12th IAEA Technical Meeting on Control, Data Acquisition and Remote Participation for Fusion Research

Monday, 13 May 2019 - Friday, 17 May 2019

Daejeon, Republic of Korea

Programme

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Monday 13 May 2019

Registration: Registration (13 May 2019, 08:00-09:00)

Arrival of participants, distribution of badges, possibility to register and pay for events, and book tickets for the airport.

Welcome (13 May 2019, 09:00-09:20)

Welcome addresses by the IAEA Scientific Secretary, Host Organization, and International Programme Advisory Committee (IPAC).

Plenary Oral: Control Systems (13 May 2019, 09:20-10:40)

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time	[id] title	presenter
09:20	[528] ITER Operation Application Systems for plant system integration and commissioning	PARK, Mikyung (ITER Organization)
09:40	[488] EAST research activities on control and data toward CFETR	Prof. XIAO, Bingjia (Institute of Plasma Physics, Chinese Academy of Sciences)
10:00	[443] Design and Development of a Cost Optimized Timing System for Steady state Superconducting Tokamak (SST-1)	Mr DHONGDE, JASRAJ (Institute for Plasma Research)
10:20	[531] Introduction of ITER CODAC Relevant Technologies on JET and MAST	Dr WATERHOUSE, John (UKAEA)

Coffee Break (10:40-11:10)

Plenary Oral: Plasma Control 1 (13 May 2019, 11:10-12:30)

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time	[id] title	presenter
11:10	[511] Advances and challenges in KSTAR plasma control toward long-pulse, high-performance experiments	Dr HAHN, Sang-hee (NFRI)

11:30	[497] Current State of DIII-D Plasma Control System	MARGO, Martin (General Atomics)
11:50	[466] The first implementation of active divertor heat flux feedback control in EAST PCS	Dr YUAN, Qiping (Institute of Plasma Physics, Chinese Academy of Sciences)
12:10	[482] MARTe2 and MDSplus integration for a comprehensive Fast Control and Data Acquisition System	MANDUCHI, Gabriele

Lunch (12:30-14:00)

Minioral: Plasma Control Miniorals (13 May 2019, 14:00-15:00)

All "MiniOrals" are short plenary oral presentations of work presented in depth in one of the poster submissions. It is meant to provide the opportunity to draw attention of the audience onto the special matter and research highlights of the poster topics, not to go into details and answer all questions.

A MiniOral can last 5 minutes maximum including possible questions/answers. It is recommended to present not more than 3 slides. Please provide slides at least one day in advance to allow compiling them into a stream of slides together with the other MiniOrals of the same session.

time	[id] title	presenter
14:00	[535] The Implementation and operation of the 4th version of KSTAR Fast Interlock System	Mr KIM, Myungkyu (NFRI)
14:05	[569] WestBox: an object-oriented software component for WEST CODAC	CAULIER, GILLES (Mr)
14:10	[580] Low-risk Beginning of the Density Feedback Control in KSTAR	Dr JUHN, June-Woo (National Fusion Research Institute)
14:15	[585] Real-time classification of L-H transition and ELM in KSTAR	SHIN, Giwook (University of Science and Technology, Korea)
14:20	[589] The MAST Upgrade Plasma Control System	MCARDLE, Graham (UKAEA)
14:25	[605] Design and development plan for control and data acquisition system of Thailand Tokamak 1 (TT1)	TAMMAN, Arlee (Thailand Institute of Nuclear Technology, Nakhon Nayok, Thailand)
14:30	[599] Development of high-current power supplies for the TCABR tokamak	Prof. SANTOS, Alessandro (Maua Institute of Technology)
14:35	[576] Development of a new CODAS for the TCABR tokamak	Dr PIRES DE SÁ, Wanderley (Institute of Physics of the University of São Paulo, São Paulo, Brazil)
14:40	[537] Preparations for the control of HL-2M first plasma campaign	Dr LI, B (Southwestern Institute of Physics(SWIP))
14:45	[558] Use of Actuator management in ASDEX Upgrade control	Dr ONDREJ KUDLACEK, Ondrej
14:50	[598] An overview of the upgrade of the TCABR tokamak	Prof. CANAL, Gustavo (University of Sao Paulo)

