



Contribution ID: 43

Type: **Talk**

## Identifying Brain Imaging Biomarkers for Early Diagnosis of Rare Dementia through MRI Post-Processing

*Friday 6 October 2023 10:00 (15 minutes)*

Diagnosing dementia in its early stages is a significant challenge due to the phenotypic overlap of various types of dementia. Some diseases can go misdiagnosed for years before the correct diagnosis is reached. On the other hand, certain causes of dementia present with distinct structural changes in the brain; however, these changes can be extremely subtle in the early stages, making them hard to detect through visual inspection. This presentation introduces deep learning-based image processing strategies for accurate segmentation and labeling of anatomical structures linked to rare forms of dementia. Our ultimate goal is to facilitate fast and automated computation of novel imaging biomarkers that have the potential to help characterize the structural changes in the brain at earlier disease stages than what is currently possible.

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**Session Classification:** LOC Session: The Local Landscape of Neuroscience in Iceland