BIG ONE

Poster session — Monday, 21 September 2026

34th SYMPOSIUM ON FUSION TECHNOLOGY
SEPT. 21-25, 2026 AIX-EN-PROVENCE, FRANCE

Poster prize zone: stands BO-001 – BO-027 — gold labels below

I. Fuel Cycle and Breeding Blankets

BO-001	Marco CARAVELLO	Eddy Dimensionality-Based Turbulence Modeling for Molten Salt Fusion Blankets
BO-002	Gabriele IOB	Molten Fluoride Salts for Breeding Blankets: Tritium Transport Gaps and Corrosion Modeling
BO-003	Ao ZHANG	Effect of Hydrogen Purging on Tritium Release Behavior from Neutron-irradiated FLiBe Molten Salt
BO-004	Jingting LIU	In situ measurement of Tritium permeation behavior in High temperature liquid LiPb
BO-005	Shumpei IWASAKI	Lithium vaporization behavior of two-phase Li8ZrO6-Li2O sintered materials in 0.1% H2/He
BO-006	Rudolfs Janis ZABOLOCKIS	Exploring Lithium-Rich Ceramics for Tritium Breeding: From Established to Novel Materials
BO-007	Stefano COLOMBI	Breeding Blanket Neutronic Studies of ARC-like reactor
BO-008	Giorgio MONGIARDINI	Thermal–Hydraulic Assessment of an Alternative Manifold Design Approach for the HCPB Breeding Blanket
BO-009	Daigo KANAMORI	Compositional impact on thermal properties of Li2BeSiO4
BO-010	Hazal HATIP	Impact of humidity contamination on the Performance of Palladium-Based Membranes
BO-011	Hyeonjeong LEE	IDAES/Pyomo-based simulation framework for hydrogen recovery via palladium membranes
BO-012	Maliha ALHADI	Hydrogen Isotope Recovery from Supercritical Carbon dioxide Cycle in Fusion Reactor
BO-013	Lee WONHO	Interpretable Surrogate Modeling and Cost Optimization of Wet Scrubbers' Detritiation System in Nuclear Fusion Fuel Cycle
BO-028	Stefan HANKE	Status and activities of the development of a Metal Foil Pump for fuel separation in a fusion plant fuel cycle
BO-029	Stefan MERLI	Investigation of a Microwave Plasma-Driven Metal Foil Pump for Hydrogen Separation in Fusion Fuel Cycles
BO-030	James DARK	SHIELD: A Gas Driven Permeation rig for Hydrogen Permeation Barrier testing
BO-031	Ciro ALBERGHI	Hydrogen Isotope Transport in EUROFER: Experimental Testing and Numerical Modeling of Anti-Permeation Coatings
BO-032	Ronny RIVES	CFD Modelling of Tritium Transport and Permeation Barriers in the EU-DEMO WCLL Breeding Blanket under MHD Conditions
BO-033	Seong Dae PARK	Structural Evaluation of the HCCP TBM-Set under Thermo-Mechanical Load
BO-034	Tim TEICHMANN	Development of a continuous, centrifuge-based, tritium-compatible Pellet Injection System
BO-035	Tamás Zoltán SZEPESI	Cryogenic pellet injector development for large fusion devices
BO-036	Alan PALMER	Design and Prototyping of a Centrifugal Pellet Injector for the Fusion Energy Industry
BO-037	Andrew DVORAK	Cryogenical exposed electrofromed samples and viewing window for the ITER Fueling Pellet Injector
BO-038	Hugo DOMINGUEZ-ANDRADE	Tritium breeding capabilities & experimental results at the tritium breeding research facilities by the University of Bristol & Astral Systems
BO-039	Akifumi IWAMOTO	A preliminary study of blanket systems for laser fusion reactors toward achieving a high tritium breeding ratio
BO-040	David PICKERSGILL	First Results from the Novel 'ROBUST' Approach to Integrated Breeding Blanket Design
BO-041	Yuqiao (Joy) FAN	Vertex-CFD MHD Capabilities for Simulations of a Novel Fusion Blanket Concept
BO-042	Guillermo G. FONFRÍA	Numerical computation of MHD pressure drop for stellarator breeding blanket configurations
BO-043	Silvia IANNONI	Analytical Modelling and Numerical Investigation of MHD Pressure Drop in Rectangular Ducts under Spatially Varying Magnetic Fields
BO-044	Clemence MONT	Development of analytical techniques for real-time tritium accountancy around the fusion fuel cycle using the HERA experiment

