



# VIT<sup>®</sup>

**Vellore Institute of Technology**  
(Deemed to be University under section 3 of UGC Act, 1956)

## 6<sup>TH</sup> BIENNIAL INTERNATIONAL GROUP THEORY CONFERENCE – 2021 (6BIGTC-2021)

(A Virtual Conference)

04<sup>th</sup> – 06<sup>th</sup> March 2021

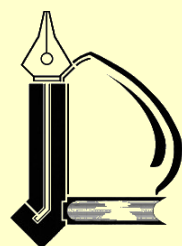


Organized By

**DEPARTMENT OF MATHEMATICS  
SCHOOL OF ADVANCED SCIENCES  
VELLORE INSTITUTE OF TECHNOLOGY  
(DEEMED TO BE UNIVERSITY)**

**VELLORE – 632014,  
TAMIL NADU, INDIA**

In Association With



Ferdowsi  
University of Mashhad

**DEPARTMENT OF PURE MATHEMATICS  
FACULTY OF MATHEMATICAL SCIENCES  
FERDOWSI UNIVERSITY OF MASHHAD  
MASHHAD, IRAN**

### ABOUT THE VELLORE INSTITUTE OF TECHNOLOGY

Vellore Institute of Technology (VIT) was founded in 1984 as Vellore Engineering College by the Chancellor Dr. G. Viswanathan. VIT attracts students from all the 29 states of India and more than 41 different countries because of its academic excellence. The Government of India recognizes VIT as an Institution of Eminence (IoE). The credentials of VIT in academics and research have ranked VIT in 1<sup>st</sup> position among private institutions in India for Innovation (ARIIA 2019 Award) by Govt. of India. VIT has placed in 15<sup>th</sup> position among the engineering institutions in India by NIRF, Govt. of India. The world ranking body namely the QS has given 4 STAR rating to VIT, with that VIT becomes the first institution in India to have the 4 STAR rating. In addition to this, the consortium of industries, FICCI has adjudged VIT as the “Excellence in Faculty”. VIT has the record of publishing maximum number of SCOPUS Indexed Research Journal papers from 2016 onwards, among Indian Universities and also overtaking all the premier institutions. VIT has also completed 3 cycles of NAAC accreditation and has been rated as “A” grade institution. In addition, VIT also has obtained for the coveted ABET accreditation by US agency. VIT has introduced many innovations in academic processes which add value to every student. FFCS (Fully Flexible Credit System), PBL (Project Based Learning) for better learning, fully digitized academic portals that assist students in equipping themselves for market place.

### ABOUT THE SCHOOL OF ADVANCED SCIENCES

The School of Advanced Sciences (SAS), VIT consists of Mathematics, Physics and Chemistry Departments. The school offers M.Sc., M.Phil. and Ph.D. programmes in all these disciplines. The School comprises qualified and research oriented faculty members whose expertise are in the frontier areas in sciences. Faculty members of SAS have received national and international recognized funded projects to the tune of 10 crores ongoing projects in SAS. Several research projects of the school are financially supported by some of the leading funding agencies such as NBHM, UGC, CSIR, DRDO, DST, DBT and Others. In addition, they have published international research papers and filed patents. The curriculum keeps abreast of the latest advancements in the respective domains and endeavours to mould the students into job seekers. The students are placed in reputed companies in India and overseas.

### ABOUT THE DEPARTMENT OF MATHEMATICS

Mathematics is an essential component of all engineering disciplines. The Mathematics department has 118 faculty members who support the other engineering departments through teaching and also actively involved in academic research in different areas such as Algebra, Analysis, Complex Analysis, Differential Equations, Fluid Dynamics, Graph Theory, Operations Research, Inventory Systems, Queuing Theory, Coding Theory, Mathematical Modelling, Fuzzy Mathematics, Numerical Analysis, Mathematical Biology and Others. The department has organized various programmes continuously like international conferences, symposia, seminars, workshops, Mathematical Meets, Math Fests, Technical Events, IDEA-THONS, Math-A-Thons, Stat-A-Thons and many lecture series.

