

Useful references

Note: these are papers and books which were useful for preparing the lectures or that I've worked with closely. Not a comprehensive list!

- Gravitational waves
 - Carroll, S. M. textbook, Spacetime and geometry. Cambridge University Press. (2019).
 - S. Weinberg textbook, Gravitation and Cosmology: Principles and Applications of the General Theory of Relativity, New York, USA: Wiley (1972) 657 p
 - Shane Larson notes on GWs:
www.physics.usu.edu/Wheeler/GenRel2013/Notes/GravitationalWaves.pdf
- Gravitational wave detectors
 - Saulson, Peter R. Fundamentals of interferometric gravitational wave detectors. 1994.
 - LIGO website, www.ligo.caltech.edu, including their beautiful gallery of images and simulations.
 - Peter Saulson lectures on GW detection at the Les Houches summer school 2018
 - Miquel Nofrarias lectures at the 2nd Institute of Space Sciences Summer School: Gravitational Wave Astronomy
 - Gravitational wave detection: Principles and practice, Peter R. Saulson ligo website
- Pulsar timing and ultralight dark matter
 - Gravitational wave research using pulsar timing arrays, Hobbs, Dai, arXiv:1707.01615
 - Review of Pulsar Timing Array for Gravitational Wave Research, Dahal, arXiv:2002.01954
 - Pulsar timing signal from ultralight scalar dark matter, Khmelnitsky and Rubakov JCAP02(2014)019, arXiv: 1309.5888
 - Parkes Pulsar Timing Array constraints on ultralight scalar-field dark matter, Nataliya K. Porayko et al (PPTA collaboration), Physical Review D 98.10 (2018): 102002, arXiv:1810.03227
- Kerr black holes
 - Carroll, S. M. textbook, Spacetime and geometry. Cambridge University Press. (2019).
 - The Kerr spacetime: A brief introduction, Matt Visser, arxiv:0706.0622
- ‘General’ Superradiance
 - Zeldovich, Rozhanskii, Starobinskii, Rotating Bodies and Electrodynamics in a Rotating Coordinate System, 1984
 - The Many faces of superradiance - Bekenstein, Jacob D. et al. Phys.Rev. D58 (1998) 064014 gr-qc/9803033
 - Amplification of waves from a rotating body, Cromb, M., Gibson, G.M., Toninelli, E. et al. Nat. Phys. (2020). <https://doi.org/10.1038/s41567-020-0944-3>. arxiv:2005.03760

- Black Hole Superradiance
 - Y. B. ZelDovich. 1971. Soviet Journal of Experimental and Theoretical Physics Letters, 14, 180.
 - Amplification of waves reflected from a rotating "black hole". - Starobinsky, A.A. Sov.Phys.JETP 37 (1973) no.1, 28-32
 - Perturbations of a rotating black hole. I- III Teukolsky, S.A. et al. Astrophys.J. 193 (1974) 443-461
 - Extraction of energy and charge from a black hole - Bekenstein, J.D. Phys.Rev. D7 (1973) 949-953
 - Floating Orbits, Superradiant Scattering and the Black-hole Bomb - Press, William H. et al. Nature 238 (1972) 211-212
 - Klein-gordon Equation And Rotating Black Holes - Detweiler, Steven L. Phys.Rev. D22 (1980) 2323-2326
 - Instability of the massive Klein-Gordon field on the Kerr spacetime - Dolan, Sam R. Phys.Rev. D76 (2007) 084001 arXiv:0705.2880
 - Superradiance: Energy Extraction, Black-Hole Bombs and Implications for Astrophysics and Particle Physics, Brito, Cardoso, Pani. Lect.Notes Phys. 906 (2015) pp.1-237 . arXiv: 1501.06570
- Superradiance for new physics searches
 - String Axiverse - Arvanitaki, Dimopoulos, Dubovsky, Kaloper, March-Russell, Phys.Rev. D81 (2010) 123530 arXiv:0905.4720
 - Exploring the String Axiverse with Precision Black Hole Physics - Arvanitaki, Dubovsky, Phys.Rev. D83 (2011) 044026 arXiv:1004.3558
 - Discovering the QCD Axion with Black Holes and Gravitational Waves - Arvanitaki, Baryakhtar, Huang, Phys.Rev. D91 (2015) no.8, 084011 arXiv:1411.2263
 - Black Hole Superradiance Signatures of Ultralight Vectors - Baryakhtar, Lasenby, Teo, Phys.Rev. D96 (2017) no.3, 035019 arXiv:1704.05081
 - Superradiant instability of massive vector fields around spinning black holes in the relativistic regime - East, William E. Phys.Rev. D96 (2017) no.2, 024004 arXiv:1705.01544.
 - Gravitational wave searches for ultralight bosons with LIGO and LISA, Brito, Ghosh, Barausse, Berti, Cardoso, Dvorkin, Klein, Pani. Phys. Rev. D 96, 064050(2017), arXiv:1706.06311
 - Probing ultralight bosons with binary black holes, Baumann, Chia, Porto, Phys. Rev. D 99, 044001 (2019), arXiv:1804.03208