

## **ATRIA INSTITUTE OF TECHNOLOGY**

Anandanagar, Bengaluru – 560 024

**Department of Basic Science Engineering & Humanities** 



### **Highlights**

About the Department

Faculty Achievements

Webinars/Events

Activities Conducted

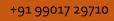
## For Internal Circulation

Department of Basic Science Engineering & Humanities

> Atria Institute of Technology, Anandanagar, Bengaluru 560024



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## About the Department

Dr. Nalinakshi N

M.Sc., M.Phil., Ph.D.

Professor & Head, Department of Basic Science Eng. & Humanities Atria Institute of Technology Anandanagar, Bengaluru – 560 024

The department of Basic Sciences Engineering and Humanities is a first rostrum all the aspiring engineers step on to. It strongly believes that knowledge is the base of all basic sciences and it strives to achieve this power to its best. This Department is devoted to foster the fundamental principles and understanding of science to enhance the students' basic knowledge of Engineering. It offers excellent introductory courses in Mathematics, Physics, Chemistry and English which will both instruct and stimulate students in all of the University's programs. The department believes that engineers are a significant source of technological innovation and expertise. To achieve this belief, the department continuously fosters students to focus on their brainpower on solving problems through the application of science and mathematics, discovering new ways to make life better for the general public. Students are guided by well experienced and highly qualified faculty members who strive to improve the students learning, research and development processes. The "spark" of creativity is a hallmark of the department and it endeavor to create the same zest amongst all the budding engineers and this process is unceasing.

#### ACHIVEMENTS

#### HEARTY CONGRATULATIONS TO DR. NALINAKSHI N



Dr. NALINAKSHI N published a paper on "Convective heat transfer and MHD flow through semi-porous cylindrical filters embedded in an impermeable region"



Hearty congratulations Dr. Nalinakshi N for being appointed as the BOE Chairman (Mathematics Composite Board), VTU

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Sub: Constitution of Board of Ex-	
By the directions of the Honorable Vice	Chancellor, I am pleased to inform you
hat you have been appointed as Chairman of E	soard of Examiners for MATHEMATICS
COMPOSITE) BOARD for the year 2022-2023	1
Please accept this appointment by return retificate in the enclosed format. I look for manination related activities.	ing the letter of acceptance and no relation ward to your active cooperation in the
Thanking you.	
	Yours Sincerely,
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	Registrar (Evaluation)
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#### The Department of BSE&H congratulates Dr. Nalinakshi N for receiving the "Best Professor Award"



**Department of Basic Science Engineering & Humanities** 

#### **ACHIEVEMENTS CONTINUED**

#### CONGRATULATIONS TO Dr. SRAVAN KUMAR T



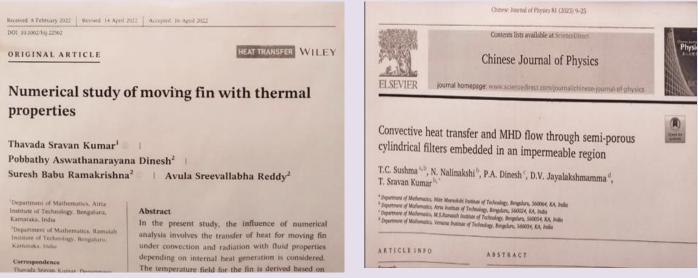
Dr. Sravan Kumar T has published 3 papers titled

1. "Convective heat transfer and MHD flow through semi-porous cylindrical filters embedded in an impermeable region".

2. Study of mixed convective – radiative fluid flow in a channel with temperature- dependent thermal conductivity"

3. "Numerical Study of moving fin with thermal properties"





#### **ACHIEVEMENTS CONTINUED**

#### CONGRATULATIONS TO Dr. VIJAYA BHASKAR REDDY



Dr. Vijay Bhaskar Reddy has published a paper titled 1. "polymeric nanoparticles as effective

*delivery systems in agriculture sustainability" 2. "Recent advances in removal of dyes from wastewater using low-cost adsorbents"* 

Hearty Congratulations to Dr. Vijay Bhaskar Reddy for being invited as a Keynote speaker, and editorial member for the Journal of Current Indian Science and Pharmaceutical Sciences

