* How could you use AI for a problem that interests you?

My current research focuses on molecular dynamics simulations. AI provides great tools to speed up the calculation time for various simulations. Meanwhile, it inspires new ways to analyze the raw data, extracting more information than standing with physical interpretation alone.

* What is the task?

A task we have been working on is to investigate mechanical properties, failure mechanisms, and scaling laws of bicontinuous nanoporous metallic glasses with AI.

* What kind of data would you use?

Data generated with large-scale molecular dynamics simulations.

* What kind of method or model might be appropriate?

We considered genetic programming algorithms as our main tools.

* What kind of metric would you use to measure success?

We fitted the model and compare the predicted results with simulated results, evaluating them with R2 scores.