

**DEPARTMENT OF PHYSICS, UTKAL UNIVERSITY**

**M.Sc. (Physics ) Project - 2016**

SlNo.	Roll No.	N A M E	TOPIC	Name of the Supervisor
1	12102V153001	AMIT KUMAR SAHOO	Thermal modeling of segmented primary mirror of an astronomical telescope	Prof. P. P. Singh (IIA, Bangalore) & Prof. G. Smith (Univ. of Arizona, USA)
2	12102V153002	ANIL KUMAR ROUT	Structural and optical characterization of AS <sub>40</sub> S <sub>60</sub> thin film	Dr. R. Naik
3	12102V153003	B. PRITIBANYA SUBHALAXMI	Measurement of mis-identification probability of tau-jet	Prof. A.K. Nayak (IOP, BBSR)
4	12102V153004	BIKASH KUMAR NAIK	ZnO nanoparticle synthesis and characterization	Dr. S. Mohanty (CIPET)
5	12102V153005	BURUMAJHI PADRA	Structure and optical properties of TiO <sub>2</sub> in nano particles	Mr. B. Kisan
6	12102V153006	DIPTI RANJAN PATTANAİK	Cosmic ray background rejection study to probe multi-Tev $\gamma$ -rays with GRAPES-3	Dr. P. K. Mohanty (TIFR, Mumbai)
7	12102V153007	GUPTESWAR SABAT	Application of Fourier transform	Prof. D.P. Mahapatra
8	12102V153008	HRUDAY RANJAN NAYAK	Structure and optical properties of doped ZnO in nano particles	Mr. B. Kisan
9	12102V153009	JAYASHREE LAKRA	Study o infectious disease models by study of malaria	Dr. J. Kumar
10	12102V153010	JITENDRA KUMAR SAHOO	Exchange bias in ferromagnetic/anti ferromagnetic hetero structures	Dr. S. Bedanta (NISER BBSR)
11	12102V153011	KARTIKESWAR MAJHI	Mass spectroscopy	Prof. D.P. Mahapatra
12	12102V153012	LOPAMUDRA SAHOO	Study of surface Plasmon polariton on insulator metal insulator structure	Dr. R. Das (NISER, BBSR)
13	12102V153013	MADHUSMITA PANDA	Study of squeezed states of light : Non-classical property of light	Dr. A. Mohapatra (NISER, BBSR)
14	12102V153014	MANAS RANJAN BEHERA	Study about GRAPES-3 experiment and analysis of MCA spectra with variation of pressure and voltage of PRCs.	Prof. Yoshio Hayashi (TIFR, Ooty)
15	12102V153015	MANORANJAN SETHI	Optical properties study of Sb <sub>10</sub> S <sub>40</sub> Se <sup>50</sup> thin film	Dr. R. Naik
16	12102V153016	NIMAI SWAIN	GRAPES-3 experiment and PULSE width spectrum analysis of muon detectors (PRCs)	Prof. Yoshio Hayashi (TIFR, Ooty)
17	12102V153017	PANKAJ KUMAR JENA	Solution of 1-D time independent Schrodinger equation for Harmonic Oscillator by Numerov's method	Dr. P.K. Panda
18	12102V153018	PRAGYANPRASU SWAIN	Coherent states and squeezed coherent states in quantum mechanics	Prof. H. Mishra (PRL, Ahmedabad)
19	12102V153019	PRIYABRAT KHATUA	Structural and optical properties of doped NiO in nano particle	Mr. B. Kisan
20	12102V153020	PUJASHREE PRIYADARSHINI SETHY	Gas sensors (Nickel oxide as gas sensor)	Prof. N.C. Mishra
21	12102V153021	RAHUL ROY	Synthesis, characterization and applications of AgInSe <sub>2</sub> and Ag <sub>2</sub> Se	Prof. N.C. Mishra
22	12102V153022	SASMITA TUDU	Dirac quantisation	Dr. S.S. Pal
23	12102V153023	SATYABAN SAHOO	Neutrino oscillation	Prof. S. Mahapatra
24	12102V153024	SHAKUNTALA MURMU	A basic introduction to gravitation, relativity and cosmology	Dr. P.K. Samal
25	12102V153025	SIPRASUBHADARSHINI JENA	Study of surface Plasmon or MIM (metal insulator metal) structure	Dr. R. Das (NISER, BBSR)
26	12102V153026	SK RAMJAN	Introduction to atomic clocks and various systematic shifts	Dr. B.K. Sahoo (PRL, Ahmedabad)
27	12102V153027	SOUMYA RANJAN MISHRA	Study of non-linear magneto optic rotation	Dr. A.K. Mohapatra (NISER BBSR)
28	12102V153028	SUBRAT PRADHAN	Synthesis and characterization of CdS nano-particle	Dr. S. Mahanty (CIPET)
29	12102V153029	SUNIL KUMAR BEHERA	Monte Carlo simulation and its application	Dr. P.K. Panda
30	12102V153030	SUNITA MARNDI	TPU/CNT nano composite for strain sensor application	Dr. S. Mohanty (CIPET)