	Nanotechnology for Environmental Engineering	Journal of Environmental Management 311 (2022) 115961		
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	Polymeric nanoparticles as effective delivery systems in agriculture	ELSEVIER journal homepage: www.elsevier.com/locate/jenvmen		
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	Machaei Viennia <sup>1</sup> () - A. Vijaya Bhaskar Reddy <sup>2</sup> Receiset 24 Jane 2022 Acquiret 13 Next 2023	Recent advances in the removal of dyes from wastewater using low-cost adsorbents		
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CURRENT INDIAN SCIENCE

#### HEARTY CONGRATULATIONS TO Prof. NAGENDRA NAIK K



Warm regards Prof. Nagendra Naik K for successfully submitting the PhD thesis titled "A Study on Algebraic Signed Graphs"

#### **ACHIEVEMENTS CONTINUED**

#### CONGRATULATIONS TO Prof. MAHESH K S



Hearty Congratulations to sir for completing open seminar - titled "Celestial Mechanics in Lunar Theroy"

#### CONGRATULATIONS TO Dr SHIVARAJ MADIVALAPPA and Mrs. VANITHA N





Dr. Shivaraj Madivalappa & Mrs. Vanitha N has published a paper which is been accepted for the publication titled

"Structural and optical properties of Polyvinyl alcohol/Zinc oxide(PVA/ZnO) nanocomposites.

4/20/23, 3.25 PM Structural and optical properties of Polyvinyl alcohol/Zinc oxide (PVA/ZnO) nanocomposites - Vanitha - physica status solidi (...

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Structural and optical properties of Polyvinyl alcohol/Zinc oxide (PVA/ZnO) nanocomposites

N. Vanitha, S.K. Kanchana, R.B. Basavaraj, Shivaraj Madivalappa 🗙

First published: 30 March 2023 https://doi.org/10.1002/pssa.202300052

This article has been accepted for publication and undergone full peer review but has not been through the copyediting, typesetting, pagination and proofreading process, which may lead to differences between this version and the Version of Record. Please (the this article as doi: 10.1002/pssa.20230052.

#### Abstract

In the present work, pristine Poly(vinyl alcohol) (PVA) and PVA-ZnO nanocomposite thin films were prepared by solution casting method with different wt% of Zinc Oxide (ZnO) (C.1, 0.2, 0.3, 0.5 wt%) nanoparticles with PVA polymer matrix. Addition of ZnO in a PVA matrix induces decrease in the transparency of films. The structural characteristics of prepared thin films were analyzed by XRD, FTIR and Raman spectroscopy. XRD confirms the presence of ZnO structure and β-phase in the synthesized films. The average crystallite size of the prepared thin films were determined by Scherer's equation. XRD result showed that increase in percentage crystallinity of the films. Vibrational modes and functional groups present in pristine PVA and PVA/ZnO thin films were identified by FT-IR and Raman spectroscopy. FTIR analysis showed the characteristics bands, which corresponds to O-H and Zn-O bands present in the films. Raman spectra of pristine PVA and PVA/ZnO films reported. Optical characteristics of synthesized pristine PVA and PVA/ZnO nanocomposite thin films studied by UV-vis spectroscopy. Optical constants like absorption edge, direct band gap, optical dielectric constant, loss and optical conductivity were estimated and optical dispersion parameters were calculated by single oscillator model.

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#### WEBINARS/WORKSHOPS

#### INTERNATIONAL WORKSHOP ON MAPLE



Date: 20<sup>th</sup> Dec 2022 Speaker: Dr. Ilias S Kotsireas Title: International workshop on Maple

The Department of Basic Science Engineering and Humanities had organized a technical workshop on the usage of Maple resources for research activities. Dr. Ilias S Kotsireas was invited as the guest speaker. This event was held in blended mode. Maple is q software could suffice the needs of every research scholar as it would help them to work on different problems and find easy solutions to them.

#### **EVENTS**

#### **BRIDGE COURSE**

#### Date:10<sup>th</sup> Oct 2022 & 5<sup>th</sup> Dec 2022 Event Name: Bridge Course

The department of Basic Science Engineering and Humanities inaugurated the Bridge Course for the academic year 2022-23 on 10th October 2022. The Bridge course also called the career development program is the initial course the first-year students undergo. This course is crafted to help students to bridge the gap between pre-university and college-level academia.

