

IAEA AI 4 Fusion

- Coordinated research project (CRP) by IAEA to create a cross-community network for AI in fusion
 - Concerned with data and accessibility
- 4 work packages
 1. MFE
 2. **IFE**
 3. MFE+IFE joint challenges (images + video)
 4. Training and outreach



Work package 2: IFE

- Use case from R McClarren and A Crilly
- Challenges with constructing a simulation database for inference
 - Hierarchy in accuracy
 - Model fidelity
 - Dimensionality 1D, 2D vs 3D
 - Varied data modality
 - Spectra, images, time-resolution, and hydro dumps
 - Constantly evolving models
 - Meta-data on “tunings”, source code, etc.
 - Proprietary and export control issues for sharing
- FAIR data
 - Findable, Accessible, Interoperable, Reusable
 - *Could you easily find a simulation of interest and re-run it and retrieve the exactly same result*

Work package 2: IFE

- Use case from R McClarren and A Crilly
- Existing tools