**DEPARTMENT OF PHYSICS, UTKAL UNIVERSITY**  
**M.Sc. (Physics ) Project - 2017**

Sl No.	Roll No.	Name of the Students	TOPIC	Supervisor
1	12102V163001	AbhijitSahoo	Neutrino oscillation	Prof. SwapnaMahapatra
2	12102V163002	Anjali Majhi	Synthesis and characterization of MWCNT decorated with ZnO	Dr. SmitaMohanty (CIPET)
3	12102V163003	AshutoshSahoo	Penrose diagram for Anti-de Sitter spacetime	Dr. ShesansuSekhar Pal
4	12102V163004	Barnali Brahma	Evolution of linear perturbation in an expanding universe	Prof. NishikantaKhandai(NISER)
5	12102V163005	Bikash Kumar Das	Growth of ZnO thin film by pulse laser deposition technique	Prof. Satyaprakashsahoo (IOP)
6	12102V163006	BirendraChhotaray	Reconstruction of electron and muon at CMS	Dr. Aruna Kumar Nayak (IOP)
7	12102V163007	BiswaRanjanMohanty	Introduction to Cosmological Principle and CMB data analysis	Dr. Pramoda Kumar Samal
8	12102V163008	BiswajitBiswal	Correlated metals as transparent conductor	Prof. DebakantaSamal (IOP)
9	12102V163009	Biswajit Panda	Study of muon response of plastic scintillator detector at GRAPES-3 experiment	Dr. Pravata Kumar Mohanty (TIFR, Mumbai)
10	12102V163010	B SheetalPriyadarshini	Synthesis and characterization of MWCNT/ZnO film	Dr. SmitaMohanty (CIPET)
11	12102V163011	ChinmayaKar	Analysing Birefringence using Speckle	Dr. MaruthiManojBrundavanam (IIT Kharagpur)
12	12102V163012	ChoudhuryAbinashBhuyan	Synthesis and characterization of Ag/As <sub>2</sub> Se <sub>3</sub>	Dr. RamakantaNaik
13	12102V163013	GajendraHansdah	Structural, Optical and magnetic properties of Ca doped NiO	Mr. BhagabanKisan
14	12102V163014	GupteswarSamal	Introduction to cosmology with CMB anisotropy	Dr. Pramoda Kumar Samal
15	12102V163015	HarekrushnaBehera	Conformal diagram for flat spacetime	Dr. ShesansuSekhar Pal
16	12102V163016	KanhuCharan Swain	Graphene-The new future: synthesis, characterization & potential application.	Mr. BhagabanKisan
17	12102V163017	PrabhudattaBehera	Critical behavior studies in ferromagnetic compounds	Mr. BhagabanKisan
18	12102V163018	Pradeep Kumar Sahoo	Investigation of structural electric and magnetic properties of NEODYMIUM doped cobalt ferrite nano particles	Prof. DhruvanandaBehera (NIT, Rourkela)
19	12102V163019	Pratik Kumar Panda	Gravitational lensing	Prof.KarmadevaMaharana
20	12102V163020	RaghunathPradhan	Calibration of scintillator detector for measurement of cosmic ray showers at GRAPES-3 experiment	Dr. Pravata Kumar Mohanty (TIFR, Mumbai)

