and<br>FLASH/FLASH2<br><i>Matthias Werner, DESY</i>   |
| 15:15 - 15:45 | <b>Coffee</b>   |
| 15:45 - 16:45 | <b>Session 8</b><br><i>Chair: Vollrath Dirksen, N.A.T. GmbH</i>   |
| 15:45 - 16:00 | From MTCA4U to ChimeraTK: A device abstraction toolkit to<br>facilitate the development of control applications<br><i>Martin Killenberg, DESY</i> |
| 16:00 - 16:15 | User Application and PCIe performance in MTCA<br><i>Ludwig Petrosyan, DESY</i>  |
| 16:15 - 16:30 | LINUX general purpose PCIe driver for MTCA<br><i>Davit Kalantaryan, DESY</i>  |
| 16:30 - 16:45 | Closeout<br><i>Holger Schlarb, DESY</i>   |