Conducător de doctorat: Prof. dr. Ladislau NAGY

Nr. locuri la doctorat: **2**

Loc 1/2 - bugetat cu bursă *(sesiunea iulie)*

Comisia de admitere:

Prof. Ladislau Nagy

Prof. Vasile Chiș

Prof. Zoltán Bálint

Tematica pentru examen

1. Fundamentals of Riemann geometry.

2. The Einstein-Hilbert variational principle.

3. Vacuum solutions of the gravitational field equations.

4. f(R) type modified gravity theories.

5. The Friedmann equations in standard general relativity, and their cosmological implications.

6. The Raychaudhury equation, and the singularity theorems.

7. Inflationary cosmological models, reheating, and Big Bang Nucleosynthesis.

References:

L. Landau and E. Lifshitz, The classical theory of fields, Butterworth Heinemann, 2004

R. Wald, General relativity, Chicago University Press, 1982

S. M. Carrol, Spacetime and geometry, Cambridge University Press, Cambridge, 2019

S. Dodelsen and F. Schmidt, Modern Cosmology, Elsevier Science Publishing Company, 2020

Tematica pentru interviu

1. Temele cercetare studiate de către candidat, rezultate obținute
2. Probleme de cercetare propuse în cadrul studiilor doctorale

Data, ora și locul examenului:

22 iulie 2024, ora 11.00, sala Farkas Gyula

Loc 2/2 - cetăţeni non-UE, bursieri ai statului român *(sesiunea septembrie)*

Comisia de admitere:

Prof. Ladislau Nagy

Prof. Vasile Chiș

Prof. Zoltán Bálint

Tematica pentru examen

1. Fundamentals of Riemann geometry.

2. The Einstein-Hilbert variational principle.

3. Vacuum solutions of the gravitational field equations.

4. f(R) type modified gravity theories.

5. The Friedmann equations in standard general relativity, and their cosmological implications.

6. The Raychaudhury equation, and the singularity theorems.

7. Inflationary cosmological models, reheating, and Big Bang Nucleosynthesis.

References:

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S. Dodelsen and F. Schmidt, Modern Cosmology, Elsevier Science Publishing Company, 2020

Tematica pentru interviu

1. Temele de cercetare studiate de către candidat, rezultate obținute

2. Probleme de cercetare propuse în cadrul studiilor doctorale

Data, ora şi locul examenului:

12 septembrie 2024, ora 11.00, sala Farkas Gyula