

# 1<sup>st</sup> Workshop on Gravity and Black Holes

**October 21-22, 2019**  
**IF-BUAP, Puebla, Mexico**

## Invited Plenary Talks

- **David Hughes (INAOE)**  
*Black hole shadows and the Large Millimeter Telescope*
- **Ulises Nucamendi Gómez (UMSNH)**  
*Mass and spin of Kerr black holes from observations: Newton vs Einstein*
- **Olivier Sarbach (UMSNH)**  
*Simple accretion models on Kerr black holes with a perfect fluid or a kinetic gas configuration*
- **Eloy Ayón Beato (CINVESTAV)**  
*The role of symmetries in the Kerr-Schild derivation of the Kerr black hole*
- **Daniel Fernando Higuera Borja (IPN)**  
*Towards new perspectives on Kerr's theorem*
- **Omar López Cruz (INAOE)**  
*How big can black holes be? Is there a limit?*
- **Ana Aurelia Avilez López (BUAP)**  
*On the possibility for scalar dark matter halos to form and host super-massive black holes*

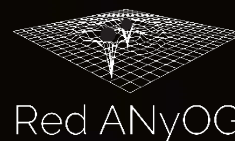
## Organizing Committee

- Roberto Cartas Fuentesvilla
- Alberto Escalante Hernández
- Alfredo Herrera Aguilar

## Venue: IFUAP Auditorium

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**More Info:** [www.ifuap.buap.mx/eventos/2019/Poster\\_workshop\\_GBH19.pdf](http://www.ifuap.buap.mx/eventos/2019/Poster_workshop_GBH19.pdf)



# 1er Taller de Gravitación y Agujeros Negros

21-22 de octubre de 2019, IF-BUAP, Puebla, México

## PROGRAMA

Lunes 21 de octubre

**Moderador: Alfredo Herrera Aguilar**

9:00-9:10 Palabras de bienvenida e inauguración a cargo de la Dra. María Eugenia Mendoza Álvarez, Directora del IFUAP y del Dr. Alfredo Herrera Aguilar por el Comité Organizador.

9:10-10:25 Plática plenaria # 1

**David Hughes (INAOE)**

*Black hole shadows and the Large Millimeter Telescope*

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**10:25-10:40**      **Café**

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10:40-11:55 Plática plenaria # 2

**Ulises Nucamendi Gómez (UMSNH)**

*Mass and spin of Kerr black holes from observations: Newton vs Einstein*

11:55-13:10 Plática plenaria # 3

**Olivier Sarbach (UMSNH)**

*Simple accretion models on Kerr black holes with a perfect fluid  
or a kinetic gas configuration*

13:10-13:35 Plática corta # 1

**Carlos Gabarrete Fajardo (UMSNH)**

*Kinetic gas configurations surrounding spherical compact objects*

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**13:35-16:30**      **Receso**

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**Moderador:**      **Roberto Cartas Fuentesvilla**

16:30-17:45      Plática plenaria # 4

**Ana Aurelia Avilez López (BUAP)**

*On the possibility for scalar dark matter halos to form and host  
supermassive black holes*

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**17:45-18:00**      **Café**

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18:00-18:25      Plática corta # 2

**Alexis Tepale Luna (UNAM)**

*Hyperscaling Violating Geometries in Scalar-Tensor theories of gravity*

18:25-18:50      Plática corta # 3

**Misael Mirón Monterrosas (BUAP)**

*Hyperscaling Violating Geometries in Einstein-Maxwell-dilaton theory*

18:50-19:15      Plática corta # 4

**Jhony Ariel Herrera Mendoza (BUAP)**

*Black holes and Hyperscaling Violating Geometries in string theory*

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**Martes 22 de octubre**

**Moderador: Alberto Escalante Hernández**

9:00-10:15 Plática plenaria # 5

**Eloy Ayón-Beato (CINVESTAV)**

*The role of symmetries in the Kerr-Schild derivation of the Kerr black hole*

10:15-11:30 Plática plenaria # 6

**Daniel Fernando Higuera Borja (IPN)**

*Towards new perspectives on Kerr's Theorem*

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**11:30-11:45 Café**

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11:45-12:10 Plática corta # 5

**Amaury Misael Durán González (BUAP)**

*On the Killing symmetries of Lifshitz spaces*

12:10 -13:25 Plática plenaria # 7

**Omar López Cruz (INAOE)**

*How big can black holes be? Is there a limit?*

13:25-13:50 Plática corta # 6

**Raúl Antonio Lizardo Castro (UNAM)**

*Estimación estadística de la masa de un agujero negro de Kerr*

13:50-14:00 Clausura a cargo de los miembros del Comité Organizador:

**Roberto Cartas Fuentevilla  
Alberto Escalante Hernández  
Alfredo Herrera Aguilar**