14:55	[547] Determination of Radiated Power Density Profile Using Bolometer Data for DT Baseline Scenario at JET	STANKUNAS, Gediminas (Lithuanian Energy Institute)

Poster facult.: Plasma Control Posters (13 May 2019, 15:05-17:05)

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[id] title	presenter	board
[568] EAST research activities on control and data toward CFETR	Prof. XIAO, Bingjia (Institute of Plasma Physics, Chinese Academy of Sciences)	O/1-2
[601] ITER Operation Application Systems for plant system integration and commissioning	PARK, Mikyung (ITER Organization)	O/1-1
[604] Introduction of ITER CODAC Relevant Technologies on JET and MAST	Dr WATERHOUSE, John (UKAEA)	O/1-4
[574] Current State of DIII-D Plasma Control System	MARGO, Martin (General Atomics)	O/2-2
[584] Advances and challenges in KSTAR plasma control toward long-pulse, high-performance experiments	Dr HAHN, Sang-hee (NFRI)	O/2-1
[554] The first implementation of active divertor heat flux feedback control in EAST PCS	Dr YUAN, Qiping (Institute of Plasma Physics, Chinese Academy of Sciences)	O/2-3
[562] MARTe2 and MDSplus integration for a comprehensive Fast Control and Data Acquisition System	MANDUCHI, Gabriele	O/2-4
[542] Design and Development of a Cost Optimized Timing System for Steady state Superconducting Tokamak (SST-1)	Mr DHONGDE, JASRAJ (Institute for Plasma Research)	O/1-3

Poster: Plasma Control Posters (13 May 2019, 15:05-17:05)

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[437] Preparations for the control of HL-2M first plasma campaign	Dr LI, B (Southwestern Institute of Physics(SWIP))	P/1-9
[472] Use of Actuator management in ASDEX Upgrade control	Dr ONDREJ KUDLACEK, Ondrej	P/1-10

[506] Low-risk Beginning of the Density Feedback Control in KSTAR	Dr JUHN, June-Woo (National Fusion Research Institute)	P/1-3
[512] Real-time classification of L-H transition and ELM in KSTAR	SHIN, Giwook (University of Science and Technology, Korea)	P/1-4
[454] Determination of Radiated Power Density Profile Using Bolometer Data for DT Baseline Scenario at JET	STANKUNAS, Gediminas (Lithuanian Energy Institute)	P/1-13
[499] Development of a new CODAS for the TCABR tokamak	Dr PIRES DE SÁ, Wanderley (Institute of Physics of the University of São Paulo, São Paulo, Brazil)	P/1-8
[489] WestBox: an object-oriented software component for WEST CODAC	CAULIER, GILLES (Mr)	P/1-2
[532] Design and development plan for control and data acquisition system of Thailand Tokamak 1 (TT1)	TAMMAN, Arlee (Thailand Institute of Nuclear Technology, Nakhon Nayok, Thailand)	P/1-6
[526] Development of high-current power supplies for the TCABR tokamak	Prof. SANTOS, Alessandro (Maua Institute of Technology)	P/1-7
[525] An overview of the upgrade of the TCABR tokamak	Prof. CANAL, Gustavo (University of Sao Paulo)	P/1-12
[516] The MAST Upgrade Plasma Control System	MCARDLE, Graham (UKAEA)	P/1-5

Coffee Buffet (15:30-16:00)

Tuesday 14 May 2019

Registration: Conference secretary open for organizational issues (14 May 2019, 08:30-09:00)

Arrival of participants, distribution of badges, possibility to register and pay for events, and book tickets for the airport.

