

**TEME PENTRU LUCRĂRILE DE DISERTAȚIE, CICLUL DE STUDII UNIVERSITARE DE MASTERAT,
DOMENIUL FIZICĂ, SPECIALIZAREA APPLIED PHYSICS/FIZICĂ APLICATA, PROMOȚIA 2025
DURATA STUDIILOR 2 ANI**

Nr. crt.	Titlul temei	Cadru didactic îndrumător
1	Variational theorems for a system of charged particles in electromagnetic field	Prof. dr. Radu-Dan CONSTANTINESCU
2	Electrostatic field in conductors. Applications in medical physics	
3	Electrostatic field in dielectrics. Applications in medical physics	
4	Langevin type models for paramagnetic and diamagnetic materials	
5	Thermoelectric effects and their application in physics	
6	AFM investigation of carbon nanotubes	Conf. dr. Gabriela-Eugenia IACOBESCU
7	Electrical properties of individual single-walled carbon nanotubes	
8	Transport phenomena in semiconductors	
9	Optical properties of semiconductors	
10	Semiconductor heterostructures	Conf. dr. Mariana OSIAC
11	Laser induced breakdown spectroscopy and applications	
12	Application of Tauc low	
13	Raman spectroscopy	
14	Temporal evolution of ions after laser pulse	Conf. dr. Silviu-Constantin SĂRARU
15	Temporal evolution of neutrals after laser pulse	
16	Interfacing a microcontroller with LabVIEW in order control stepper motors	
17	Microscope autofocus systems used in laser processing of materials	
18	Image reconstruction. Linogram method	Conf. dr. Iulian PETRIȘOR
19	Image reconstruction. Algebraic method	
20	Aspects of asymptotic diffusion in magnetic turbulence	
21	Plasma kinetic theory. Numerical simulations	
22	Ion transport in drift turbulence. Numerical simulations	

Temele de disertație au fost avizate în Ședința Consiliului Facultății de Științe din data de 12.06.2024

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23	Light propagation in tissues	Lect. dr. Ion PĂLĂRIE
24	Medical applications of the lasers	
25	A percolation model to evaluate the correlation length of dye – nematic liquid crystal interaction	
26	Dye doped nematic liquid crystal reorientation in a linear polarized laser field: threshold effect	
27	Time evolution of optical emission spectrum of a Hg-HID lamp exposed to X-ray	Lect. dr. Mihaela Tinca UDRIȘTIOIU
28	Radiotherapy techniques. Case study	
29	Brachytherapy. Case study	
30	Quality assurance procedures in radiotherapy	