

## 12th Iberian Gravitational Waves Meeting



Contribution ID: 12

Type: **Contributed Talk (20 minutes)**

# Probing primordial non-Gaussianities with anisotropies of the SGWB

*Wednesday 8 June 2022 16:45 (20 minutes)*

Primordial non-Gaussianities of the scalar(tensor)-tensor-tensor type supporting a non-trivial squeezed component are known to induce anisotropies in the stochastic gravitational wave background. I will explain how to compute such anisotropies by making use of the in-in formalism for cosmological correlation functions. After illustrating the general method and explaining why the minimal single-field slow-roll scenario cannot lead to observable anisotropies, I will apply it to two interesting multifield models of inflation. First, I will make contact with previous results on anisotropies due to the presence of an extra spin-2 field during inflation. Secondly, I will show how to calculate the 1-loop scalar-tensor-tensor three-point function in the context of so-called supersolid inflation. The corresponding gravitational wave anisotropy is induced atop a gravitational signal that may be sufficiently large for detection.

Based on <https://arxiv.org/pdf/2203.17192.pdf>

### Which topic best fits your talk?

GW Theory and Fundamental Physics

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