Plenary Oral: Neural Network Methods (14 May 2019, 09:00-10:00)

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time	[id] title	presenter
09:00	[513] Automatic recognition of anomalous patterns in discharges by recurrent neural networks	FABREGAS ACOSTA, Ernesto (UNED)
09:20	[484] Automatic recognition of plasma relevant events: implications for ITER	Dr VEGA, Jesús (Ciemat)
09:40	[456] Disruption Predictor Based on Neural Network and Anomaly Detection	Dr ZHENG, Wei (International Joint Research Laboratory of Magnetic Confinement Fusion and Plasma Physics, Huazhong University of Science and Technology)

Minioral: KI related Miniorals (14 May 2019, 10:00-10:30)

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time	[id] title	presenter
10:00	[543] Real-time ELM recognition system based on deep learning	Prof. XIA, Fan
10:05	[582] New decimation method for fusion research data	CASTRO ROJO, Rodrigo (CIEMAT)

10:10	[548] A database dedicated to development of machine learning based disruption predictors	Mr WU, Qiqi (International Joint Research Laboratory of Magnetic Confinement Fusion and Plasma Physics, Huazhong University of Science and Technology)
10:15	[572] Implementation of an FPGA-based DAQ and Processing system for Neutron-Diagnostics using Nominal Device Support, OpenCL and MTCA	Mr ASTRAIN, Miguel (Universidad Politécnica de Madrid)
10:20	[579] Real-Time Processing the MSE data with GPGPU in KSTAR	LEE, Taegu
10:25	[593] Exploring MDSplus data□acquisition and analysis software with JupyterLab	SANTORO, Fernando (MIT Plasma Science and Fusion Center)

Coffee Break (10:30-11:00)

Plenary Oral: Plasma Control 2 (14 May 2019, 11:00-12:40)

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time	[id] title	presenter
11:00	[459] Fast scenario design for alternative magnetic diverted discharge on EAST	LUO, Zhengping (Institute of Plasma Physics, Chinese Academy of Sciences)
11:20	[518] Rapid prototyping of advanced control schemes in ASDEX Upgrade	SIEGLIN, Bernhard (Max-Planck-Institut for Plasma Physics)
11:40	[527] Real-time MHD Analysis Computer System Design, Architecture, and Integration with PCS	ERICKSON, Keith (PPPL)
12:00	[530] Integrated Data Acquisition, Storage and Retrieval for Glass Spherical Tokamak (GLAST)	JAVED, Muhammad Aqib (National Tokamak Fusion Program (NTFP))
12:20	[485] From Tore Supra to WEST : Evolution of CODAC infrastructure	Mr SANTRAINE, Benjamin (CEA-IRFM, F-13108 Saint-Paul-lez-Durance, France)

Lunch (12:40-14:10)

Coffee Break (14:20-14:50)

Experience exchange: KSTAR experiment visit (14 May 2019, 15:00-17:30)

Wednesday 15 May 2019

Registration: Conference secretary open for organizational issues (15 May 2019, 08:30-09:00)

Arrival of participants, distribution of badges, possibility to register and pay for events, and book tickets for the airport.

Plenary Oral: MCR & DTI (15 May 2019, 09:00-10:30)

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time	[id] title	presenter
09:00	[529] State-full Asynchronous Event Server and Clients	DUVAL, Basil (Ecole Polytechnique Fédérale de Lausanne – Swiss Plasma Center (SPC), Association Euratom-Confédération Suisse(EPFL) CH-1015 Lausanne, Switzerland)
09:20	[503] Application of LHD Post Data Analysis Systems to the KSTAR Project	EMOTO, Masahiko (National Institute for Fusion Science)
09:40	[523] Design for the Distributed Data Locator Service for Multi-site Data Repositories	NAKANISHI, Hideya (National Institute for Fusion Science)
10:00	[445] Control system of Neutral Particle Analyser in energy sweeping mode.	Dr DREVAL, Mykola (IPP NSC Kharkov Institute of Physics and Technology, Kharkov, Ukraine)
10:15	[510] Design of the Interlock System for MITICA	Mr LUCHETTA, Adriano (Consorzio RFX)

