

# Systematic Uncertainties in Simulations of Strong-Field QED

T G BLACKBURN<sup>1</sup>

<sup>1</sup>*Department of Physics, University of Gothenburg, Gothenburg, Sweden*  
Contact Email: [tom.blackburn@physics.gu.se](mailto:tom.blackburn@physics.gu.se)

Encouraging progress is being made in probing the strong-field QED regime, using high-intensity lasers in combination with wakefield- or conventionally accelerated electron beams. Due to the complexity of the interactions, comparisons between experimental data and theory predictions are usually made with the help of numerical simulations. This makes it important to know what systematic uncertainties are inherent in these simulations, given that they are built on a hierarchy of approximations to the underlying theory. In this talk I will discuss recent progress towards simulation tools that can provide a quantitative uncertainty bound on the predictions that they make.