The aim of this bridge course was to bridge the gap from pre-university to college-level academia. Students were trained in the basics of sciences along with Communicative Skills and Career Development Programs. This training helped students to refresh their academic knowledge of pre-university and use it effectively at the college level. There were nearly 180 students taking up the bridge course.

#### VISIT TO SRIHARIKOTA

#### Date:22<sup>nd</sup> Oct 2022 Event Name: Industrial Visit

The Department of Basic Science Engineering and Humanities organized an industrial visit to SHAR, ISRO, Sriharikota to witness the launch of the LMV3-L2, India's biggest launch vehicle carrying nearly 36 satellites. This was one of the dreams come true moments for the Atrians. The launch took place at 12.07 AM on 22.10.2022 and was one of the most mesmerizing and breathtaking moments. Students claimed that this was one of the most awaited moments of their life and that it would be treasured forever



#### **INAUGURATION OF NCC FIRING RANGE AT AIT**

#### Date:27<sup>th</sup> Oct 2022 Event Name: NCC FIRING RANGE

Atria Institute of Technology had taken the initiative to set up the firing range to train NCC cadets, and the inauguration for the same was held on 27th October 2022. ACP Sri. Manoj Kumar, Lt. Col. Damodharan PP, and Adam Officer Anil Kumar were invited as the guests of honor.

The firing range would help every NCC cadet to reach that one proud moment in life, the Parade during the Republic Day before the Prime Minister. He stated that it would be a lifetime achievement for every NCC Cadet. He exclaimed that this training was a selection process for all the cadets and only the best would be able to represent India during the parade.













**Department of Basic Science Engineering & Humanities** 

#### INAUGURATION OF IUCEE STUDENT CHAPTER AT AIT

#### Date: 31<sup>st</sup> Oct 2022 Event Name: IUCEE Student Chapter

The inaugural ceremony of the IUCEE Student Chapter at Atria Institute of Technology was held on 31st of October 2022 at 12:30 PM. The Student Chapter was inaugurated by Dr. Krishna Vedula, Dr. Ravi Salagame, and Mr. Anil Kumar Pandit.

The chapter aims to transform engineering education and bring the best out of every emerging engineer.







#### **INDUCTION PROGRAM FOR THE AY-2022-23**



#### Date:10<sup>th</sup> Nov 2022 & 5<sup>th</sup> Dec 2022

#### **Event Name: Induction Program**

The "Induction Program-2022 " for the First-Year students was held in two batches namely from 10.11.2022 - 17.11.2022 and from 05.12.2022 - 10.12.2022. The Induction Program is an initiative taken by every engineering college to help the First Year students get accustomed to transitioning from school to college. The prime motive of this program is to help students fill the gap between the new unfamiliar environment and to have a clear understanding of the requirements of the college and the field of engineering.

The main objective of the induction program is to help students acclimatize to the new surroundings and develop bonds with fellow students and teachers and have sensitivity towards various issues of social relevance and imbibe human values in them so as to become responsible citizens.

The Induction Program leads to the holistic development of students. Students are not only trained on hard and soft skills but also on personal development. A strict routine, if followed during their stay, helps students to gather courage and to face the difficulties of life.

The list of activities organized is:

- Physical Activities such as Yoga, Zumba, Aerobics, and Walking
- Professional Development Courses
- Innovative and Critical Thinking
- World View
- Literary and Hands-on experience activities
- Lectures and workshops by eminent personalities
- Fun and recreational activities
- Extracurricular activities
- Talk with management
- Day-out
- Health check-up and First Aid Training

There were nearly 250 students in the I Batch and 230 students in the second batch who took up the program. The entire program was coordinated by the Department of Basic Science Engineering and Humanities.

#### **CELEBRATION OF CONSTITUTION DAY**

#### Date: 29<sup>th</sup> Nov 2022 Event Name: Constitution Day Coordinator: Dr. Nalinakshi N

The Atria Institute of Technology celebrated Constitution Day on 29th November 2022 at 10:30 AM in the Campus Parking Area. The event was organized by the Department of NCC in accordance with NCC Day.

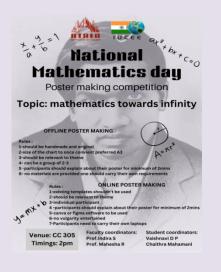
This day commemorates the formation of the Constitution and is a day where we remember the contribution of those who worked behind the development of the Constitution.







