

10th International Conference on Gravitation and Cosmology: New  
Horizons and Singularities in Gravity (ICGC 2023)



Contribution ID: 349

Type: **not specified**

## Gravitational Wave Paleontology: a new frontier to probe massive stars through cosmic history

*Friday 8 December 2023 09:30 (45 minutes)*

In this talk I will discuss the challenges and prospects of Gravitational-wave Paleontology: studying massive stars from their ‘remnants’ as compact object coalescences, with the goal to answer the key questions in gravitational-wave astronomy today: What can we learn from these gravitational-wave sources about the formation, lives, and explosive deaths of massive stars across cosmic time? How do we unravel the gravitational-wave formation channels? I will discuss open challenges in gravitational waves including the “Uncertainty Challenge” and give an overview of current efforts in the field to overcome this.

**Presenter:** BROEKGAARDEN, Floor (Simons Foundation | Columbia | Johns Hopkins)

**Session Classification:** Plenary