BO-045	Yingwu JIANG	CFEDR Tritium Fuel Cycle Design and Optimization
BO-046	Jae-Uk LEE	Comparative Analysis of Numerical Efficiency and Scalability of Surrogate Model Types for Integrated Fusion Fuel Cycle Optimization
BO-047	Seok-Kwon SON	Preliminary Experimental Study on Hydrogen Oxidation and Regeneration Characteristics of a CuO-Based Oxidizer for Coolant Purification System of Breeding Blanket
BO-048	Mohamad Ali ABDALLAH	De-risking Glovebox Delivery for the H3AT Tritium Fuel Cycle
BO-049	Kazunari KATAYAMA	Influence of Fuel Cycle Design Parameters on Tritium Balance in a Water-Cooled Solid Breeder Fusion DEMO Reactor
BO-050	Wenhai GUAN	Preliminary Design Development of Water-Cooled Ceramic Breeder Test Blanket Module
BO-051	Antonio FROIO	System-level modelling for the EU DEMO Water Lead Ceramic Breeder Breeding Blanket
BO-052	Salvatore D'AMICO	Design rationale and functional architecture of the Water Lead Ceramic Breeder (WLCB) Breeding Blanket for EU-DEMO
BO-053	Christophe GARNIER	Thermomechanical Design Activity for the Development of the Alternative Water-Cooled WLCB Breeding Blanket concept for DEMO
BO-054	Guangming ZHOU	A blanket functional materials irradiation module in IFMIF-DONES for Helium Cooled Pebble Bed breeding blanket
BO-055	Jae-Hwan KIM	Current R&Ds; on advanced breeding functional materials for JA DEMO
BO-056	Yutaka SUGIMOTO	The deuterium retention properties of advanced neutron multiplier materials after irradiation with D ions
BO-057	Julia LEYS	First Insights from the “Advanced Ceramic Breeder's in situ Tritium Release Experiment under Neutron irraDiation” (ACB-TREND) campaign
BO-058	Keisuke MUKAI	Preliminary neutronics analysis of Tribreed blanket mock-up for advanced ceramic breeders
BO-059	Yuki KOGA	Pneumatic Capsule Transportation Tests Conducted by WCCB-NAS Mock-up Test Facility
BO-060	Alina Elena NICULESCU	Experimental Evaluation of a Reactive Molecular Sieve Bed Mock-Up for Tritium Recovery via Isotopic Exchange
BO-061	Jaesung YOON	Structural Simplification and Fabrication Procedure Development for the HCCP TBM Shield with Validation through a Small-Scale Mock-up
BO-062	Chiara MISTRANGELO	Optimization of the manifold design for the WCLL TBM via MHD analysis
BO-063	Leo BÜHLER	Magnetohydrodynamic flow in a toroidal manifold for WCLL blankets
BO-064	Cyril COURTESSOLE	Experimental study of PbLi MHD flow in a circular pipe
BO-065	Simone SIRIANO	Modelling Helium nucleation, bubble growth and transport in PbLi breeding blankets under magneto-convection
BO-066	Suk-Kwon KIM	Operational Validation of a High-Speed Helium Circulator for the Helium Cooling System of the Test Blanket System
BO-067	Antoine AYMARD	Performance assessment of a Quick Disconnecting System sealing junction for the ITER Test Blanket Module Helium Cooling System
BO-068	Gaurav VERMA	Preliminary Thermal and Mechanical Assessment of a Modular Monoblock HCPB Breeding Blanket for EU DEMO
BO-069	Taehyun HWANG	Recent Study of the mechanical and thermal properties of plasma sintered Be12Ti
BO-070	Brahim CHELIHI	Dedicated Thermal and Thermo-mechanical Analyses in support of DEMO WCLL BB design
BO-071	Daniel MOYA ALONSO	Thermo-Mechanical Analysis for HCCP Ancillary Systems (HCS & CPS) in the TCWS Vault Area
BO-072	Javier LEBOREIRO IRIARTE	Integrated Assembly and Maintenance Planning for the HCCP HCS and HCCP CPS Ancillary Systems in ITER Based on RAMI Driven Design
BO-073	Giuseppe CEFALI	The Dynamics Behind Steady State Fusion: Modelling Challenges and Progress Towards Integrated Solutions for STEP
BO-074	Ethan FLYNN	STEP fusion powerplant breeder blanket design approach for tritium self-sufficiency
BO-075	Helen BROOKS	A Multi-physics Modelling and Simulation Platform for Breeder Blanket Technology

