



# 4th IAEA Technical Meeting on Fusion Data Processing, Validation and Analysis

## Thursday, 2 December 2021

### Thursday 2 Dec: Inverse Problems; (Chaired by M. Churchill) (12:00 - 13:55)

time	[id] title	presenter
12:00	[14] Deep learning for fast Bayesian inference of plasma diagnostic models	PAVONE, Andrea
12:25	[21] APPLICATION OF TOMOGRAPHY METHODS IN EAST LINE-INTEGRATED X-RAY RADIATION DIAGNOSTICS	XU, Liqing
12:40	[42] Design of a soft-X ray imaging system and tomography analysis based on Bayesian principle	ZU, Yiming
12:55	[51] Progress in the Application of Machine Learning and Artificial Intelligence To Enhance EFIT Equilibrium Reconstruction for Fusion Data Analysis and Real-Time Applications	LAO, Lang
13:10	[54] DEVELOPMENT OF INVERSE THERMOGRAPHY METHODS BASED ON INFRARED SYNTHETIC DIAGNOSTIC	AUMEUNIER, Marie-Hélène
13:35	[59] RESEARCHES ON THE RECONSTRUCTION ALGORITHM OF ELECTRON DENSITY PROFILES BASED ON MACHINE LEARNING TECHNIQUES	Dr LAN, TING
13:45	[63] An advanced plasma current tomography based on Bayesian inference and neural networks	Dr LIU, Zijie Mr HUANG, Yao Prof. LI, Jiangang Mr WANG, YueHang Prof. XIAO, Bingjia Dr YU, Qingze

### Thursday 2 Dec: Causality Detection in Time Series; (Chaired by J. Vega) (13:55 - 15:05)

time	[id] title	presenter
13:55	[5] OBSERVATIONAL CAUSALITY DETECTION FOR TIME SERIES: FROM THEORY TO PRACTICE	MURARI, Andrea
14:20	[17] ASSESSING PHASE AND AMPLITUDE INFLUENCE IN SYNCHRONIZATION EXPERIMENTS	CRACIUNESCU, Teddy
14:35	[25] DETECTING CAUSAL RELATIONS BETWEEN TIME SERIES WITH NEURAL NETWORKS	SPELLADORE, Luca
14:50	[32] CONDITIONAL RECURRENT PLOTS AND TRANSFER ENTROPY FOR OBSERVATIONAL CAUSALITY DETECTION	PELUSO, Emmanuele

### Thursday 2 Dec: Synthetic Diagnostics, Integration, Verification and Validation; (Chaired by A. Dinklage) (15:05 - 16:15)

time	[id] title	presenter
15:05	[7] Error estimation in filament measurements using a synthetic probe	SHANAHAN, Brendan

15:30	[52] STATUS, PROSPECTS, AND BENCHMARKING OF THE MINERVA BAYESIAN MODELING FRAMEWORK AT WENDELSTEIN 7-X	Dr LANGENBERG, Andreas
15:45	[50] Anisotropic diffusion as a proxy model for the estimation of heat-loads on plasma-facing components	KNIEPS, Alexander
16:00	[71] DEVELOPMENT OF THE ITER SYNTHETIC REFLECTOMETRY DIAGNOSTIC	Dr NIKOLAEVA, Valentina