#### CELEBRATION OF NATIONAL MATHEMATICS DAY



Date: 22-12-2022 Event Name: National Mathematics Day Coordinator: Dr. Nalinakshi N

The Department of Basic Science Engineering and Humanities in collaboration with IUCEE celebrated National Mathematics Day 2022 on 22.12.2022. Various events pertaining to Mathematics were arranged to help students understand the role of mathematics in their day-to-day lives. The events were organized by the Student Chapter Members of IUCEE and the faculty members of BSE&H. The list of events is as follows:



#### PARENTS TEACHERS MEET FOR THE AY - 2022-23

#### Date: 11-2-2023 Coordinator: Dr. Nalinakshi N

Parents Teachers Meeting for the odd sem was held on 11<sup>th</sup> Feb 2023. An orientation program for the parents was organized. This was followed by the one-on-one interaction between the parents and teachers in the respective classrooms.

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#### SCIENTIA- INTRA-DEPARTMENTAL TECHNICAL FEST

#### Date: 23-2-2023 Event Name: Scientia Coordinator: Dr. Nalinakshi N

SCIENTIA - 2023 is an annual intradepartmental tech-fest organized by the Department of Basic Science Engineering and Humanities. This fest aims at bringing in the scientific talents of the first-year students through various events organized by the department.

In collaboration with IUCEE, SCIENTIA 2023 was organized from 23.02.2023 - 27.02.2023. Various events pertaining to the field of science were arranged to help students understand and identify the importance of science in their day-to-day lives.

#### Event: Rapid Quiz Date: 21.02.2023 Event Coordinator: Chemistry Department

This event was the most spotted one. The competition was held in two slots namely the Prelims and the Finals which was held on the 21/2/2023. This was a team event and out of which 5 teams were selected for the finals. The finale was a blockbuster with students actively tossing their brains to hit on the right answers

### Event: DUMB CHARADES Date: 23.02.2023

Event Coordinator: IUCEE members and Prof. Nagendra Naik

This event was the most fun-filled event. There were nearly 40 participants who had registered and participated. Students worked as a team to solve the riddle through mono-acting and developed a healthy spirit of sportsmanship.





#### *Event: BEST OUT OF WASTE Date: 23.02.2023*

#### Event Coordinator: Prof. Indira S & Mahesha R

Nearly 30 students had registered for the event. Students enthusiastically participated in the competition and came out with creative minds, expressing their views on the Best out of waste.

#### Event: ESSAY WRITING Date: 23.02.2023 Event Coordinator: Vanitha N & Kanchan S K

The theme of the essay writing competition was given on the spot. Various perspectives on the theme were beautifully brought down by the students.

#### Event: JUST DO IT Date: 24.02.2023 Event Coordinator: Prof. Anu S & Prof. Madhu G U

This Competition was an individual event and was held in three slots namely a Concentration game and a Question series round. There was 30+ students out of which 15 were selected for the next level. The event was held at 2:00 PM.

# *Event: Pick & Speak Date: 24.02.2023*

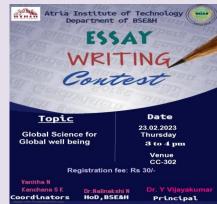
#### Event Coordinator: Dr. Shivaraj M & Prof. Chethan P B

Pick and speak is the spotlight for those who voluntarily hold the mike and speak up to the topic and look up to the curious crowd. The stage was set, and it was time for the speakers to highlight their perspectives on the picked topic and impress the audience. One by one, each having their points with a timer set tried their best and indeed a few did steal the audience's heart and were rewarded with a huge round of applause.



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#### Event: POSTER MAKING Date:24.02.2023 Event Coordinator: Chemistry Department The Department of Basic spices had ensuring

The Department of Basic science had organized a Poster making competition. This competition focused on participants creating a poster on the theme. Participants involved themselves actively in this contest by designing beautiful posters which were both handmade and digital.



