

## **Naked Singularities for the Einstein Vacuum Equations: The Exterior Solution**

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We will start by recalling the weak cosmic censorship conjecture. Then we will review Christodoulou's construction of naked singularities for the spherically symmetric Einstein-scalar field system. Finally, we will discuss joint work with Igor Rodnianski which constructs spacetimes corresponding to the exterior region of a naked singularity for the Einstein vacuum equations

Future Prospects for NR in Gravitational Wave Astronomy Shoemaker, Deirdre University of Texas at Austin For decades, both the gravitational wave and numerical relativity communities have worked to prepare for the era of gravitational wave astronomy. With the first observations of two black holes merging, the new era of gravitational wave astronomy has begun. I will present the role that numerical relativity played in the unveiling of the gravitational wave sky and anticipate how it might improve our understanding of the role strong gravity plays in the universe as the detectors improve.