

Date: 18 Sep 2024

## **68th General Conference of IAEA: Statement by Dr. Ajit Kumar Mohanty, Chairman, AEC and Secretary, DAE**

<https://www.iaea.org/sites/default/files/24/09/india-gc68.pdf>

Video: <https://streaming.iaea.org/24618/54841/>

## **Vacuum vessel assembly - Back in the starting blocks**

<https://www.iter.org/newsline/-/4070>

[Latest ITER Newsline: <https://www.iter.org/whatsnew>]

## **UK reveals next STEPs toward prototype fusion power plant**

<https://physicsworld.com/a/uk-reveals-next-steps-toward-prototype-fusion-power-plant/>

## **Trailblazers in plasma turbulence computer simulations win 2024 James Clerk Maxwell Prize**

<https://www.pppl.gov/news/2024/trailblazers-plasma-turbulence-computer-simulations-win-2024-james-clerk-maxwell-prize>

## **AI enhances plasma plume analysis**

<https://phys.org/news/2024-09-ai-plasma-plume-analysis.html>

## **Dust: Trapped by a laser or threatening ITER, it's making headlines**

<https://www.ans.org/news/article-6390/dust-trapped-by-a-laser-or-threatening-iter-its-making-headlines/>

## **Strength of US High-Magnetic-Field Science is Waning, Academies Report Warns**

<https://www.aps.org/apsnews/2024/09/strength-high-magnetic-field-academies>

## **Draghi's Report on European Competitiveness Highlights Fusion as a Disruptive Technology**

<https://www.fusionindustryassociation.org/draghis-report-on-european-competitiveness-highlights-fusion-as-a-disruptive-technology/>

## **The Crucial Role of Computer-Driven Simulation in Nuclear Fusion**

<https://www.eetimes.eu/the-crucial-role-of-computer-driven-simulation-in-nuclear-fusion/>

## **New Tool Sheds Light on Experimental Nuclear Fusion Systems**

<https://engineering.tamu.edu/news/2024/09/new-tool-sheds-light-on-experimental-nuclear-fusion-systems.html>

## **Boosting Clean Energy with AI-Powered Catalysts and Microwave Plasma Technologies**

<https://uh.edu/news-events/stories/2024/september/09172024-clean-energy-catalysts-plasma-technologies.php>

## **Can Fusion Energy Play a Role in Mitigating Climate Change?**

<https://www.engineering.columbia.edu/news/can-fusion-energy-play-role-mitigating-climate-change>

### **Kyoto Fusioneering Selected by NEDO for its “Deep-Tech Startups Support Program in the Green Transformation field (GX)”**

<https://kyotofusioneering.com/en/news/2024/09/12/2609>

### **EUROfusion spearheads advances in Artificial Intelligence and Machine Learning to unlock fusion energy**

<https://euro-fusion.org/eurofusion-news/eurofusion-spearheads-advances-in-artificial-intelligence-and-machine-learning-to-unlock-fusion-energy/>

### **What are the fuel cycle challenges of tripling nuclear capacity?**

<https://www.world-nuclear-news.org/articles/fuel>

### **Laser and X-ray combo creates star-like conditions inside a hair-thin wire**

<https://phys.org/news/2024-09-laser-ray-combo-star-conditions.html>

### **How to spot tiny black holes that might pass through the solar system**

<https://www.sciencenews.org/article/primordial-black-holes-solar-system>

### **New superconductor has record breaking current density**

<https://physicsworld.com/a/new-superconductor-has-record-breaking-current-density/>

### **CMS experiment at CERN weighs in on the W boson mass**

<https://home.cern/news/press-release/physics/cms-experiment-cern-weighs-w-boson-mass>

### **Giant bubbles on the surface of a nearby star preview the fate of our sun**

<https://edition.cnn.com/2024/09/11/science/giant-star-bubbles-convection/index.html>

### **LLNL Hosts French Alternative Energies and Atomic Energy Commission Leaders**

<https://lasers.llnl.gov/news/llnl-hosts-french-alternative-energies-atomic-energy-commission-leaders>

### **Westinghouse unveils nuclear-specific AI system**

<https://www.neimagazine.com/news/westinghouse-unveils-nuclear-specific-ai-system/>

### **How end-users can help drive nuclear new-build**

<https://www.world-nuclear-news.org/articles/how-end-users-can-help-drive-nuclear-new-build>

### **NASA suffering from ageing infrastructure and inefficient management practices, finds report**

<https://physicsworld.com/a/nasa-suffering-from-ageing-infrastructure-and-inefficient-management-practices-finds-report>

### **'Diversity of personalities needed to meet nuclear expansion challenge'**

<https://www.world-nuclear-news.org/articles/diversity-of-personalities-needed-to-meet-nuclear-expansion-challenge>

### **Containment vessel heads in place at two CAP1000 units**

<https://www.world-nuclear-news.org/articles/containment-vessel-heads-in-place-at-two-cap1000-units>

### **Recent Peer-Reviewed Articles of Interest**

#### **Preface to special issue: Private fusion research: Opportunities and challenges in plasma science**

<https://pubs.aip.org/aip/pop/article/31/9/090401/3312274/Preface-to-special-issue-Private-fusion-research>

#### **Surrogate model-based cognitive digital twin for smart remote maintenance of fusion reactor: Modeling and implementation**

<https://iopscience.iop.org/article/10.1088/1741-4326/ad7b56>

#### **Data-driven prediction of scaling and ignition of inertial confinement fusion experiments**

<https://pubs.aip.org/aip/pop/article/31/9/092702/3313048/Data-driven-prediction-of-scaling-and-ignition-of>

#### **A spectroscopic analysis code for spatially resolved x-ray absorption data from the COAX platform**

<https://pubs.aip.org/aip/rsi/article/95/9/093526/3312887/A-spectroscopic-analysis-code-for-spatially>

#### **Acceleration of ion phase-space holes due to interactions with ion solitons in a wave-guided plasma**

<https://www.nature.com/articles/s41598-024-72316-z>

#### **SOLPS-ITER modeling of divertor detachment in MAST-U's super-X double null configuration and comparison to experiment**

<https://www.sciencedirect.com/science/article/pii/S2352179124001595>

#### **MARTE2 on ARM platforms integration challenges: An asymmetric multiprocessing approach for the ITER magnetics diagnostics**

<https://www.sciencedirect.com/science/article/pii/S0920379624002230>