**DEPARTMENT OF PHYSICS, UTKAL UNIVERSITY**  
**M.Sc. (Physics) Project - 2018**

SINo.	Roll No.	Name of the Students	Topic	Supervisor
1	12102V173001	AkankhyaMohapatra	Study of multiferroic based solar photovoltaics	Dr. NiharikaMohapatra , IIT, BBSR
2	12102V173002	Ashish Kumar Dalei	Crystal analysis using rietveld refinement technique	Dr. BhagabanKisan, UU
3	12102V173003	Aswini Kumar Sahoo	Study of reconstruction and identification of tau- lepton in CMS at LHC	Dr. Arun Kumar Nayak, IOP, BBSR
4	12102V173004	BikramKeshariPradhan	Thermodynamics of Relativistic particle And Hagedorn's Spectrum	Prof. BedangadasMohanty, NISER
5	12102V173005	Birupakhya Nanda	Detection of Muon in Proportional Counter	Dr. Pravata Kumar Mohanty, TIFR Mumbai
6	12102V173006	BuddhanathBehera	Study of the Plastic Scintillator Detector response at the GRAPES-3 Experiment	Dr. Pravata Kumar Mohanty, TIFR Mumbai
7	12102V173007	ChandanaNayak	Introduction to Cosmology with Cosmic Microwave Background	Dr. Pramoda Kumar Samal, UU
8	12102V173008	DamburudharaSabara	Thermal diffusivity of Brass	Dr. BhagabanKisan, UU
9	12102V173009	DibyajyotiNayak	Mg doped ZnO	Dr. BhagabanKisan, UU
10	12102V173010	FuloswariSoren	Mg doped TiO <sub>2</sub>	Dr. BhagabanKisan, UU
11	12102V173011	Gobinda Das	Linearized gravity in ads background	Dr. ShesansuSekhar Pal, UU
12	12102V173012	HimansuSekharNayak	Ni doped ZnO	Ms. BasantiBehera, OUAT
13	12102V173013	IpsitaNayak	Numerical methods for solving helium atom in coordinate space	Dr. Prafulla Kumar Panda, UU
14	12102V173014	JayalaxmiPani	Electronic structure determination of grapheme using "Density Functional Theory (DFT)"	Dr. Jagadish Kumar, UU
15	12102V173015	KajolSahoo	Supersymmetry in quantum mechanics	Dr. Pramoda Kumar Samal, UU
16	12102V173016	Kalyan Kumar Senapati	A new route to enhance the ferromagnetic transition temperature for a DMS	Dr. KalpataruPradhan, SINP, Kolkata
17	12102V173017	LakhidharGemel	Study of nonlinear dynamics on Logisticmap	Dr. AlokRanjanNayak, IIIT, BBSR
18	12102V173018	Madan Mohan Mahana	A study of Black hole Thermodynamics	Prof. SwapnaMahapatra, UU
19	12102V173019	RajasmittaSahoo	Superconductivity in perovskite oxides Ba(Bi, Pb)O <sub>3</sub> , and (Ba,Te)O <sub>3</sub> system	Dr. NiharikaMohapatra, IIT, BBSR

