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Abstract for an Invited Paper for the APR12 Meeting of the American Physical Society

Numerical Relativity and Black Hole Binaries: The historical path to present simulations PABLO LAGUNA, Georgia Institute of Technology

The numerical relativity landscape at the turn of the century reached a unique transformative moment. A time with the ripe conditions to solve one of the grand challenges in computational physics: the two-body problem in general relativity. The computational modeling of two black holes as they coalesce is a formidable undertaking, requiring the most powerful hardware, innovative algorithms and creativity. This talk provides a historical perspective of the developments that led to the current success we enjoy of binary black hole simulations as genuine tools of discovery in the new astronomy of gravitational waves.