

Name	Degree	% participation
Bruno Santos	Fellow with Master	100%

Participation in the ITER project

The Dolphin DXH510 cards were installed, configured and tested in FPSC computers to provide more reliable and faster communications between these machines.

The SDN API was integrated in MARTE to provide MARTE communications through this API, enabling MARTE to communicate with low latency.

The netCDF was installed and configured in all system and some features were developed:

- Data Archiving Client was integrated with EPICS and SDN API.
- Data Archiving Server was modified to send network statistics to EPICS.

In order to prepare beta version presentation some developments were performed like CSS panels and EPICS IOC.

A. Publications

Papers in international refereed scientific journals

Author(s)	B. Santos, R. Castro, J.H. Santos, D. Gomes, H. Fernandes, J. Sousa, C.A.F. Varandas
Paper title	OpenMeetings as a Browser-Based Teleconferencing Tool for EFDA Laboratories
Journal name	Fusion Engineering and Design
Volume, page	86, 1282-1285
Year	2011

B. Publications and contributions in conferences and workshops

Oral contributions

Conference	2011 IEEE Nuclear Science Symposium and Medical Imaging conference
------------	--

Start-end date	23-29 October 2011
Location	Valencia, Spain
Author(s)	B. Gonçalves, J. Sousa, B.B. Carvalho, A. Batista, A. Neto, B. Santos , A. Duarte, D.F.Valcárcel, D. Alves, M. Correia, A. P. Rodrigues, P.F. Carvalho, M. Ruiz, J. Vega, R. Castro, J.M. López, N. Utzel, P. Makijarvi
Talk title	ITER fast plant system controller prototype based on ATCA Platform
Conference	5th Workshop on ATCA and MicroTCA for Physics, 2011 IEEE Nuclear Science Symposium and Medical Imaging conference
Start-end date	23-29 October 2011
Location	Valencia, Spain
Author(s)	B. Gonçalves, J. Sousa, B.B. Carvalho, A. Batista, A. Neto, B. Santos , A. Duarte, D.F.Valcárcel, D. Alves, M. Correia, A. P. Rodrigues, P.F. Carvalho
Talk title	ATCA Developments for Fusion Fast Plasma Control Systems
Conference	8th IAEA Technical Meeting on Control, Data Acquisition, and Remote Participation for Fusion Research
Start-end date	20-24 June 2011
Location	San Francisco, California, United States of America
Author(s)	B. Gonçalves, J. Sousa, B.B. Carvalho, A. Batista, A. Neto, B. Santos , A. Duarte, D. Valcárcel, D. Alves, M. Correia, A. P. Rodrigues, P.F. Carvalho, M. Ruiz, J. Vega, R. Castro, J.M. López, N. Utzel, P. Makijarvi

Talk title	ITER fast plant system controller prototype based on ATCA Platform
Conference	8th IAEA Technical Meeting on Control, Data Acquisition, and Remote Participation for Fusion Research
Start-end date	20-24 June 2011
Location	San Francisco, California, United States of America
Author(s)	R. Castro, J. Vega, M. Ruiz, G. De Arcas, E. Barrera, J.M. López D. Sanz, B. Gonçalves, B. Santos , N. Utzel, P. Makijarvi
Talk title	NetCDF based data archiving system proposal for the ITER Fast Plant System Control prototype
Workshop	ITER Fast Controller Workshop
Start-end date	28 February-2 March 2011
Location	Cadarache, France
Author(s)	Bernardo B. Carvalho, A. Neto, D. Alves, D. Valcárcel, B. Santos , P. Ricardo, A. Duarte, P. Carvalho and FPSC Team
Talk title	MARTE-EPICS, A Wining Combination for the ATCA FPSC
Workshop	ITER Fast Controller Workshop
Start-end date	28 February-2 March 2011

Location	Cadarache, France
Author(s)	R. Castro, J. Vega, M. Ruiz, G. De Arcas, E. Barrera, J.M. López D. Sanz, B. Gonçalves, B. Santos , N. Utzel, P. Makijarvi
Talk title	NetCDF based archiving

C. Other publications and outputs

Technical reports

B. Gonçalves, J. Sousa, B.B. Carvalho, A. Batista, A. Neto, **B. Santos**, A. Duarte, D. Valcárcel, D. Alves, M. Correia, A. P. Rodrigues, P.F. Carvalho, J. Fortunato, P. J. Carvalho, M. Ruiz, J. Vega, R. Castro, J.M. López, N. Utzel, P. Makijarvi, C. Leong, V. Bexiga, I.C.Teixeira, J.P.Teixeira, A. Barbalace, P. Lousã, J. Godinho, P. Mota, “ITER FPSC Engineering Design” (September 2011)

M. Ruiz, J. Vega, R. Castro, J.M. López, B. Gonçalves, J. Sousa, B.B. Carvalho, A. Batista, A. Neto, **B. Santos**, A. Duarte, D. Valcárcel, D. Alves, M. Correia, A. P. Rodrigues, P.F. Carvalho, J. Fortunato, P. J. Carvalho, N. Utzel, P. Makijarvi, “ITER FPSC PXIe Engineering Design” (September 2011)

B. Gonçalves, J. Sousa, B.B. Carvalho, A. Batista, A. Neto, **B. Santos**, A. Duarte, D. Valcárcel, D. Alves, M. Correia, A. P. Rodrigues, P.F. Carvalho, J. Fortunato, P. J. Carvalho, M. Ruiz, J. Vega, R. Castro, J.M. López, N. Utzel, P. Makijarvi, C. Leong, V. Bexiga, I.C.Teixeira, J.P.Teixeira, A. Barbalace, P. Lousã, J. Godinho, P. Mota, “ATCA FPSC Test Plan” (October 2011)