BO-076	Samuele MESCHINI	Physics, technology, and economic considerations for DD startup of DT fusion power plants
BO-077	Fabrizio LISANTI	Modelling of hydrogen mass transport in the Permeator Against Vacuum technology for the Tritium Extraction and Removal system of the EU DEMO WCLL blanket
BO-079	Fumito OKINO	Reverse diffusion of deuterium in a lithium-lead blanket test loop
BO-080	Rami BECHARA	Detailed specifications of transfer models for activated corrosion products in lead-lithium breeding blanket
BO-081	Katharina BATTES	Lithium isotope analyses for the validation of the ICOMAX lithium enrichment setup
BO-082	Lilian MOUMANEIX	Improvement of electrochemical isotope separation methodology for future large-scale lithium-6 production
BO-083	Alessandro DEL NEVO	W-HYDRA: An Integrated Large-Scale Experimental Platform for Thermal-Hydraulic and PbLi–Water Interaction Studies in WCLL Breeding Blanket Systems
BO-084	Francesco COLLIVA	Thermal-Hydraulic Analysis of the EU-DEMO Primary Heat Transfer System with Different Steam Generator Options
BO-085	George ANA	CFD-based thermal analysis and heat transfer enhancement of a ZrCo packed getter bed
BO-086	Quentin TICHIT	Upgrading heat transfer correlations for plasma-facing components with one-side heated rectangular cooling channel.
BO-087	Rin GANAHA	Mass transfer behavior of tritium released from neutron-irradiated LiAlO2 to Zr
BO-088	Juro YAGI	Evacuation behavior of Na and Li vapor for the development of fusion vacuum system
BO-089	Thomas HAERTL	Development of a Torus Vacuum Pumping System for a Volumetric Neutron Source
BO-090	Christian HOPF	Tritium inventory estimate of the EUROfusion neutral-beam-driven Volumetric Neutron Source and its dependence on the hydrogen isotope allocation to torus and neutral beams
BO-091	James BUCKERFIELD	Experience and Design Implications from the First Cryogenic Operation of Large Custom Cryopumps Manufactured for ITER Torus, Cryostat, and Neutral Beam Pumping Systems.
BO-092	Ivan Alessio MAIONE	Analysis of Residual-Magnetization-Induced Electromagnetic Loads in the DEMO Breeding Blanket System
BO-093	Italo GODOY-MORISON	Efficiency of permanent magnet electromagnetic pumps for liquid breeder blanket applications
BO-094	Alessandro TASSONE	Effect of tilt angle on the liquid metal MHD mixed convection in a separately cooled breeding blanket with helical cooling pipes
BO-095	Claudio SCARDINO	Real-Time Monitoring of MHD Liquid Metal Flows with Shallow Recurrent Decoders

G. Plasma-Facing Components

BO-014	Tomislav DAMJANOVIC	Design-by-Analysis of Tungsten Fibre-Reinforced Tungsten for Divertor Plasma-Facing Components
BO-015	Robert LÜRBKE	Hybrid additive manufacturing of tailored tungsten preforms on tungsten armor tiles for plasma-facing component application
BO-016	Zhiyong WANG	Advanced manufacturing of tungsten for nuclear fusion applications using laser deposition: microstructure and properties
BO-017	Jaeyoon BAE	Effect of Powder Size Variation on the Microstructure and High-Temperature Properties of Hetero-structured Ferritic ODS Alloy
BO-018	Lukas KLOS	Development and Optimization of Mechanically Alloyed ODS Copper
BO-019	Taewoo KIM	3D Design Optimization of KSTAR Tungsten Divertor Using HEAT
BO-020	Zumaro ZUMARO	Ratcheting-Constrained Design of Rounded-Edge Fin Monoblock Hypervapotrons under 15 MW/m2 Divertor Heat Flux
BO-021	Alessio QUAMORI TANZI	Numerical Simulation and Experimental Testing of a Reduced-Scale Additive Manufactured TPMS Divertor Tile for Wendelstein 7-X
BO-022	Kazushi HONJO	Probabilistic Evaluation Method for Cracks on Divertor Armors in Fusion Reactors Using Direct Current Potential Drop Technique

