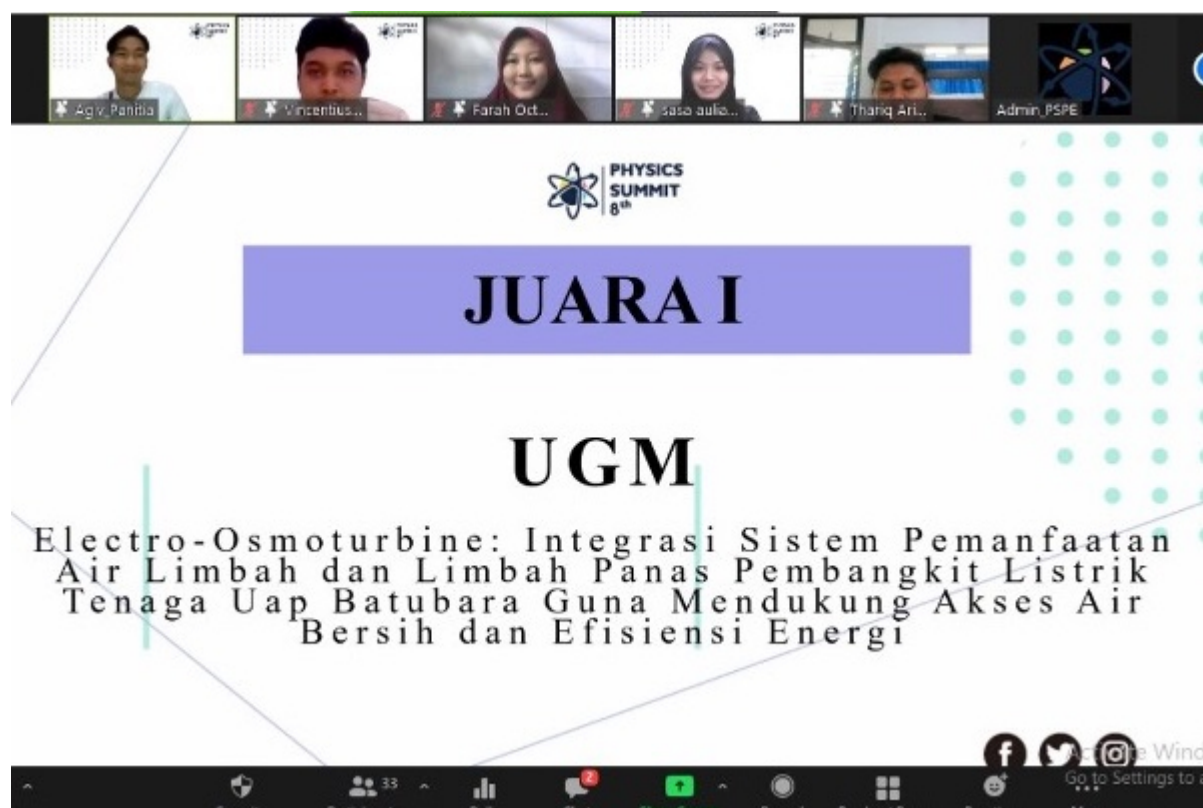


# Students' Electro-Osmoturbine Idea Earns First Place in Paper Competition


Monday, 02 August 2021 WIB, By: Salma



UGM Engineering students comprised of Vincentius Adven Brilliant (Mechanical Engineering), Sasa Aulia (Engineering Physics), Farah Octaviani (Engineering Physics), and Tariq Arian Khalfani (Engineering Physics) won 1st place at the 8th Physics Summit 2021 held by the Physics Student Association of Sepuluh Nopember Institute of Technology. The UGM team competed with other students from various universities, including Sepuluh Nopember Institute of Technology, Airlangga University, Padjadjaran University, UPN "Veteran" East Java, and Shipbuilding Institute of Polytechnic Surabaya.

"The competition consists of 3 rounds, namely abstract selection, full paper selection, and final presentation. Only the top five teams will qualify for the final," said team representative Adven when contacted on Friday (30/7).

The team proposed an innovative system called Electro-Osmoturbine to solve a clean water crisis and untreated coal plant wastewater. Their paper entitled *Electro-Osmoturbine: Integration of Wastewater and Waste Heat Utilization Systems of Coal-fired Power Plants to Support Access to Clean Water and Energy Efficiency*.



Adven added that some Indonesians faced a threat of a clean water crisis for the next 30 years. On the other hand, coal-fired power plants consumed a large amount of water, and most of the water was disposed of without further utilization. Furthermore, energy transition also demanded saving on energy consumption of fossil-fuel power plants, including coal plants.

“So, we came up with Electro-Osmoturbine to address both problems simultaneously. Despite communicating merely online, we make sure everything is thoroughly prepared. We didn’t expect our idea was chosen and appreciated by the four judges,” he said.

Adven hopes his team’s idea can spark similar innovations to emerge, especially on clean water production of industrial wastewater through reverse osmosis.

Author: Desy

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