



HIGH ENERGY PHYSICS AND COSMOLOGY AT NORDITA

RONNIE RODGERS



NORDITA



Konstantin Zarembo



Paolo di Vecchia

Professors



Witse Sybesma



Ziqi Yan

**Assistant Professors/
Senior Researchers**



Victor Mishnyakov



Ronnie Rodgers

**Fellows/
Postdocs**

HEP

NON-LORENTZIAN
PHYSICS

HOLOGRAPHY

BLACK HOLE
INFORMATION

QUANTUM FIELD
THEORY

STRING THEORY

SCATTERING
AMPLITUDES

QUANTUM GRAVITY

NON-LORENTZIAN
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Kostya



Witse



Ziqi



Kostya



Victor



Paolo



Guilherme
Franzmann
(joint with
philosophy)

HEP

Niels Obers
(NBI, Copenhagen)



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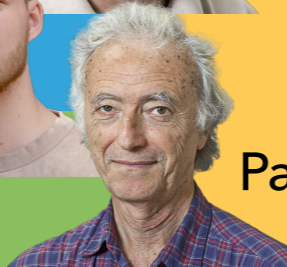
Kostya

STRING THEORY

Victor



Paolo



SCATTERING
AMPLITUDES



Guilherme
Franzmann
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QUANTUM GRAVITY

HEP

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SCATTERING
AMPLITUDES

(Uppsala)



Guilherme
Franzmann
(joint with
philosophy)

QUANTUM GRAVITY

Henrik Johansson



Ingrid Vazquez-Holm



COSMOLOGY



Assistant Professor

Florian Niedermann

Postdocs/fellows:



Aleksandr Chatrchyan



Judit Prat Martí



Oksana Iarygina

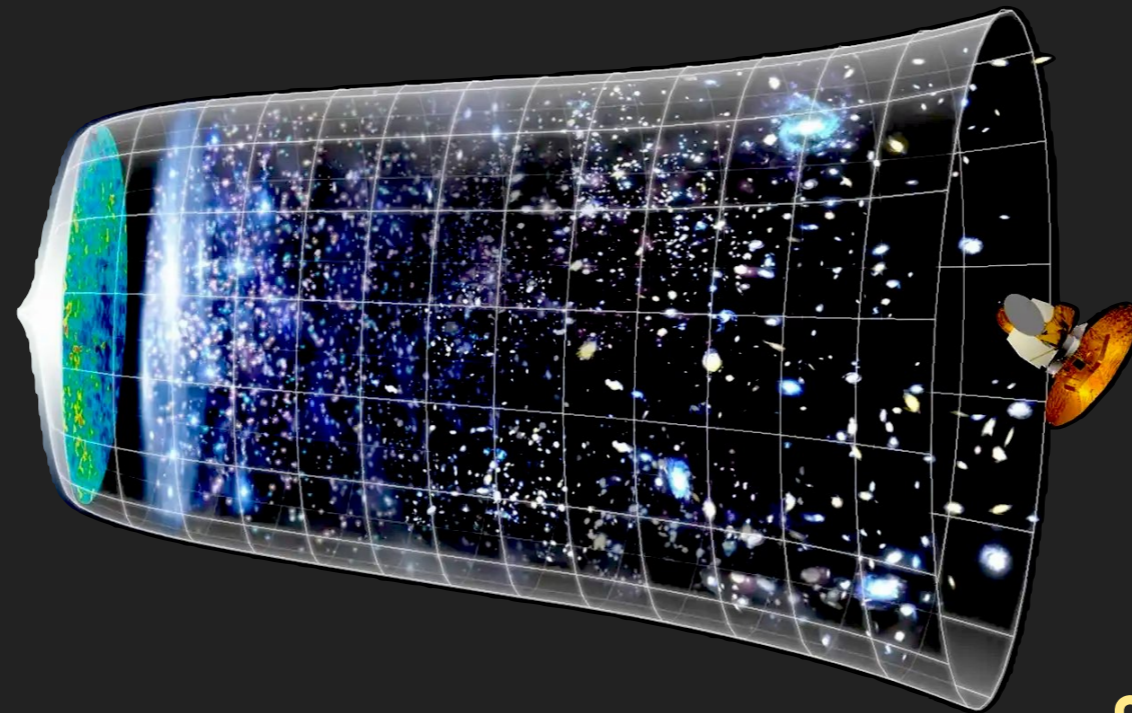
Early Universe:

Late Universe:

**Inflation,
reheating**

**Dark energy,
Hubble tension**

Gravitational waves



**Cosmological constant
problem**

**Phase transitions,
non-equilibrium physics,
axions**

Observational cosmology:

galaxy surveys,

large scale structure,

Alternative gravity

weak lensing

Early Universe:

Late Universe:

