



Canadian Association
of Physicists

Association canadienne
des physiciens et physiciennes

Contribution ID: 408

Type: **Invited Speaker** / **Conférencier(ère) invité(e)**

Building Infrastructure for Building MRIs in Remote Communities

Tuesday 10 June 2025 17:00 (45 minutes)

In recent years low-field MRI technology has advanced to the point where it is possible to build a complete MRI using parts that total a few tens of thousands of dollars. But to make truly affordable and accessible MRI, a means to make, service and use the MRIs locally in the communities is needed. Local expertise is needed in addition to cheap parts. The first steps in creating that local expertise is education. Since 2023 we have been running student MRI building projects in collaboration with the Saskatchewan Indian Institute of Technologies in Saskatoon. A complete wrist-sized MRI was built by a team of 7 students in the summer of 2024. This summer another student team is making project MRI construction kits for use in community high school physics classes. The kits are based on an MRI designed for the lunar Gateway space station, following the vision of the Canadian Space Agency's Health Beyond Initiative.

Keyword-1

Keyword-2

Keyword-3

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Session Classification: (DPMB) T3-8 | (DPMB)

Track Classification: Technical Sessions / Sessions techniques: Physics in Medicine and Biology / Physique en médecine et en biologie (DPMB-DPMB)