



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

(DEEMED TO BE UNIVERSITY)

Accredited with "A" grade by NAAC

Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai – 600 119

www.sathyabama.ac.in



SCHOOL OF SCIENCE AND HUMANITIES

DEPARTMENT OF PHYSICS

Faculty Activities – 2018 - 2019

S. No	Name of the faculty who organized	Name of the Events/ FDP/Orientation/Refresher/Short term course/workshops/conferences/seminar/ Etc.,	Title	Duration	No. of Participants
1.	Dr. S. Jayalakshmi	Workshop	Modelling and Simulation in Materials Science and Engineering" with Hands on Session	18-06-2018 to 22-06-2018	40
2.	Dr . Helen Merina Albert	Workshop	TALENT HUNT-2018	09-10-2018 to 10-10-2018	120



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Modelling and Simulation in Materials Science and Engineering" with Hands on Session



CSIR Sponsored Summer Workshop on "Modelling and Simulation in Materials Science and Engineering" with Hands on Session (MSME 2018)

18-22 June, 2018

Organized by: Department of Physics (DST-FIST Sponsored),
Sathyabama Institute of Science and Technology
(Deemed to be University), Chennai-600119.



ABOUT SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY

Sathyabama University (A Christian Minority Institution) formerly known as Sathyabama Engineering College was established in 1987 by Dr. Jeppiaar. It is a premier institute imparting knowledge in the areas of engineering, science, technology and education. The University offers 27 programmes at UG level and 41 programmes at PG level in all disciplines. The University has excellent infrastructure facilities including modern laboratories, library with multimedia facilities, internet and other general amenities. University has written a special page in the history of space research on 22nd June, 2016 with the launch of "SATHYABAMASAT" in association with ISRO. The launch of "SATHYABAMASAT" and accolades received in world platforms is a specimen. Our motto is "TOGETHER FOR BETTER TOMORROW" and our mantra of Success is "LEARN TODAY and LEAD TOMORROW". We practice and teach to our students that "JOY OF LIVING IS IN JOY OF GIVING". The University aims to be the destiny of efficient and responsible technocrats those are fit enough to serve the industry and society.

ABOUT THE WORKSHOP

DFT codes in Computational Materials Science, allows to calculate the electronic structure of solids with high precision. The goal of this course is:

- ✦ This Workshop is organized for the benefit of the PG students Researchers and faculties of Physics, Chemistry, Mechanical engineering and Nano technology to enlighten latest research developments of materials and their technological applications.
- ✦ The main objective of this workshop is to bring distinguished professors and renowned scientists to expose various developments in materials, address new challenges and solutions and also motivate them by interacting future research directions.
- ✦ To discuss how first-principles computational methods can drive the understanding, improvement and prediction of new technology based engineering materials and its application to material simulation
- ✦ Learn to utilize the codes like WIEN 2K and VASP and its application to simulate advance material for various applications.
- ✦ We start with detailed introductions and then have hands-on exercises with the WIEN2k/VASP program.

ABOUT DEPARTMENT OF PHYSICS (DST-FIST Sponsored)

Department of Physics was established in the year 1988. It offers courses in B.Sc., M.Sc., M.Phil., and Ph.D. The Department has been recognized as DST-FIST sponsored Department (2015-2020). The Department has excellent infrastructural facilities and other general amenities. The Department has undertaken various sponsored projects funded by such as DST, DRDO and CARS for the worth of nearly 1.3 Crore. We have organized international conference adored by the visit of Prof. Dr. Walter Kohn (Nobel Laureate-1998) and video conferencing session by Prof. Dr. Douglas Dean Osheroff (Nobel Laureate-1996) in the year of 2014. The Faculties of the Department have expertise in various fields of research that includes Bulk, Thin film, Polymers & Nano Composite Materials, Crystal Growth and Characterization, Computational Materials Science and they have a strong technical background witnessed by their WoS/Scopus indexed research publications (91) with high impact factor.



TOPICS OF THE WORKSHOP

- ✦ Introduction to density functional theory
- ✦ Concepts of DFT codes for band structure calculations
- ✦ Structure optimization, building models with supercells, DFT+U
- ✦ Electronic, magnetic, optical, thermo electric, mechanical properties of various materials
- ✦ Use of the web-based graphical user interface (w2web) as well as the command-line interface
- ✦ "Hands-on" calculations with the WIEN2k /VASP code
- ✦ Discussions and exchange of experience between users.