A. Barbalace, B.B. Carvalho, B. Gonçalves, J. Sousa, A. Batista, A. Neto, **B. Santos**, A. Duarte, D. Valcárcel, D. Alves, M. Correia, A. P. Rodrigues, P.F. Carvalho, J. Fortunato, P. J. Carvalho, “MARTE to EPICS Process Variables Interface” (October 2011)

B. Gonçalves, J. Sousa, B.B. Carvalho, A. Batista, A. Neto, **B. Santos**, A. Duarte, D. Valcárcel, D. Alves, M. Correia, A. P. Rodrigues, P.F. Carvalho, J. Fortunato, P. J. Carvalho, M. Ruiz, J. Vega, R. Castro, J.M. López, N. Utzel, P. Makijarvi, C. Leong, V. Bexiga, I.C.Teixeira, J.P.Teixeira, A. Barbalace, P. Lousã, J. Godinho, P. Mota, “ITER FPSC Installation Manual” (November 2011)

B. Gonçalves, J. Sousa, B.B. Carvalho, A. Batista, A. Neto, **B. Santos**, A. Duarte, D. Valcárcel, D. Alves, M. Correia, A. P. Rodrigues, P.F. Carvalho, J. Fortunato, P. J. Carvalho, M. Ruiz, J. Vega, R. Castro, J.M. López, N.

Utzel, P. Makijarvi, C. Leong, V. Bexiga, I.C.Teixeira, J.P.Teixeira, A. Barbalace, P. Lousã, J. Godinho, P. Mota, “ITER FPSC User Manual” (November 2011)

B. Gonçalves, J. Sousa, B.B. Carvalho, A. Batista, A. Neto, **B. Santos**, A. Duarte, D. Valcárcel, D. Alves, M. Correia, A. P. Rodrigues, P.F. Carvalho, J. Fortunato, P. J. Carvalho, M. Ruiz, J. Vega, R. Castro, J.M. López, N. Utzel, P. Makijarvi, C. Leong, V. Bexiga, I.C.Teixeira, J.P.Teixeira, A. Barbalace, P. Lousã, J. Godinho, P. Mota, “ATCA FPSC Test Report” (November 2011)

Laboratorial prototypes

B. Gonçalves, J. Sousa, B.B. Carvalho, A. Batista, A. Neto, **B. Santos**, A. Duarte, D. Valcárcel, D. Alves, M. Correia, A. P. Rodrigues, P.F. Carvalho, J. Fortunato, P. J. Carvalho, M. Ruiz, J. Vega, R. Castro, J.M. López, N. Utzel, P. Makijarvi, C. Leong, V. Bexiga, I.C.Teixeira, J.P.Teixeira, A. Barbalace, P. Lousã, J. Godinho, P. Mota, “ITER Prototype Fast Plant System Controller”

M. Correia, B. Gonçalves, J. Sousa, B.B. Carvalho, A. Batista, A. Neto, **B. Santos**, A. Duarte, D. Valcárcel, D. Alves, A. P. Rodrigues, P.F. Carvalho, J. Fortunato, P. J. Carvalho, “ATCA PCIe switch”

A. Batista, B. Gonçalves, J. Sousa, B.B. Carvalho, A. Neto, **B. Santos**, A. Duarte, D. Valcárcel, D. Alves, M. Correia, A. P. Rodrigues, P.F. Carvalho, J. Fortunato, P. J. Carvalho, C. Leong, V. Bexiga, I.C.Teixeira, J.P.Teixeira, P. Lousã, J. Godinho, P. Mota, “ATCA IO Processor”

Computational and numerical codes

B.Santos, P.F. Carvalho, “MARTE Framework State Machine Panel” for EPICS CSS

B.Santos, P.F. Carvalho, “Synchronous Data Network Interface Panel” for EPICS CSS

B.Santos, P.F. Carvalho, “Data Archiving Statistics Panel” for EPICS CSS

B.Santos, P.F. Carvalho, “Acquisition Channels Configuration Panel” for EPICS CSS

P.F. Carvalho, **B.Santos**, “CODAC System State Machine” for EPICS CSS

P.F. Carvalho, **B.Santos**, “Memory and Processor Usage Statistics Monitoring Panel” for EPICS CSS

P.F. Carvalho, **B.Santos**, “Main Application Control and Monitoring Panel” for EPICS CSS

P.F. Carvalho, **B.Santos**, “Analogue to Digital Converter Monitoring Panel” for EPICS CSS

P.F. Carvalho, **B.Santos**, “Digital to Analogue Converter Monitoring Panel” for EPICS CSS

P.F. Carvalho, **B.Santos**, “Hardware Management Monitoring and Control Panel” for EPICS CSS

B.Santos, “devDataArchivingClient-support” for EPICS IOC

B.Santos, “devDataArchivingStatistics-support” for EPICS IOC

B.Santos, “devMARTeSDNFelix-support” for EPICS IOC

B.Santos, “devMARTeStateMachine-support” for EPICS IOC

B.Santos, “netCDF-client” for netCDF

R. Castro, **B.Santos**, “netCDF-server” for netCDF

B.Santos, A. Neto, “StreamingDriverSDN IOGAM” for MARTe

D. Education and training

Other

Participation in ITER Fast Controller Workshop which took place in Cadarache from the 28th of February to the 2nd of March 2011.