



Canadian Association
of Physicists

Association canadienne
des physiciens et physiciennes

Contribution ID: 399

Type: **Plenary Speaker / Conférencier(ère) plénier(ère)**

“Two-Eyed Seeing”: Dynamical evolution across galactic scales and the future of big science

Monday 9 June 2025 09:00 (45 minutes)

“Two-eyed seeing” was coined by Albert Marshall, a Mi’kmaq elder, to describe the depth of perspective gained when perceiving the world through both an Indigenous and Western lens. Using this framework, I will describe my approach to science, which focuses on emergent behavior in disk galaxies as a driver of evolution. Dynamical resonances are essential to the evolution of disk galaxies. These resonances arise in the presence of massive structures, like a bar, spiral arms and satellites, and they reshape a galaxy as they diffuse, shepherd and rearrange orbits and stellar populations. This talk will highlight a collection of methods that together enable us to connect orbital dynamics to morphological evolution. The end of this talk will touch on the status of the next generation gravitational wave observatory in the US, Cosmic Explorer. In particular, how our approach to site selection embodies two-eyed seeing and why our approach is critically important to the future of big science.

Keyword-1

Keyword-2

Keyword-3

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Session Classification: M-PLN1 Plenary Session | Session plénière - Kathrynne Daniel, U. of Arizona

Track Classification: Herzberg Public and Plenary Talks / Conférenciers des sessions Herzberg et plénières