

Panel : Scientific objectives of different GW projects, the R&D needed, difficulties and opportunities

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- \* What are the challenges in achieving the main scientific goals in the coming years?
- \* What lessons have been learned and what mistakes should be avoided when transitioning from the present generation to building the next upgrades or next generation of detectors?
- \* What challenges are involved in scaling up the detectors to the next generation (both from engineering and organizational point of view), and how these challenges can be effectively addressed?
- \* How an international collaboration and coordination can play a role in the development and operation of next-generation gravitational-wave detectors?
- \* In addition to detecting gravitational waves, what other scientific objectives (i.e. quantum mechanics, geophysics) or research fields can be explored or used with the next-generation detectors (i.e. machine learning, AI in general)?