**3D Modelling and Printing workshop: *Improving availability and cost of custom Assistive Technology***

**ASTRACT SUMMARY (250 words)**

Custom Assistive Technology can now be made more accessible and affordable to everyone thanks to 3D printing, enabling health professionals, AT providers and individual users to create custom or low volume parts quickly and affordably. The ability to create, share, modify and physically manifest objects can empower both AT providers and users.

This workshop aims to train participants on the basic skills and tools required to start creating and modifying 3D models of device parts as well as discussing some design considerations when modelling. Once a model is created the audience will also be shown how to share, replicate (or modify) and produce in small numbers for a fraction of the cost compared to traditional manufacturing processes.

This workshop will cover some of the following:

* How to model and produce affordable parts using 3D modelling and 3D printing.
* Advantages of 3D modelling designs, including ease of concept development, improved information sharing, collaborative development and improved documentation.
* Advantages and limitations of 3D printing.
* Considerations when designing and manufacturing custom medical devices.
* General engineering guiding principles to consider including application requirements for strengths/applied forces, surface finishes & tolerances).
* Where to find pre-made models (and optionally share your designs) to prevent “re-invention of the wheel”.
* How to make parts if you don’t own a 3D printer.
* See examples of real life devices made by the Rehabilitation Technology Unit, used by public patients in Western Australia.

We ask attendees to pre-register for a free account at [onshape](https://www.onshape.com/).org and bring their own laptop & mouse.