**DEPARTMENT OF PHYSICS, UTKAL UNIVERSITY**  
**M.Sc. (Physics) Project - 2019**

SINo.	Roll No.	Name of the Students	Topic	Supervisor
1	12102V183001	AniketMohanty	Optical and dielectric study of Bismuth and Antimony Bilayers	Dr. BhagabanKisan, UU
2	12102V183002	Anil Mahaling	To study the property of ZrO <sub>2</sub> /GO/PVA thin film	Dr. S.K.S. Parashar, KIIT University
3	12102V183003	Arpan Kumar Pradhan	Structural and dielectric properties of Ti doped BaMnO <sub>3</sub>	Dr. BhagabanKisan, UU
4	12102V183005	Ashish Kumar Mandal	A two dimensional ising model with order-disorder transition	Dr. Jagadish Kumar, UU
5	12102V183006	AshrumochanMohanty	Lithium doped with Zno thin film	Dr. SatyaprakashSahoo, IOP, BBSR
6	12102V183007	AtalabihariPahadasingh	Fluctuated Ricci tensor to first order in metric perturbation	Dr. ShesansuSekhar Pal, UU
7	12102V183008	BhagyarathiSahoo	Characterstics of gas electron multiplier detector	Dr .Pradip Kumar Sahu, IOP, BBSR
8	12102V183009	Bikram Kumar Rout	Coherent state & its applications	Dr. Prafulla Kumar Panda, UU
9	12102V183010	DibyajyotiSahu	Atomic spin model simulation of magnetic material	Dr. Jagdish Kumar, UU
10	12102V183011	JyotiBikashMohapatra	Spin orbit coupled superconductivity	Prof. DevakantaSamal, IOP
11	12102V183012	KabitaKumariNayak	Dielectric behavior analysis of Bamboo Charcoal for Estimation of Electromagnetic Interference Shielding potential	Dr. PuspallataPattojoshi, KIIT University
12	12102V183013	KalpanaHemram	Morphological and optical properties of Bamboo charcoal and review of its potential for water and air purification	Dr. PuspallataPattojoshi, KIIT University
13	12102V183014	MonalisaSahoo	Proton proton collision and hadron jets	Dr. Arun Kumar Nayak, IOP BBSR
14	12102V183015	NirupamaKerai	Activated bamboo charcoal in medical science	Dr. PuspallataPattojoshi, KIIT University
15	12102V183016	Om Prakash Das	Structural, magnetic and dielectric properties of Fe doped CaMnO <sub>3</sub>	Dr. BhagabanKisan, UU
16	12102V183017	PrajnyanPriyadarshini	Annealing induced structural and optical properties change in As <sub>40</sub> Se <sub>50</sub> Ge <sub>10</sub> thin films	Dr. RamakantaNaik, ICT-IOC
17	12102V183018	Prasanta Kumar Maharana	Electronic Structure of single layer graphene on nickel substrate.	Prof. Saroj Kumar Nayak, IIT, BBSR
18	12102V183019	PrathanapravaParida	Pseudo super capacitor (fe P) ,oxidation reduction	Prof. Saroj Kumar Nayak, IIT, BBSR

**DEPARTMENT OF PHYSICS, UTKAL UNIVERSITY**  
**M.Sc. (Physics) Project - 2020**

S.No.	Roll No.	Name of the Students	Topic	Supervisor
1	12102V193001	Arun Kumar Gagrai	Tensor Formulation in Relativity	Dr. P.K. Samal, G. M. University
2	12102V193002	Asish Kumar Das	Squeezed Coherent states and anharmonic oscillator	Dr. P.K. Panda, UU
3	12102V193003	BiplabJyotiranjana Jena	Study of Optical properties of Sn-Se thin films prepared by co-evaporation deposition method	Dr. B. Kisan
4	12102V193004	BiswaranjanBaral	Thermal annealing of Ag-Se bilayer thin film and its optical behaviour	Dr. B. Kisan, UU
5	12102V193005	BuddhadevMahana	Thermal annealing of Al-Se bilayer thin film and its thermal and optical properties	Dr. B. Kisan, UU
6	12102V193006	DebidattaMohanty	Energy Conditions	Dr. S.S. Pal, UU
7	12102V193007	Deepak Kumar Mallick	Study of Optical Properties and Raman Study on Al-Sb thin film Bilayer Structure	Dr. B. Kisan, UU
8	12102V193009	Jagannath Panda	Study of growth of epitaxial thin film	Dr. AshutoshRath, CSIR-IMMT
9	12102V193010	LijaraniKar	Raman Effect	Prof. N C. Mishra (Retd.) , UU
10	12102V193011	MadhusmitaBehera	Construction of Schwarzschild geometry	Dr. S.S. Pal, UU
11	12102V193012	Mahendra Kumar Panda	Refractive index calculation of Laser irradiated As <sub>50</sub> Se <sub>40</sub> Sb <sub>10</sub> using Swanepoel method	Dr. RamakantaNaik, ICT-IOC, BBSR
12	12102V193013	ManasBiswal	Spontaneous symmetry breaking	Dr. S.S. Pal, UU
13	12102V193014	MinatiSardar	Construction of Schwarzschild geometry	Dr. S.S. Pal, UU
14	12102V193015	NiharikaPrusty	Z-scan technique	Dr. J. Kumar, UU
15	12102V193016	ParthasarathiPanigrahi	An experimental study on optical properties of CdS thin film	Dr. B. Kisan, UU
16	12102V193017	PradipaMarandi	Cosmology, especially to find the behavior of the scale factor of Robertson Walker metric	Dr. S.S. Pal, UU
17	12102V193018	Pratyasha Mishra	Thermal Annealing of Bi-Sb Thin film and Study of its Optical and Thermal Properties	Dr. B. Kisan, UU
18	12102V193019	Rajroshan Bag	Landau Levels	Dr. S.S. Pal, UU

