UNIVERSITATEA DIN CRAIOVA   Se aprobă   Avizat,
FACULTATEA DE ȘTIINȚE   Decan,   Director departament,
DEPARTAMENTUL DE FIZICĂ   Conf. dr. C. TIGAE   Lect.dr. I. PETRIȘOR

TEME PENTRU LUCRĂRILE DE DISERTAȚIE, CICLUL DE STUDII UNIVERSITARE DE MASTERAT,
DOMENIUL FIZICĂ, SPECIALIZAREA THEORETICAL PHYSICS/FIZICĂ TEORETICĂ, PROMOȚIA 2022
DURATA STUDIILOR 2 ANI

Nr. crt.	Titlul temei	Cadru didactic îndrumător
1	Equivalence between the Lagrangian and the Hamiltonian BRST formalisms for spinor electrodynamics	Prof. dr. Constantin BIZDADEA
2	Gauge-invariant massive models with an Abelian gauge field and a set of scalar fields	
3	Einstein equations in classical mechanics	
4	Self-interacting massive scalar field theories	
5	Symmetries of the nonlinear dynamical systems	Prof. dr. Radu-Dan CONSTANTINESCU
6	From chaos to regular dynamics for the nonlinear systems	
7	Electromagnetic interactions in material media	
8	Classical theories on the magnetic materials	
9	Interactions of material media with various configurations of electric fields.	
10	Solitary waves through material media.	
11	Electromagnetic fields in the dipole approximation.	
12	Thermoelectric effects in material media	
13	LHC Experiments: an arXiv-based ATLAS overview	Prof. dr. Solange-Odile SALIU
14	LHC Experiments: an arXiv-based ALICEglobal view	
15	LHC Experiments: an arXiv-based CMS review	
16	LHC Experiments: an arXiv-based LHCb synthetic view	
17	The Robertson-Walker metric	Prof. dr. Eugen-Mihăiţă CIOROIANU
18	Friedman cosmological models	
19	Differential operators versus derivations	
20	Nachtman quantization method	
21	Lovelock gravity	
22	Gauge unfixing approach of the ideal fluid	Conf. dr. Silviu-Constantin

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DURATA STUDIILOR 2 ANI**

23	A first-class approach of the ideal fluid. BF method	SĂRARU
24	A note on the generalized quantum rigid rotor	
25	A note on the free particle system on toric geometry	
26	Hamilton-Jacobi equation for higher derivative theory	
27	Fluid Mechanics and the SPH Method	Lect. dr. Iulian PETRIȘOR
28	Fluid Dynamics and Turbulence	
29	Turbulent Flows	
30	Turbulence in Astrophysics and Geophysical Flows	
31	The dynamics of vorticity	