Coffee Break (10:30-11:00)

Plenary Oral: PC3, MCR & DTI (15 May 2019, 11:00-12:20)

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time	[id] title	presenter

11:00	[441] An efficient MHD equilibrium solver for control oriented transport models	GARCIA-MARTINEZ, Pablo (CONICET - Centro Atomico Bariloche)
11:20	[471] Validation of the Fenix ASDEX Upgrade flight simulator	Dr JANKY, Filip (Max Planck Institute for Plasma Physics)
11:40	[524] Navigational Data Management - A general approach to representation and exploitation of relationships in scientific data sets	Mr STILLERMAN, Joshua (MIT Plasma Science and fusion Center)
12:00	[498] Dockerizing MDSplus for use with custom data collection devices	LANE-WALSH, Stephen (MIT Plasma Science and Fusion Center)

Lunch (12:20-14:00)

Plenary Oral: DASP Systems (15 May 2019, 14:00-14:40)

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time	[id] title	presenter
14:00	[457] A full stack data acquisition, archive and access solution for J-TEXT based on Web technologies	Mr WANG, Yuxing (International Joint Research Laboratory of Magnetic Confinement Fusion and Plasma Physics, Huazhong University of Science and Technology)
14:20	[451] Strategy for diagnostics integration into W7-X CoDaC for OP2	Dr WINTER, Axel (Max Planck Institut für Plasmaphysik)

Minioral: FNT, MCR & DTI (15 May 2019, 14:40-15:20)

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time	[id] title	presenter
14:40	[551] Development of real time framework for parallel streaming data processing	Dr KWON, giil (National Fusion Research Institute)

14:45	[559] Evaluation of the Backup Signal-Processing System of the KSTAR Quench Detection System	YONEKAWA, Hirofumi (National Fusion Research Institute)
14:50	[571] Realization of the requirements for a safe operation of Wendelstein 7-X	SCHACHT, Jörg (Max Planck Institut für Plasmaphysik, Greifswald, Germany)
14:55	[566] First experience with the W7-X Fast Interlock System	VILBRANDT, Reinhard (Max-Planck-Institut für Plasmaphysik Teilinstitut Greifswald)
15:00	[587] Development of the JT-60SA Experiment Database System	Ms YAMAZAKI, Riho (National Institutes for Quantum and Radiological Science and Technology)
15:05	[578] Reliable Local Controller for ITER Coil Power Supply	Mr LEE, Chungsan (Dawonsys)
15:10	[590] W7-X Logbook REST API for processing metadata and experiment data enrichment at the Wendelstein 7-X stellarator	GRAHL, Michael (Max-Planck-Institut für Plasmaphysik)
15:15	[556] EAST MDSplus Log Data Management System	WANG, Feng (ASIPP)

Coffee Break (15:25-15:55)

Poster: MCR & DTI (15 May 2019, 15:25-18:00)

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[455] A database dedicated to development of machine learning based disruption predictors	Mr WU, Qiqi (International Joint Research Laboratory of Magnetic Confinement Fusion and Plasma Physics, Huazhong University of Science and Technology)	P/2-3
[494] Implementation of an FPGA-based DAQ and Processing system for Neutron-Diagnostics using Nominal Device Support, OpenCL and MTCA	Mr ASTRAIN, Miguel (Universidad Politécnica de Madrid)	P/2-4
[505] Real-Time Processing the MSE data with GPGPU in KSTAR	LEE, Taegu	P/2-5
[509] New decimation method for fusion research data	CASTRO ROJO, Rodrigo (CIEMAT)	P/2-2
[520] Exploring MDSplus data acquisition and analysis software with JupyterLab	SANTORO, Fernando (MIT Plasma Science and Fusion Center)	P/2-6
[444] Real-time ELM recognition system based on deep learning	Prof. XIA, Fan	P/2-1