#### NATIONAL SCIENCE DAY

Date: 28-2-2023 Event Name: National Science Day Coordinator: Dr. Nalinakshi N

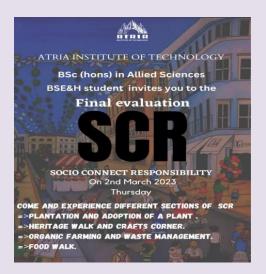
The Department of BSE&H celebrated National Science Day on 28.02.2023. This day commemorates the invention of the Raman Effect by the great Indian scientist Sir. C V Raman.

A formal celebration was held at the Seminar Hall at 11 am, with the dignitaries and students. This was followed by the principal honoring the dignitaries and each of them was felicitated. The guests further handed over mementos to the HoDs who had engaged in life skills classes for the first-year students during the Bridge Course. The winners of SCIENTIA 2023 and National Mathematics Day 2022 were awarded towards the end of the program.





#### Socio Connect Responsibility (SCR)



#### Date: 2-3-2023 Event Name: Socio Connect Responsibility Coordinator: Dr. Nalinakshi N

The final evaluation of the SCR subject was held on 2nd March, 2023 for the BSc. (Hons). The event was inaugurated by the HoD and the following events were organized:

- Plantation and adoption of a plant.
- Heritage Walk and Crafts Corner
- Organic Farming and Waste Management
- Food Walk

Students had learned many aspects of the subject which they felt worthwhile throughout their life.

WOMENS DAY CELEBRATION Date: 7-3-2023 Event Name: Women's Day Celebration Coordinator: Dr. Nalinakshi N

International Women's Day at Atria Institute of Technology was celebrated on March 8th, 2023. Eminent personalities from the fields of Psychology, Medicine and Safety and Security were invited as the Chief Guests. They enlightened the audience regarding the safety of women. This lecture was informative and helpful to the audience.



#### ETHNIC DAY



#### Date: 21-3-2023 Event Name: Ethnic Day

Atria Institute of Technology had celebrated Ethnic Day on 21.03.2023 in the college level & Basic Science Dept dressed up in Kerala Style. Ethnic Day aims at celebrating different cultures and ethnic groups. The day helps reconnect people with traditional and cultural roots and promotes the true essence of customs and traditions.

Mr. Kalver from I year ECE-A won the Mr. Ethnic title.







#### **NEW JOINEES**

#### Mahesha R



*Mr.* Mahesha R completed his M.Sc in Mathematics from Bangalore University. Sir is Pursuing his Ph.D. under the guidance of Dr. Nalinakshi N on the topic of Fluid Dynamics. He has 7 years of experience working at Pragathi First Grade College, Vijayapura. He is passionate about teaching and research. Sir is good at academic and extracurricular events and was awarded the 'Best Student'. Sir started his journey with BSE, AIT on September 1<sup>st,</sup> 2022. We welcome sir to the team and wish his contribution would strengthen the growth of the department.

Nagaveni M D



Mrs. Nagaveni M D completed her MSc in from Tumkur University with a specialization in solid-state Physics in the academic year 2011. She has six years of experience in teaching degree students. Ma'am started her journey with BSE, AIT on January 2nd, 2022. We welcome her to the team and wish her the best and we hope her contribution will strengthen the growth of the department.

#### Madhu G U



Prof. Madhu G U has completed his M.Sc in Mathematics from Bangalore University. He has a passion for teaching and began his career as a teacher and is very passionate about it. Sir started his journey with BSE, AIT on 26<sup>th</sup> Dec 2022. We welcome Sir to the team and wish him the best in his new role.

#### Veda T



Prof. Veda T holds a Master's degree with a 5<sup>th</sup> Rank in Chemistry from V V Puram College of Science, affiliated with Bengaluru City University. With a passion for teaching, she began her career as a teacher and has been guiding several students for various competitive Examinations. She started her journey with BSE, AIT on 2<sup>nd</sup> Jan 2023. We welcome Prof. Veda T to BSE, AIT to train our engineering students.

#### Nagendrachari K N



*Mr.* Nagaendrachari holds a Master's degree in Physics with a specialization in Cosmology from Bangalore University. He is interested in Instrumentation and Experimental Physics. He joined BSE, AIT on 26<sup>th</sup> December 2022 as a Physics lab instructor, we welcome him to the team and wish him the best in his new role.

Editors Dr. Nalinakshi N Ms. Anu.S Mrs. Jeslin G Mr. Chethan P B