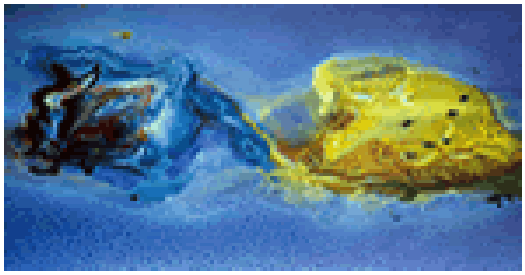

Contribution ID: **204** Type: **Invited plenary talk**

Bayesian techniques and applications to QCD

Wednesday, 1 August 2018 11:00 (30 minutes)

Connecting experimental measurements, numerical simulations and microscopic theory to form a genuine understanding of nuclear matter in extreme conditions requires robust statistical tools. In this talk I will discuss Bayesian techniques, which allow the practitioner to make explicit her prior knowledge, as well as uncertainty, in a well controlled manner. As examples for application of Bayesian techniques in the realm of the strong interactions I will discuss the extraction of spectral functions from lattice QCD [1,2] and the recent estimates of transport properties from hydrodynamic modeling [3].

[1] M. Jarrell, J.E. Gubernatis Phys. Rep. 269 (1996) 133
[2] Y. Burnier, A.R., PRL 111 (2013) 182003
[3] J.E. Bernhard et.al. PRC94 (2016) 024907

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