[469] EAST MDSplus Log Data Management System	WANG, Feng (ASIPP)	P/3-9
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[458] Development of real time framework for parallel streaming data processing	Dr KWON, giil (National Fusion Research Institute)	P/3-1
[486] First experience with the W7-X Fast Interlock System	VILBRANDT, Reinhard (Max-Planck-Institut für Plasmaphysik Teilinstitut Greifswald)	P/3-4
[504] Reliable Local Controller for ITER Coil Power Supply	Mr LEE, Chungsan (Dawonsys)	P/3-7
[491] Realization of the requirements for a safe operation of Wendelstein 7-X	SCHACHT, Jörg (Max Planck Institut für Plasmaphysik, Greifswald, Germany)	P/3-3
[433] The Implementation and operation of the 4th version of KSTAR Fast Interlock System	Mr KIM, Myungkyu (NFRI)	P/1-1

Poster facult.: PC2, PC3, MCR & DTI (15 May 2019, 15:25-18:00)

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[603] Integrated Data Acquisition, Storage and Retrieval for Glass Spherical Tokamak (GLAST)	JAVED, Muhammad Aqib (National Tokamak Fusion Program (NTFP))	O/4-4
[557] Validation of the Fenix ASDEX Upgrade flight simulator	Dr JANKY, Filip (Max Planck Institute for Plasma Physics)	O/6-2
[591] Rapid prototyping of advanced control schemes in ASDEX Upgrade	SIEGLIN, Bernhard (Max-Planck-Institut for Plasma Physics)	O/4-2
[600] Real-time MHD Analysis Computer System Design, Architecture, and Integration with PCS	ERICKSON, Keith (PPPL)	O/4-3
[540] An efficient MHD equilibrium solver for control oriented transport models	GARCIA-MARTINEZ, Pablo (CONICET - Centro Atomico Bariloche)	O/6-1
[564] Automatic recognition of plasma relevant events: implications for ITER	Dr VEGA, Jesús (Ciemat)	O/3-2

[575] Dockerizing MDSplus for use with custom data collection devices	LANE-WALSH, Stephen (MIT Plasma Science and Fusion Center)	O/6-4
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[565] From Tore Supra to WEST : Evolution of CODAC infrastructure	Mr SANTRAINE, Benjamin (CEA-IRFM, F-13108 Saint-Paul-lez-Durance, France)	O/4-5
[583] Design of the Interlock System for MITICA	Mr LUCHETTA, Adriano (Consorzio RFX)	O/5-5
[544] Control system of Neutral Particle Analyser in energy sweeping mode.	Dr DREVAL, Mykola (IPP NSC Kharkov Institute of Physics and Technology, Kharkov, Ukraine)	O/5-4
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[597] Navigational Data Management - A general approach to representation and exploitation of relationships in scientific data sets	Mr STILLERMAN, Joshua (MIT Plasma Science and fusion Center)	O/6-3
[602] State-full Asynchronous Event Server and Clients	DUVAL, Basil (Ecole Polytechnique Fédérale de Lausanne – Swiss Plasma Center (SPC), Association Euratom-Confédération Suisse(EPFL) CH-1015 Lausanne, Switzerland)	O/5-1
[595] Design for the Distributed Data Locator Service for Multi-site Data Repositories	NAKANISHI, Hideya (National Institute for Fusion Science)	O/5-3

Conference Banquet (19:00-22:00)

Thursday 16 May 2019

Registration: Conference secretary open for organizational issues (16 May 2019, 08:30-09:00)

Arrival of participants, distribution of badges, possibility to register and pay for events, and book tickets for the airport.

