



Contribution ID: 317

Type: Talk

【1】 Artificial intelligence in materials science - hype or revolution?

Tuesday 27 August 2019 10:10 (40 minutes)

The growth of data from simulations and experiments is expanding beyond a level that is addressable by established scientific methods. The so-called “4 V challenge” of Big Data –Volume (the amount of data), Variety (the heterogeneity of form and meaning of data), Velocity (the rate at which data may change or new data arrive), and Veracity (uncertainty of quality) –is clearly becoming eminent also in the sciences. Controlling our data, in turn, sets the stage for explorations and discoveries. Novel approaches and tools of Artificial Intelligence can find patterns and correlations in data that cannot be obtained from individual calculations or experiments and not even from high-throughput studies. In fact, data-driven research is adding a new research paradigm to the scientific landscape. I will discuss the concepts and recent progress of data-driven materials science, also addressing the importance of FAIR and Open Data.

Author: Prof. DRAXL, Claudia (Physics Department and IRIS Adlershof, Humboldt-Universität zu Berlin and Fritz Haber Institute of the Max Planck Society, Berlin)

Presenter: Prof. DRAXL, Claudia (Physics Department and IRIS Adlershof, Humboldt-Universität zu Berlin and Fritz Haber Institute of the Max Planck Society, Berlin)

Session Classification: Plenary Session