

**Adam Mickiewicz University**  
**Faculty of Mathematics and Computer Science**

GEOMETRY AND TOPOLOGY SEMINAR

1:45 PM, Wednesday, April 24, 2019  
B1-37, Collegium Mathematicum

**Speaker:** Wojciech Dybalski (Technische Universität München)

**Title:** Compton scattering in algebraic Quantum Field Theory

**Abstract:**

We consider Quantum Electrodynamics from the point of view of algebraic QFT. For a class of electrically charged representations of the algebra of observables, defined by Buchholz and Roberts, we construct scattering states describing one electron and photons. The main technical problem consists in showing that the single-electron states are vacua of the asymptotic photon fields. This is achieved by the mean ergodic theorem applied in a certain extended Hilbert space. (Joint work with Sabina Alazzawi).