

The dance of celestial bodies: Embodied astronomy learning

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Explaining the dynamics of a binary star system can be a tricky task, especially for students that may not be confident in using the disciplinary discourse of physics and astronomy. In this talk, we examine video data of a pair of physics students, showing how they successfully reason about binary star motion without the terminology of Newtonian mechanics, but rather by recruiting their bodily intuition in an informal partnered dance. Our analysis of this case study reveals how, when given the space to do so, science students such as these can (an do) spontaneously coordinate a variety of non-disciplinary communicational resources (e.g., talk, gesture, body position, haptic-touch) to enact analogies that can be powerful for the learning of physics and astronomy.

Author: EULER, Elias (Lund University)

Co-authors: Mr RÅDAHL, Elmer (Dragonskolan); Dr GREGORCIC, Bor (Uppsala University)

Presenter: EULER, Elias (Lund University)

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