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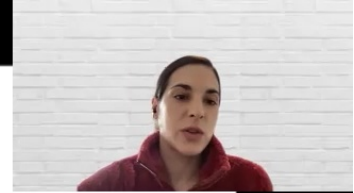
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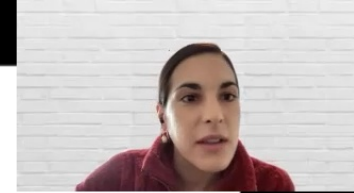
Date: October 29, 2021 - 12:10 PM

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BIO

- PhD 2013-2017 - Utrecht University
- POSTDOC 2017-2018 - The University of Southampton
- POSTDOC 2018-2021 - ICTP, Trieste





Research Areas

- Holography
- 2-dim String Theory/ Matrix Quantum Mechanics
- Quantum Gravity



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Research Areas

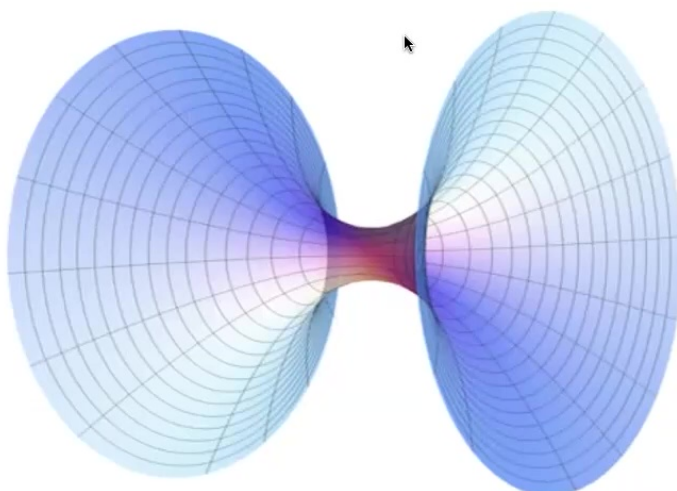
Euclidean Wormholes

MQM and 2-dim string theory

Euclidean Wormholes

In holography

- Understand holography in the presence of multiple boundaries
- Entanglement versus soft interactions
- What is the role of wormholes in the QG path-integral
- Stability of such solutions
- Microscopic Models



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Research Areas

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Euclidean Wormholes in Holography

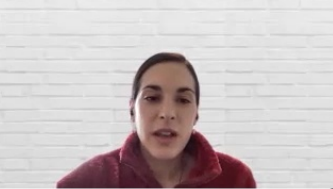
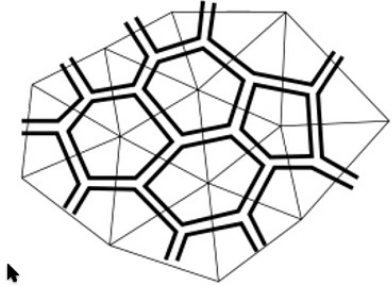
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MQM and 2-dim string theory

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MQM and 2-dim string theory

- Powerful duality, allows for construction of many interesting microscopic models
- Advantage: one can perform analytic computations
- Disadvantage: toy models in 2-dimensions
- Try to understand black holes, wormholes as well as cosmologies in this context



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- PhD 2019-2021 - Leeds University
- PostDoc 2021-2023 - The University of Southampton
- PostDoc 2019-2021 - ICTP, Trieste

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Research Areas

- Holography
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- Quantum Gravity

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Euclidean Wormholes in Holography

- Understanding holography in the presence of Euclidean wormholes
- Entanglement versus soft disconnected
- Matter in the bulk of wormholes in the AdS path integral
- Holographic models
- Holographic Models

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MOM and 2-dim string theory

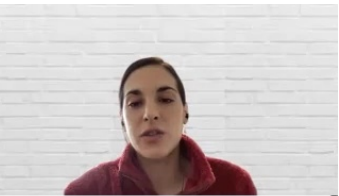
- Powerful duality allows for computation of black hole entropy, microstate counting
- Holography, area-conjecture, analytic continuation
- Black hole entropy, 2-dim string theory
- The role of microstate counting, asymptotic symmetries in the context

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Information in QG How gravity localizes information

- In quantum gravity, constraints, they are stronger than those in gauge theories
- Allow for detection of excitations in the centre of space time, from the boundary
- Leading to storage of information close to the boundary of space time
- Nature of quantum gravity is holographic
- Implication for resolution to the information paradox for black holes

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Information in QG

How gravity localizes information

- Exploit gravitational constraints, they are stronger than those in gauge theories
- Allow for detection of excitations in the centre of space time, from the boundary
- Leading to storage of information close to the boundary of space time
- Nature of quantum gravity is holographic
- Implication for resolution to the information paradox for black holes

