Teaching and Learning Conference

Workshop: 3D printing – a novel way of communicating science and developing functional models for training medical and non-medical students.

This workshop will follow two talks related to 3D printing technology: “A Novel Way of Communicating Science” and “Development of Functional Models”.

Three-dimensional printing or rapid prototyping (RP) technology has been widely used in a variety of scientific areas: biotechnology, medical science, chemistry, dentistry and others. RP is the process of fabricating arbitrarily shaped 3D objects, layer by layer from a stream of raw materials (plastics, metals and ceramics). This technology dramatically reduces production time and cost.

In this workshop, attendees will become familiar with an overview of the existing printing technologies, practical considerations of computer aided design (CAD) and a 3D printer via live demonstration. We will present a standalone online platform providing a centralised source of information including a database of videos, designed to teach everything needed to create your own print. This is achieved with OnShape, a freely available cloud-based CAD program.

Clinicians or those interested in the medical field will be able to see a number of anatomically accurate 3D models, including kidney, ribs, and brain. These models were developed from medical imaging data and will be used for research and teaching purposes. They can also clarify research projects and concepts at Public Engagement and Outreach Activities.

The workshop will be of great benefit to anyone interested in communicating science using the latest technologies, or those with a more general interest in 3D printing.

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