Plenary Oral: DASP (16 May 2019, 09:00-10:00)

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time	[id] title	presenter
09:00	[490] Methodology to standardize the development of FPGA-based intelligent DAQ and processing systems on heterogeneous platforms using OpenCL	Mr ASTRAIN, Miguel (Universidad Politécnica de Madrid)
09:20	[508] Design of GPU-based Parallel Computation Architecture of Thomson Scattering Diagnostic in KSTAR	LEE, Seung-Ju (National Fusion Research Institute)
09:40	[522] Recent Diagnostic Developments with the ASDEX Upgrade Standard Data Acquisition System using the FPGA implemented Serial I/O card „SIO2“	Dr BEHLER, Karl (IPP - MPI f. Plasmaphysik, Garching, Germany)

Minioral: DASP (16 May 2019, 10:00-10:35)

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time	[id] title	presenter
10:00	[539] Plasma Diagnostics in the Optical and X-Ray Regions on the IEC Plasma Device	Dr ELARAGI, Gamal (Egyptian atomic energy authority)
10:05	[541] Multi-channel analog lock-in system for real-time motional Stark effect measurements	WI, Hanmin (NFRI)
10:10	[546] Integration of data acquisition devices in the ITER Real-Time Framework using Nominal Device Support	Dr ESQUEMBRI, Sergio (Universidad Politécnica de Madrid)
10:15	[553] Development of Local-Imaging and High-Speed Visible Diagnostics for Real-Time Plasma Boundary Reconstruction of EAST	Prof. SHEN, Biao

10:20	[560] Standardization of software device driver implementation for data acquisition and timing devices in ITER CODAC Core System: Nominal Device Support	Mr ASTRAIN, Miguel (Universidad Politécnica de Madrid)
10:25	[588] Framework for development of software for laboratory equipment and experimental setup subsystems integrated into large scale DAQ systems (LabBot)	Mr CHERNAKOV, Alexandr (Ioffe Institute, 194021, St.Petersburg, Russia; Spectral-Tech, AO, 194021, St. Petersburg, Russia)
10:30	[538] Development and Implementation of EPICS Application Program of HL-2A Host Engineering Parameters Acquisition System	Ms XU, Jie

Coffee Break (10:35-11:05)

Plenary Oral: RPVL (16 May 2019, 11:05-11:45)

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time	[id] title	presenter
11:05	[468] Remote Experiment with WEST from ITER Remote Experiment Centre	TOKUNAGA, Shinsuke (National Institutes for Quantum and Radiological Science and Technology (QST), Japan)
11:25	[483] RUSSIAN PROTOTYPE OF ITER REMOTE PARTICIPATION CENTER	Dr SEMENOV, Igor (Project Center ITER) Mr SEMENOV, Oleg (Project Center ITER)

Minioral: RPVL (16 May 2019, 11:45-12:00)

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time	[id] title	presenter
11:45	[561] Graphic interactive environment for remote data analysis and visualization with a view on ITER	Dr FABREGAS, Ernesto (UNED)
11:50	[567] Web-based Streamed Waveform Display using MDSplus events and Node.js	MANDUCHI, Gabriele
11:55	[592] The Information Technology tools for remote participation and remote experiment control of WEST	HUTTER, Thierry (CEA, IRFM, France)

Lunch (12:00-13:15)

IPAC/IAEA organizational meeting: IAEA/IPAC session (16 May 2019, 13:15-14:15)

The International Programme Advisory Committee and the IAEA officials meet to discuss organizational topics about this meeting, the series of meetings in past and future, the constitution of the IPAC, and publishing procedures.

Poster facult.: DASP & RPVL (16 May 2019, 13:30-16:00)

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[id] title	presenter	board
[545] Strategy for diagnostics integration into W7-X CoDaC for OP2	Dr WINTER, Axel (Max Planck Institut für Plasmaphysik)	O/7-2
[550] A full stack data acquisition, archive and access solution for J-TEXT based on Web technologies	Mr WANG, Yuxing (International Joint Research Laboratory of Magnetic Confinement Fusion and Plasma Physics, Huazhong University of Science and Technology)	O/7-1
[570] Methodology to standardize the development of FPGA-based intelligent DAQ and processing systems on heterogeneous platforms using OpenCL	Mr ASTRAIN, Miguel (Universidad Politécnica de Madrid)	O/8-1
[581] Design of GPU-based Parallel Computation Architecture of Thomson Scattering Diagnostic in KSTAR	LEE, Seung-Ju (National Fusion Research Institute)	O/8-2
[594] Recent Diagnostic Developments with the ASDEX Upgrade Standard Data Acquisition System using the FPGA implemented Serial I/O card „SIO2“	Dr BEHLER, Karl (IPP - MPI f. Plasmaphysik, Garching, Germany)	O/8-3
[555] Remote Experiment with WEST from ITER Remote Experiment Centre	TOKUNAGA, Shinsuke (National Institutes for Quantum and Radiological Science and Technology (QST), Japan)	O/9-1
[563] RUSSIAN PROTOTYPE OF ITER REMOTE PARTICIPATION CENTER	Dr SEMENOV, Igor (Project Center ITER) Mr SEMENOV, Oleg (Project Center ITER)	O/9-2