BO-023	Sonia PIGNATIELLO	A Porous-Medium MHD Model for Pressure Drop Prediction in Liquid Metal CPS for fusion applications
BO-024	Francisco MIRANDA	Fusion-relevant neutron irradiation of tungsten: hardening, embrittlement, and recrystallization under diverse irradiation conditions
BO-025	Simon CORAH	Investigating the influence of potassium-doping on the plasma material interaction response of tungsten
BO-026	Jannik TWEER	Steps towards in situ surface regeneration of plasma facing material
BO-027	Chongyang LIU	Improving the Sinterability of Wf/W by Alloying
BO-078	Boštjan KONCAR	Thermal-Hydraulic Assessment of HHF Cooling Channel Geometries for the W7-X Divertor Target Module
BO-096	Antara MENZEL-BARBARA	Field-line-guided design of self-shadowed W7-X divertor targets for enhanced particle exhaust
BO-097	Daniel ORDNUNG	Thermal shock performance of tungsten fabricated by laser powder bed fusion
BO-098	Daniel DOROW-GERSPACH	High heat flux performance of CuCrZr cooling structures produced by laser powder bed fusion
BO-099	Shin-ichi SATAKE	Heat Treatment Effects on Subcooled Boiling and Thermal Conductivity of ITER-Grade CuCrZr
BO-100	Dai HAMAGUCHI	Comprehensive study on the neutron irradiation effects of the latest ITER-grade CuCrZr for Japanese DEMO divertor application
BO-101	Seonghee HONG	Study on Neutron Streaming Effects through Gaps between Monoblocks and Inter-module Gaps in the Divertor
BO-102	Marco CEROCCHI	Fabrication of divertor target mock-ups with W-WC monoblocks
BO-103	Maurizio FURNO PALUMBO	Manufacturing & Qualification activities of DTT First Wall small-scale mock-ups
BO-104	Damiano PAOLETTI	Thermostructural verification of the DTT Inboard First Wall Limiter
BO-105	Riccardo DE LUCA	Non-destructive and mechanical characterization of W coatings produced by means of APS for the Outboard First Wall of DTT
BO-106	Mehrdad MOUSAPOUR	Industrial Scaling up and Mechanical Performance of Wf/W Composites for Divertor Applications
BO-107	Rudolf NEU	Characterization of Self-Passivating Tungsten Alloy Produced by Industrial Upscaling and its Comparison to Laboratory Samples
BO-108	Zhe WANG	Study on the Microstructure of Rolled W-0.5 wt.% TiC Alloy with High Hardness and Thermal Stability
BO-109	Jianglong PAN	Synergistic Optimization of Tungsten-Potassium Materials for Enhanced Thermal Stability and High-Heat-Flux Testing
BO-110	Hyoung Chan KIM	High Heat Flux testing and Investigation of the Recrystallization Characteristics of Potassium-doped Tungsten fabricated by Spark Plasma Sintering
BO-111	Germán PÉREZ PICHEL	Advanced strategy on assessing thermo-hydraulic performance of ITER Divertor High Heat Flux Plasma-Facing Components

STUDIO 1

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Poster prize zone: stands S1-01 – S1-15 — gold labels below

