

# Hadron Physics for Precision Tests of the Standard Model



**Monday, 1 June 2020 - Wednesday, 3 June 2020**

**Jagiellonian Center of Innovation Sp. z o.o. (LTD)**

## Scientific Programme

### Precision Tests of the Standard Model [PrecisionSM (STRONG2020)]

Precision experiments at low energy, often called the Intensity Frontier of the Standard Model, entail measuring parameters of SM with high precision thereby constraining the contributions of yet unknown non-standard interactions and particles. While collider searches are best suited to look for heavy new particles, low-energy tests are sensitive to the full range of new physics. Some experimental programs that define the context of this proposal are: precise determination of the muon anomalous magnetic moment  $(g-2)_\mu$ ; extraction of the CKM matrix element  $V_{ud}$  from beta decay; the weak mixing angle from parity-violating electron scattering (PVES). The new physics reach of these tests of SM is directly related to their precision which consists of the proper accuracy of the experiment, and that of theoretical calculations of radiative corrections (RC). In all processes the precision requires accounting for the effects of the structure of hadrons in the kinematical regime where QCD is non-perturbative.

## Strange and Charm Baryons

Strange and charmed baryon polarization and CP tests. This track is a follow-up to the *Workshop on form factor, polarization and CP violation in quantum-correlated hyperon-anti-hyperon production* Fudan 6-8 July <https://indico.ihep.ac.cn/event/9834/>

### Program committee:

Hai-Bo Li (chair)  
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## Precision hadron physics

Meeting of PrecisionSM network

Program committee

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