**DEPARTMENT OF PHYSICS, UTKAL UNIVERSITY**  
**M.Sc. (Physics) Project, 2022 (AB 2020-21)**

Sl.No.	Roll No.	Name of the Students	Topic	Supervisor	Full Marks (100)
1	12102V203001	Abinash Nandi	Structural and magnetocaloric effects of Ti doped magnetic $Gd_{0.7}Sr_{0.3}Mn_{1-x}Ti_xO_3$	Dr. BhagabanKisan, UU	
2	12102V203002	AdityaMishra	Neutrino Oscillation	Dr. PrafullaKumar Panda, UU	
3	12102V203003	AmiyaRanjanMallik	Study of structural , dielectric and magnetic properties of $Gd_2NiMnO_6$	Dr. BhagabanKisan, UU	
4	12102V203004	Bhavna Dora	Machine learning approach to detect pulsars	Dr. Jagadish Kumar, UU	
5	12102V203005	BudhibantaBariha	Triboelectrification based on NiO-Mg magnetic nanocomposite: synthesis, device fabrication and energy harvesting performance	Dr. JagadishKumar, UU	
6	12102V203006	Deoranjana Kumar Sabar	Effect of Al doped $YCrO_3$ on structural, electronic and magnetic properties	Dr. BhagabanKisan, UU	
7	12102V203007	IndranilMahato	Electroweak Interaction	Dr. PrafullaKumar Panda, UU	
8	12102V203008	JayasingGond	Transport and magnetic properties of Fe doped $CaMnO_3$	Dr. BhagabanKisan, UU	
9	12102V203009	JyotirmayeePani	Study of optical and structural properties of BiSb/BiSb and Pb/BiSb bilayers	Dr. BhagabanKisan, UU	
10	12102V203010	Kalingarani Mishra	Quantization of mass square operator of open string	Dr. ShesansuSekhar Pal, UU	
11	12102V203011	Nikita Jaiswal	Correlation function in the CFTD/Adsd+1 correspondence[ Normalization of 2-point function on Adsd+1space]	Dr. ShesansuSekharPal, UU	
12	12102V203012	NityanutanMohapatra	Conformal Algebra and correlation function	Dr. ShesansuSekharPal, UU	
13	12102V203014	Pankaj Kumar Sardar	Characterization of Al doped Barium Manganese Oxide.	Dr. BhagabanKisan, UU	
14	12102V203015	Pradyut Kumar Lima	Study on effect of Gadolinium on the structural and dielectric properties of BCZT ceramics	Dr. BhagabanKisan, UU	
16	12102V203018	RashmiranjanBehera	Experimental study on optical Properties of Cds Thin film	Dr. BhagabanKisan, UU	

17	12102V203019	Sarthak Mishra	Experimental study on Bi-Sb Thin Films	Dr. BhagabanKisan, UU	
18	12102V203020	ShrabaniKanungo	Structural, Dielectric properties of GdCrO <sub>3</sub>	Dr. BhagabanKisan, UU	
19	12102V203021	SouvagyaKumar Biswal	Epidemiological study of COVID 19 and data forecasting	Dr. JagadishKumar, UU	
20	12102V203022	Subhashree Dash	Experimental study of structural and optical properties of Al-Sb Thin films	Dr. BhagabanKisan, UU	
21	12102V203023	Subhrajit Mishra	Quantization of mass square operator for closed string	Dr. ShesansuSekharPal, UU	
22	12102V203024	SurajSinku	Study of magnetic properties of a novel ceramic ferroelectric-ferromagnetic composite.	Dr. BhagabanKisan, UU	
23	12102V203025	SuryanarayanMohap tra	Exoplanet detection using Machine Learning and improve its Performance	Dr. Jagadish Kumar, UU	
24	12102V203027	TarunaHuika	The study of Lorenz model using scilab	Dr. Jagadish Kumar, UU	