

# Gravitational Waves Over the Next 40 Years

## Advanced detectors

- What do we expect to see at design sensitivity?
- What do we get from addition of LIGO India and Kagra?

## 3G detectors

- Why do we need bigger detectors?
- Proposed detector designs
  - Cosmic Explorer
  - Einstein Telescope

## Laser Interferometer Space Antenna

- Why does LISA see different sources than LIGO?
- The success of LISA pathfinder
- Planned mission: opportunities and challenges

## Pulsar Timing Arrays

- What types of sources will PTAs see?

## Suggested Reading

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|------------------------|---|
| • Cosmic Explorer      | <a href="https://cosmicexplorer.org">https://cosmicexplorer.org</a> |
| • Einstein Telescope   | <a href="http://www.et-gw.eu/">http://www.et-gw.eu/</a>             |
| • LISA                 | <a href="https://lisa.nasa.gov">https://lisa.nasa.gov</a>           |
| • Pulsar Timing Arrays | <a href="http://nanograv.org">http://nanograv.org</a>               |