ADVISORY COMMITTEE

1. Emeritus Prof. Dr. T. V. Rama Krishnan, BHU, IISc., Bangalore.
2. Prof. Dr. R. Asokamani, Secretary, The Academy of Sciences, Tamil Nadu.
3. Prof. Dr. M.Rajagopalan, CGC, Anna University (Retired).
4. Prof. Dr. Sushil Auluck, CSIR-NPL, IIT-Kanpur.
5. Prof. Dr. S. Mathi Jaya, IGCAR, MSG, Kalpakkam .

LECTURES & DEMO

1. Prof.Dr. Sushil Auluck, CSIR-NPL, IIT-New Delhi.
2. Prof.Dr. R. Asokamani, Secretary, The Academy of Sciences, Tamil Nadu
3. Dr. V Subramanian, Sr. Principal Scientist, CSIR, Tamil Nadu.
4. Dr. E. V. Sampathkumaran, Professor, TIFR, Mumbai.
5. Dr. P. Ravindran, Professor, Central University of Tamil Nadu, Thiruvannur.
6. Dr. Vidya Ravindran, Asst. Professor, Dept of Medical Physics, Anna University.
7. Dr. Sharat Chandra, Scientist, MSG, IGCAR, Kalpakkam
8. Dr. C. Ravi, Scientific Officer, MSG, IGCAR, Kalpakkam.
9. Dr. Awadesh Mani, Scientific Officer, MSG, IGCAR, Kalpakkam.
10. Dr. B. R. K. Nanda, Asst. Professor, Dept. of Physics, IIT Madras.
11. Dr. Satyesh Kumar Yadav, Asst. Professor, Metallurgical and Materials Engineering, IIT Madras.
12. Dr. P. Murugan, Scientist, Functional Materials Division, CECRI, Karaikudi.
13. Dr. R. Thangavel, Asst. Professor, IIT (ISM), Dhanbad.
14. Dr. G. Subramoniam S/O 'F' System, Institute of Mathematical Sciences, Taramani, Chennai.
15. Dr. M. Victor Antony Raj, Asst. Professor, Loyola College, Chennai
16. Dr. I. B. Shameem Banu, Professor, B.S. Abdur Rahman Crescent Institute of Science and Technology, Chennai.
17. Dr. Pushpamithra, Scientist - E, Hindustan Institute of Technology and Science, Chennai.

HOW TO APPLY

Interested participants are requested to send the filled-in registration form and DD on or before **31-05-2018** to Email ID: wsmsme2018@gmail.com.

COURSE FEE:

Research scholar - Rs.2000
Faculty / Industry - Rs.2500

The registration amount is to be paid through DD with the name "Sathyabama Institute of Science and Technology" payable at Chennai.

Limited participants (40)

Participants are requested to bring their laptop for hands on training.

ACCOMMODATION will be provided in our Institution Hostel.

ORGANIZING COMMITTEE

CHIEF PATRON

Tmt. Remibai Jeppiaar,
Chancellor,
Sathyabama Institute of Science and Technology.

PATRON

Dr. Marie Johnson, B.E., M.B.A., M.Phil., Ph.D.,
Vice President,
Sathyabama Institute of Science and Technology.

Dr. Mariazeena Johnson, B.E., M.B.A., M.Phil., Ph.D.,
Pro Chancellor,
Sathyabama Institute of Science and Technology.

ORGANIZING SECRETARY

Dr. M. Sundareswari,
Professor and Dean (School of Science and Humanities).

CONVENER

Dr. D. S. Jayalakshmi, Assistant Professor.

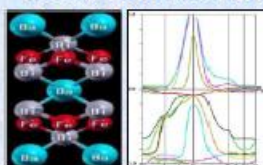
CO CONVENERS

1. Dr. M. Manjula, Assistant Professor.
2. Mr. E. Viswanathan, Research Scholar.

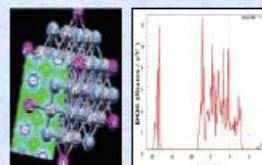
Summer Workshop on "Modelling and
Simulation in Materials Science and
Engineering" with
Hands on Session
(MSME 2018)
(18th - 22nd June 2018)

Registration Form

1. Name of the candidate :
 2. Designation :
 3. Gender : Male / Female
 4. Contact Number (Personal) :
 5. Email ID :
 6. Name of the College/Institution :
 7. Payment Details Amount, bank, DD No. & date:
 8. Whether Accommodation is required : Yes/ No
- Date : Signature of the Candidate



Address for Communication:
The Convener, MSME-2018,
Department of Physics,
(DST-FIST Sponsored)
Sathyabama Institute of Science and Technology,
Rajiv Gandhi Salai, OMR, Chennai-600 119.
Contact No.: 9840477004; 9884973863





