



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

Contribution ID: 208

Type: **Invited talk**

Physics Teacher Professional Learning: innovative models for promoting culture and addressing societal issues

Monday 3 July 2023 10:00 (1 hour)

Two of the major challenges facing physics education internationally is the shortage of qualified physics teachers and an increased focus on the use of integrated STEM learning experiences at primary and second level. Firstly, this talk discusses the design and influence of a professional learning programme to upskill second-level teachers of mathematics, chemistry, biology to become qualified as physics teachers. The programme design includes principles that are fundamental to effective physics teacher education, i.e., strong physics knowledge is essential for good teaching, and teachers carrying out a practitioner inquiry (PI) on their own practice as part of a professional learning community (PLC) will enhance their content knowledge for teaching physics. Secondly, this talk shares the experiences and influences of a STEM Teacher Internship (STInt) programme that has provided paid summer placements for over 250 pre-service and novice in-service STEM teachers across 60 host organizations across Ireland. The influence on teachers' personal and professional learning, awareness of equity and societal issues, use of 'real world' contexts and integrated STEM learning approaches, inspired by their own immersive learning experiences in industry, is discussed. This talk shares recommendations for the design and implementation of immersive and collaborative learning experiences for enhancing physics teacher professional learning and influencing classroom practice.

How would you like to present your contribution?

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

Target education level (primary)

Pre-service teacher education

Target education level (secondary, optional)

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Session Classification: Plenary talk