Poster: DASP & RPVL (16 May 2019, 13:30-16:00)

All submissions accepted as "Poster" should provide a poster conforming to the rules published in the conference announcement and by the Local Organizing Committee. As all poster topics are as well presented

in MiniOrals before the poster session the IPAC is expecting each poster to get its attention by interested conference participants. (As a recommendation the presenter should at least be present at his poster during 60% of the poster session duration.)

[id] title	presenter	board
[438] Development and Implementation of EPICS Application Program of HL-2A Host Engineering Parameters Acquisition System	Ms XU, Jie	P/4-7
[440] Plasma Diagnostics in the Optical and X-Ray Regions on the IEC Plasma Device	Dr ELARAGI, Gamal (Egyptian atomic energy authority)	P/4-1
[442] Multi-channel analog lock-in system for real-time motional Stark effect measurements	WI, Hanmin (NFRI)	P/4-2
[452] Integration of data acquisition devices in the ITER Real-Time Framework using Nominal Device Support	Dr ESQUEMBRI, Sergio (Universidad Politécnica de Madrid)	P/4-3
[479] Standardization of software device driver implementation for data acquisition and timing devices in ITER CODAC Core System: Nominal Device Support	Mr ASTRAIN, Miguel (Universidad Politécnica de Madrid)	P/4-5
[463] Development of Local-Imaging and High-Speed Visible Diagnostics for Real-Time Plasma Boundary Reconstruction of EAST	Prof. SHEN, Biao	P/4-4
[519] The Information Technology tools for remote participation and remote experiment control of WEST	HUTTER, Thierry (CEA, IRFM, France)	P/5-3
[487] Web-based Streamed Waveform Display using MDSplus events and Node.js	MANDUCHI, Gabriele	P/5-2
[481] Graphic interactive environment for remote data analysis and visualization with a view on ITER	Dr FABREGAS, Ernesto (UNED)	P/5-1
[515] Framework for development of software for laboratory equipment and experimental setup subsystems integrated into large scale DAQ systems (LabBot)	Mr CHERNAKOV, Alexandr (Ioffe Institute, 194021, St.Petersburg, Russia; Spectral-Tech, AO, 194021, St. Petersburg, Russia)	P/4-6

Coffee Break (15:00-15:30)

Plenary Summary and Closing (16 May 2019, 16:00-17:00)

Summary presentations by the IPAC, and closing addresses by the Host Organization and IAEA Scientific Secretary.

Friday 17 May 2019

Registration: Conference secretary open for organizational issues (17 May 2019, 08:30-09:00)

Arrival of participants, distribution of badges, possibility to register and pay for events, and book tickets for the airport.

MDSplus Workshop: Optional panel presentations and discussion (programme not settled) (17 May 2019, 09:00-10:00)

Get together of the MDSplus developers and users for a regular experience exchange.

MDSplus Workshop: Optional open discussion (programme not settled) (17 May 2019, 10:00-10:50)

Get together of the MDSplus developers and users for a regular experience exchange.

Tentative Coffee/Refreshment Break (10:50-11:20)

Excursion (11:30-16:30)

Farewell (17 May 2019, 16:30-17:30)

Travelling home via Seoul direct from Jeonju or via Daejeon (check on first day with the registration desk).