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Summer Workshop on “Modelling And Simulation In Material Science And Engineering with Hands On Session (MSME-2018) –June 18-22, 2018

List of Confirmed participants

S. No.	Name of Participant	Affiliated Department and Institute (with full address)	Email Id	Contact No (Office & Mobile)	M/F	Hostel Required
1.	Gopal Sharmae 184815	University of Jammu, Jammu and Kashmir, 180006	gopalgulshan1992@gmail.com	7051739943	M	yes
2.	Jigmat Stondus 184814	University of Jammu, Jammu and Kashmir, 180006	jstondus@gmail.com	7006125625	M	yes
3.	Akash A Deshmukh 438153	Department of Physics, RTM Nagpur University, Nagpur	akdeshmukh9@gmail.com	9175477696	M	yes
4.	Aditya S. Shende 438148	Visvesvaraya National Institute of Technology, (VNIT), Nagpur.	aditya.bit2@yahoo.com	9922878018,	M	yes
5	Radhey Shyam Yadav 438154	Visvesvaraya National Institute of Technology (VNIT), Nagpur.	Radheyshyam8999@gmail.com	9266548999,	M	yes

6.	Dr. V. Vetrivelan (Rs.2,500) 120564162	Thanthai Periyar Government Institute of Technology, Vellore- 632 002. Vellore District.	vetri.tpgit@gmail.com	9486898120	M	Yes
7.	Ashish Kore 438149	Visvesvaraya National Institute of Technology (VNIT), Nagpur.	ashishkore93@gmail.com	8605764848	M	Yes
8.	A ANGELINE DOROTHY 117456582	Hindustan Institute of Technology and Science	adorothy43@gmail.com ,	9789993793	F	No
9.	V. Mohan Kumar 464405	SSN college of Engineering	mohaphysics@gmail.com	9788287027	M	No
10.	ANURADHA (Rs.2,500) 213093	SrimadAndavan Arts and Science College, Trichy	sairam@andavancollege.ac.in	9677897090	F	No
11.	Manikandan.G. N 829093	AC Tech campus, Anna University	manikandanmsd@gmail.com	9677011138	M	No
12.	Mathangi .J.B 829094	AC Tech campus, Anna University	jbmathangi@gmail.com	9566299545	F	No
13	Aravindhan 178683	Thiagarajar College of Engg. Madurai	aronearvind	8220253407	M	Yes
14	R.Karthick 829043	Anna University	Kartheesh06@gmail.com	9566124592	M	No

15	M. MOHAMED SHEIK SIRAJUDEEN (Rs.2,500) (DD No. 183489, IOB)	B.S.A. CRESCENT IST, VANDALLUR		9940216965	M	No
16	VOMA UDAY KUMAR (DD No. 637521, SBI)	IIT-Tirupati	uday@iittp.ac.in	9573062933	M	Yes
17	DR. P. SELVARENGAN (DD.NO. 476630)	KALASALINGAM UNIVERSITY, KRISHNANKOIL	p.selvarengan@klu.ac.in	8220367387	M	Yes
18	Boya Krishnamraju 813708	IIT Tirupati	Krishnamraju1994@gmail.com	8179433557	M	Yes
19	R.Muthukumar (Rs.2,500) (DD.NO. 927904) REG. Form	SrimadAndavan Arts and Science College, Trichy	muthur@andavanc college.ac.in	9965657898	M	Yes
20	J.Jayarubi 123913055844	P.G & Research Department of Physics,Govern ment Arts College, Melur, Madurai.	jayarubiphysics@g mail.com	9047394031	F	Yes
21	D.Manimegalai 135435	Bharathidasan University, Tiruchirapalli	manimegalaibhc@ gmail.com	9159256954	F	Yes

22	S. M. SURESH 476690	Kalasalingam Academy of Research and Education, Krishnankoil, Virudhunagar - 626 126	smsuresh026@gm ail. com	7418030022	M	Yes
23	SUGANYA 912943	Periyar University, Salem	Convey2sugan@g mail.com	9942043613	F	Yes
24	Shyama Muraledharan KP 632751	Bharathiar University	shyamamuraliyhp @gmail.com	9500799238	F	Yes
25	C. Meera 863760	Bharathiyar University	meeracheviri@gm ailc.om	9787791688	F	Yes
26	A.Amudhavalli 616372	Nadar Mahajana Sangam S.Vellaichamy Nadar College, Madurai	Amudha.shuba8@ gmail.com	9486928092	F	Yes
27	Padmavathy 616373	Nadar Mahajana Sangam S.Vellaichamy Nadar College, Madurai	Padmaram83@gm ail.com	9486174140	F	Yes
28	Akiode, Olubunmi Kolawole 044257 (4,000)	CSIR-CECRI, Karaikudi	mubbil2010@gmail .com	917598530126	M	Yes
29	SATHYA		smsathya90@yaho o.com	8300728692	F	Yes
30	Annie Rathnakumari 466230 (4,000)	SSN College of Engg.	Anniephysics08@g amil.com	9790093956	F	No
31	Balakrishnan		Balakrishp1992@g mail.com	9786948825	M	No