D. Plasma Engineering, Plasma Control, and CODAC

S1-01	Zalán ZÁMBORI	Multiphysics Model for Optimization of the Propellant Valve Prototype design for the ITER Disruption Mitigation System
S1-02	Letizia MELARAGNI	Preliminary analysis of the formation cycle of cryogenic pellets for disruption mitigation in DTT
S1-03	Luigi CACCIAPUOTI	First steps towards the fast protection of the ICRH system for DTT
S1-04	Lorenzo SACCARO	Physics Informed Neural Network for Real-Time Toroidal Reconstruction of Magnetic Perturbation in RFX-mod2
S1-05	Franco Augusto GALFRASCOLI	Model Predictive Path Integral Control of Tokamak Plasma Boundary Evolution Using a Physics-Informed Neural Equilibrium Surrogate
S1-06	Johannes ILLERHAUS	Real-Time GPU-Accelerated Equilibrium Quantity Reconstruction Using Deep Learning for Control at ASDEX Upgrade
S1-07	Daniela KROPACKOVA	Application of Alpha Heating Power Emulation on ASDEX Upgrade
S1-08	Marco BIASIZZO	Implementation and Benchmarking of a Software-in-the-Loop Flight Simulator Embedding the Discharge Control System of ASDEX Upgrade
S1-09	Fernando VALDIVIA DEL ROSAL	A hardware-in-the-loop platform for traffic flow scheduling in AI-native accelerator facilities
S1-10	Marco NERI	Assessment of Linearized Plasma Response Models and Vertical Instability Growth Rates
S1-11	Mateo BELLOUARD	Surrogate models for transport modelling in pulse design simulators
S1-16	Renat KERMENOV	Feedback Control of Magnetic Topology for Alternative Divertor Configurations on ASDEX Upgrade
S1-17	Ondrej KUDLACEK	Feedback Control of Plasma Density at ASDEX Upgrade using Magnetic Perturbation Coils
S1-18	Peter LANG	Real-time pellet fuel flux inventory accounting for advanced density control in ASDEX Upgrade
S1-19	Francesco PASTORE	Improved electron density profile estimation on ASDEX Upgrade for pellet-fuelled discharges
S1-20	Lucas BROWN	Upgrading gas flow control on MAST-U for improved density ramp-up and detachment control
S1-21	Hassan AL KHAWALDEH	Demonstration of Real-Time Multi-Actuator Plasma Density Control in KSTAR via Adaptive Fueling
S1-22	Youngho LEE	Validation of ITER PCS-Based PF Coil Control in KSTAR: From Simulation to Plasma Startup
S1-23	Gianmaria DE TOMMASI	Control-oriented plasma magnetic models cross-validation with EDICAM
S1-24	Himank ANAND	System Engineering Approach to Plasma Control System Design for Future Fusion Power Plants
S1-25	Federico PESAMOSCA	Heat flux control for the ITER upper first wall
S1-26	David KEELING	Reduced wall-heating protection during DT operation on JET: management of risks.
S1-27	Stefano TOSCANO	LLM-assisted requirements management for the ITER PCS Plasma Control System design
S1-28	Anna VU	Progress on ICH control and exception handling in ITER PCS design
S1-29	Olivier PAILLAT	WEST PCS design to explore long pulse operation
S1-30	Mireille SCHNEIDER	Status and plans of the ITER Pulse Design Simulator
S1-31	Simon VAN MULDERS	Towards real-time impurity transport modeling for tokamaks with RAPTOR
S1-32	Filippo BERTINI	Real-time prediction of NTMs onset at TCV
S1-33	Myounghun KIM	Application of the ITER Real-Time Framework to a Two-Color Interferometer Diagnostic
S1-34	Piotr PEREK	Universal Scalable Software Framework for MTCA.4-based Image Acquisition Systems for Plasma Diagnostics
S1-35	Cristian SOMMARIVA	The EPFL–NVIDIA Fusion Digital Twin: A Modular Framework for Automating Fusion Component Design and Analysis
S1-36	SooHwan PARK	Pellet formation of a dual shattered pellet injection system for enhanced operational versatility

