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## **[2] The first image of a black hole**

*Tuesday 31 August 2021 10:50 (40 minutes)*

I will discuss how the first image of a black hole was obtained by the Event Horizon Telescope-EHT collaboration. In particular, I will describe the theoretical aspects that have allowed us to model the dynamics of the plasma accreting onto the black hole and how such dynamics was used to generate synthetic black-hole images. I will also illustrate how the comparison between the theoretical images and the observations has allowed us to deduce the presence of a black hole in M87 and to extract information about its properties. Finally, I will outline the lessons we have learned about strong-field gravity and alternatives to black holes.

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