32	Manikandan 616459 (4000)	Nadar Mahajana Sangam S.Vellaichamy	Belleyton16@gmai l.com	9600450290	M	Yes
33	Dharma Raja 616459	Nadar College, Madurai	dharmarajamdu@g mail.com	9362618108	M	Yes
34	Jaishree Rs.2,500	Sri Ramakrishna Institute of Technology	Jaishree.sh@srit.or g	9994910283	F	Yes
35	Dr.V.Nirmala, 755741	Queen Mary's COLLEGE	Gvan.nirmala@gm ail.com	8056008234	F	No
36	Nithya Balaji 087330	Valliammai Engineering College, Kattankulathur	nithu4balu@gma il.com	9841426202	F	No
37	RamyaRajan. M. P 087331	Valliammai Engineering College, Kattankulathur	ramyarajanmp@ gmail.com	99400 87252	F	No
38	MD.Ghouse mohiddin khan 159234	Bharathiar University	ghousegm@gmail .com	7801085867	M	Yes
39	B Yagna Narayana 43680	VIT, Vellore		8985219213	M	Yes
40	J. Mani (NO Fees)	Department of Nuclear Physics, University of Madras	maniphysics08@g mail.com	9445319092	M	No



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Report

On

Summer Workshop on “Modeling And Simulation In Material Science And Engineering with Hands On Session (MSME-2018) –June 18-22, 2018

Date: 22.06.2018

Venue: Department of Physics

The department of Physics organised a **SUMMER WORKSHOP** during 18-22 June, 2018 to benefit the Under graduate and Post graduate students of Physics. The resource persons were faculty members of various departments of premier institutes. All the sessions were enriching as it included topics that will maximize their potential and deepen the educational content to a higher level.

The expected learning experience were:

- Research ideas
- Learning strategies for smooth career life

The program was greatly appreciated by the students and ended with a vote of thanks by the department head.

Head of the Department of Physics

Dr. S. Ravichandran



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TALENT HUNT-2018



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School of Science and Humanities

Department of Physics

Organizes

TALENT HUNT-2018

From 09.10.2018-10.10.2018

CHIEF PATRONS

Dr. Mariazeena Johnson
Chancellor

Dr. Marie Johnson
President

PATRON

Dr.T.Sasipraba
Vice Chancellor

Time : 8:00-3:15 PM

Venue: Department of Physics Lab

Convener
Dr. Helen Merina Albert
Department of Physics

Co-ordinators
Faculties
Department of Physics
School of Science and Humanities



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Report

On

TALENT HUNT-2018

Date: 10.10.2018

Venue: Department of Physics

An interschool event on '**Talent Hunt 2018**' was organized by Faculty of Science and Humanities with blessing of the Management of "**Sathyabama Institute of Science and Technology**" on October 9th and 10th 2018. The programme is intended only for first year UG/PG students of all schools of Engineering, Arts & Science, Law, Medicine, Dental and architecture. The main objective of the programme is to integrate, encourage all the students to exhibit their hidden potential in technical skills. The programme caters to all disciplines and had **10** themes like Hydraulic Robo Design, Sensor Design, Prototype Satellite Design, Mobile App design, Modelling and Coding, Reverse Engineering, Models based on Science laws, Science in Daily life experiments, Chem-E-Car, Creative writing and Film Reviewing. Approximately 200 first year students of various disciplines have actively participated in the event to exhibit their skills. The programme was spearheaded by judges with their valuable comments to the participants for improving their technical ideas. Around 123 participants were selected as winners for the Talent Hunt Programme. All the participants and the winners are appreciated with certificate of participation and merit.

The expected learning experience were:

- Research ideas
- Innovative ideas

The program was greatly appreciated by the students and ended with a vote of thanks by the department head.

Head of the Department of Physics

Dr. S. Ravichandran



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Participating Students

Mobile app design



Creative writing



Prototype Satellite design



Reverse Engineering

