Karpacz Winter Kindergarten of Theoretical Physics



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Presentation "Introductions to generalised symmetries"

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Abstract: "Throughout history of physics, symmetry was arguably the most important idea in the description of nature. Especially fruitful was 20th century, when by combining it with Quantum Field Theory physicists managed to create the most accurate scientific theory in history, the Standard Model of particle physics. Beyond that, symmetry has been used as a guide to create better phenomenological description of studied systems in condensed matter physics and high energy physcis. However, in recent years, a new understanding of symmetries emerged, which leads to reinterpretation of some of the previously known theory as well as creation of new tools in theoretical physics. These generalized symmetries find themselves at the forefront of contemporary research in Quantum Field Theory that incorporates ideas from mathematics, high energy physics as well as condensed matter. This talk will provide merely an introduction to the topic of generalized symmetries and hopefully spark an interest in this exciting area of research."

Presenter: KALINOWSKI, Stanisław (University of Warsaw)

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