S1-37	Dániel FERENCZY	Analysis of aerodynamics and mechanical factors affecting the pellet flight in shattered pellet injection for the ITER DMS
S1-38	Trey GEBHART	US Contributions to the ITER Disruption Mitigation System Toward Reliable Pellet Launching and In-Flight Stabilization
S1-39	László Richárd CSISZÁR	Pellet trajectory optimisation studies for the ITER Disruption Mitigation System
S1-40	Dániel Imre RÉFY	Development of a Propellant Valve Prototype for the ITER Disruption Mitigation System
S1-41	Jordan BERTON	Influence of pellet formation and acceleration parameters on the fragmentation of solid hydrogen pellets for Disruption Mitigation System
S1-42	Théo BOUJET	Cryogenic pellets production with supercritical helium cooling in a compact cold cell assembly for ITER Disruption Mitigation System
S1-43	Silvio GIORS	Numerical CFD modelling of hydrogen and neon pellet de-sublimation and optimization of ITER DMS 28.5 mm and 18 mm cold cell designs
S1-44	Daniel FILIPE VALCARCEL	Design of the ITER DMS Sequence Manager
S1-45	Federico FIORENZA	Plasma boundary reconstruction of ITER plasmas using physics-informed neural networks
S1-46	Adriano MELE	Improved coil decoupling at TCV through the ALIGN algorithm
S1-47	Teddy CRACIUNESCU	Topology measures for the study of the complexity changes in time series related to disruptions
S1-48	Pasquale ZUMBOLO	Vertical Stability Analysis in VNS via CREATE-FXL-CARIDDI coupling
S1-49	Natale RISPOLI	Overview of the DTT ECH&CD; Control System Architecture
S1-50	Troy PEDERSON	Modifications to the DIII-D Plasma Control System for Commercial use and Fusion Reactor Relevance
S1-51	Vincent GRABER	Robust Adversarial Reinforcement Learning for Multi-Variable Burn Control of ITER Plasmas
S1-52	Domenico FRATTOLILLO	Feasibility and Controllability Assessment of Negative Triangularity Plasmas in JT-60SA in view of OP2
S1-53	Yuya AKAZAWA	Design of boronization system in JT-60SA
S1-54	Roberto AMBROSINO	CREATE PEGASO: Plasma Equilibrium Generation and Automatic Scenario Optimization tool

STUDIO 2

Poster session — Monday, 21 September 2026

Poster prize zone: stands S2-01 – S2-09 — gold labels below

A. Integrated Plant Systems and Pathways Toward Fusion Power Plants

S2-01	Alfonso RODRIGUEZ-GONZALEZ	Negative triangularity and low aspect ratio for compact high-field fusion pilot plants
S2-02	Timothé AUCLAIR	High-temperature superconductors for fusion power plants: preliminary design and multi-code assessment of a 2 GW tokamak
S2-03	Tiago POMELLA LOBO	A novel Multi-Timescale strategy for Fusion Systems Codes and its impact to parametric analyses of Fusion Power Plants
S2-04	Isaac Asiel LORENZO MERCADO	Forced Convection Heat Transfer Experiment with Molten Salt
S2-10	Simon KIRK	STEP Fusion powerplant vacuum vessel and in-vessel systems design approach for managing radiation loads during steady state operations
S2-11	Amanda ROCCA	Electrical Infrastructure Design Challenges for the Steady-State Operation of STEP Prototype Plant
S2-12	Nisarg Hasmukhbhai PATEL	Design approach for STEP Fusion Powerplant outboard component integration
S2-13	Jan Willem COENEN	From Perfection to Pragmatism: A FOAK-Oriented Strategy for Materials and Component Qualification in Fusion Power Plants»
S2-14	Francesco Maria FARINELLA	Development of a Thermal-hydraulic Object-oriented Model of the DTT Water Cooling System for Design Optimization
S2-15	Valeria RUSSO	Preparation of the tokamak assembly in the DTT facility
S2-16	Stefany Paola ALVIAREZ HERNANDEZ	Challenges in the design of the Atmosphere Detritiation System for UKAEA's Tritium Research Facility
S2-17	Aljaz CUFAR	Lower Port Neutronics Analyses for EU-DEMO and Volumetric Neutron Source – common challenges and shielding options
S2-18	Lorenzo GIANNINI	Toward an Integrated Magnetic Cage for the Volumetric Neutron Source (VNS): Physics-Driven Design and Enabling Technologies
S2-19	Andrea QUARTARARO	An Improved Integrated Physics and Technology Tool for Fusion Plant Design
S2-20	Josephine PETERS	Using PROCESS and BLUEMIRA as training tools for Fusion Power Plant Design
S2-21	Thomas BROWN	The STAR fusion power plant design completes a pre-conceptual design phase millstone
S2-22	Bruno GONFIOTTI	Status of the EU-DEMO WCLL BOP variants and provisional selection
S2-23	Teobaldo LUDA DI CORTEMIGLIA	DYT: Design Your Tokamak
S2-24	Samad KHANI MOGHANAKI	Multiphysics systems simulation for rapid breeder blanket concept analysis
S2-25	Minoru SAKAMA	Advanced Neutronics Analysis Framework for the Helical Fusion Reactor Helix KANATA: Efficient Tetrahedral Mesh Modeling, Variance Reduction, and Integrated 3D Visualization Using PHITS