

## **Learning to Run a Power Network in a Sustainable World: A NeurIPS 2020 AI Competition**

On the way towards a sustainable future, the L2RPN challenge aims at unleashing the power of reinforcement learning for a real-world industrial application: controlling electricity power transmission and moving closer to truly “smart” grids using underutilized flexibilities. In NeurIPS track 1, participants developed their agent to be robust to unexpected events, due to adversarial attacks, and keep delivering reliable electricity everywhere even in difficult circumstances. In NeurIPS track 2, participants rather developed their agent to adapt to new energy productions in the grid with an increasing share of less controllable renewable energies over years. We will review here the scope and promising results of this competition. This whole open-science project was made possible thanks to the open-source development of Grid2op platform and its GridAlive ecosystem. Eventually, this competition brought together researchers from AI and power system communities, a strong step towards a much needed "AI for power system" community.