**Inflation,
reheating**



Oksana



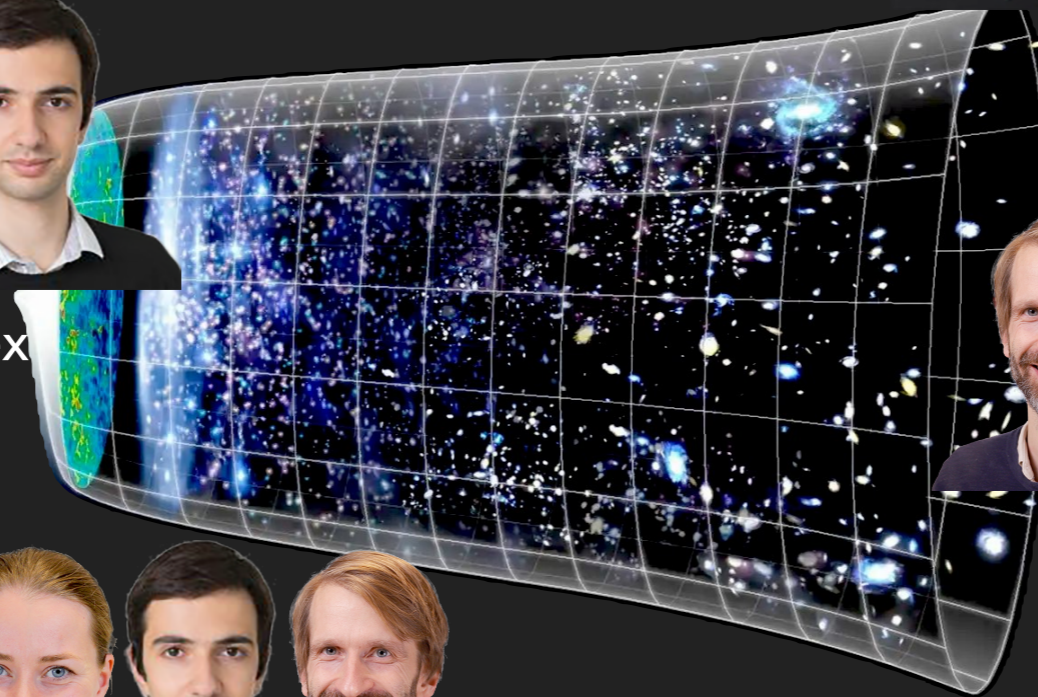
Alex + Florian

**Dark energy,
Hubble tension**

Gravitational waves



Oksana + Alex



Florian

**Cosmological constant
problem**

Phase transitions,

non-equilibrium physics,

axions



Oksana + Alex + Florian

Observational cosmology:

galaxy surveys,

large scale structure,

Alternative gravity



Florian



Judit

weak lensing

HEP - COSMOLOGY

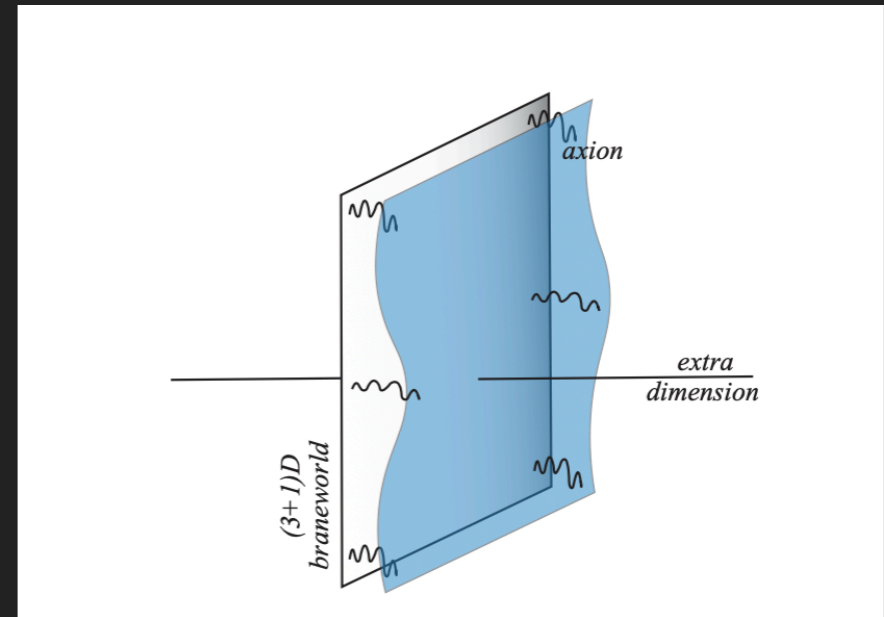
Braneworld models in cosmology



Florian Niedermann



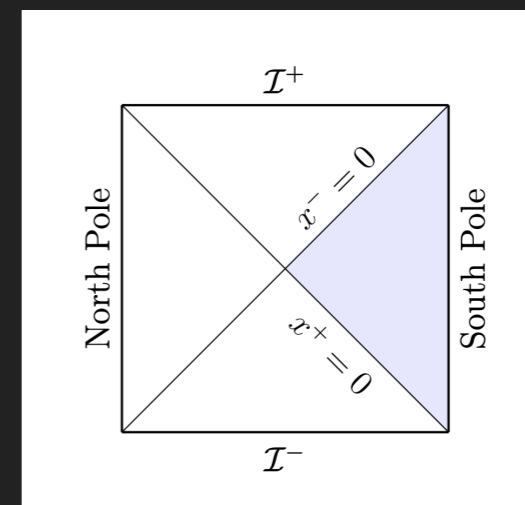
Ziqi Yan



Quantum information in de Sitter



Witse Sybesma



EVENTS AT NORDITA – PAST AND FUTURE

Nordic Network Meeting on Strings, Fields, and Branes

29 - 31 Oct 2024

Operator Algebras in HEP

30 Sep - 4 Oct 2024

Program on Quantum Gravity

29 Jul - 23 Aug 2024

Winter School in Particle Physics and Cosmology

15-26 Jan 2024

Axions in Stockholm 2025

23 - 11 Jun 2025

Numerical simulations of early Universe sources of gravitational waves

28 Jul - 15 Aug 2025

Eurostrings 2025

25 - 28 Aug 2025

Integrability, Dualities and Deformations

8 - 19 Sep 2025

GET IN TOUCH!

- ▶ ronnie.rodgers@su.se
- ▶ Find us:
 - ▶ Nordita website
 - ▶ Google: inspire + "name"
- ▶ Attend events:
 - ▶ Scientifika
 - ▶ Group meeting
 - ▶ HEP seminars
 - ▶ Theoretical cosmology meeting - Alex & Oksana
 - ▶ Observational cosmology meeting - Judit