GIREP-EPEC
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GIREP-EPEC conference 2023
*Physics learning promoting culture
and addressing societal issues*

Contribution ID: **210**   Type: **Invited talk**

Use of quantitative methods in Physics Education Research: searching for new perspectives to inform theory and practice

Thursday 6 July 2023 09:30 (1 hour)

Starting November 2022, Physical Review Physics Education Research, the flagship journal in physics education research community, has announced the establishment of a Statistical Modeling Review Committee to assess the quality of statistical modeling techniques in submitted papers. The establishment of this committee reflects the increasing number of submissions that exploit techniques such as structural equation modeling, linear regression and Rasch analysis. While the declared aim of this committee is to relieve the reviewers' burden to delve into technical details of papers, it also clearly signals that the physics education research community is increasingly acknowledging the need to support its claims through suitable quantitative methods, going beyond the old-fashioned motto Education is not Measurement. In the first part of this talk, I will briefly review the main statistical techniques used nowadays in physics education research and call for a better interaction with the statistical and educational psychology communities. Lack of such an integration, I will argue, is the main impediment to finding consensus about the obtained results even within the physics education research community itself. In the second part of the talk, I will try to envisage possible new research avenues for physics education research building on the possibilities offered by advanced statistical methods.

How would you like to present your contribution?

Live in Košice (time slot to be allotted based on the programme)

Target education level (primary)

Upper-secondary education

Target education level (secondary, optional)

University education

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