### ABOUT THE FERDOWSI UNIVERSITY OF MASHHAD

The first proposal for launching the Ferdowsi University of Mashhad was announced concurrently with the establishment of Tehran University in 1934. However, the first step was converting the Higher Institute of Public Health to a Medical Faculty in 1949. Shortly after, this institute was officially inaugurated as the first Center for Medical Sciences in the North East of Iran by the former Minister of Culture. Finally in 1956 after the foundation of the Faculties of Literature and Theology, the complex was named “Mashhad University”. Later on in 1957, the rules and regulations for employment and education of Tehran University were adopted for use in this new university. Since then other faculties have been gradually added to the university based on the local demand. In 1975 after the separation of the faculties related to the Medical Sciences from the university, the name of the university was changed from “Mashhad University” to “The Ferdowsi University of Mashhad (FUM)”. The Ferdowsi University of Mashhad has now nearly seven decades of brilliant educational, research and cultural history and it is well known among institutes of higher education in Iran. It is currently one of the nation’s top three universities and also the largest center of higher education in the North East of Iran.

### ABOUT THE CONFERENCE

Algebra plays a prominent role in Mathematics, which includes Geometry, Number Theory and Analysis. As the development in the field of Algebra is growing faster and making significant changes globally for the past few decades, it is inevitable to have a deeper understanding of the subject and its recent developments, especially in group theory and its applications. The Biennial International Group Theory Conference (BIGTC) is a conference that is organized every two years. The aim of this conference is to exchange the research ideas amongst the group theorists and postgraduate students. In addition, specialists in the subject of group theory can present their latest research works and encourage the interested students to progress and widen their knowledge in group theory.

The First Biennial International Group Theory Conference was held during 14-18 February 2011 in Ibnu Sina Institute, Universiti Teknologi Malaysia, Johor Bahru, Johor. The second conference was held during 4-8 February 2013 in Dogus University, Istanbul, Turkey. The third conference was organized by the Ferdowsi University of Mashhad, Mashhad, Iran during 28 -31 January 2015. The fourth conference was held in UTM, Kuala Lumpur during 23-25 January 2017. The fifth conference was held in Institut Teknologi Bandung, Indonesia on 24-26 June 2019. The Sixth Biennial International Group Theory Conference – 2021 (6BIGTC-2021) is organized during 4-6 March 2021 in Vellore Institute of Technology, Vellore, India.

## ORGANIZING COMMITTEE

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HoD (Mathematics), SAS, VIT

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**Dr. D. Easwaramoorthy**

**Dr. S. Nandhini**

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Department of Mathematics, SAS, VIT

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**Research Scholars**

Department of Mathematics, SAS, VIT

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Department of Pure Mathematics, FMS, FUM

### Supported By



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**Dr. Pudji Astuti**

Institut Teknologi Bandung, Indonesia.

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Middle East Technical University, Turkey.

**Dr. Ismail Guloglu**

Dogus University, Turkey.

**Prof. Dr. Nikolai Vavilov**

St. Petersburg State University, Russia.

## PLENARY SPEAKERS

**Prof. Dr. T. Tamizh Chelvam**

Manonmaniam Sundaranar University, India.

**Prof. Dr. Mark Lewis**

Kent State University, USA.

**Prof. Dr. Martyn Dixon**

The University of Alabama, USA.

**Prof. Dr. C.R. Leedham-Green**

Queen Mary University of London, UK.

**Prof. Dr. Francesco De Giovanni**

University of Naples Federico II, Italy.

## INVITED SPEAKERS

**Prof. Dr. Ali Reza Ashrafi**

University of Kashan, Iran.

**Prof. Dr. Mehri Akhavan Malayeri**

Alzahra University, Iran.

**Prof. Dr. Alexander Zimmermann**

University of Picardie Jules Verne, France.

**Prof. Dr. Nor Haniza Sarmin**

Universiti Teknologi Malaysia, Malaysia.

**Prof. Dr. Intan Muchtadi**

Institut Teknologi Bandung, Indonesia.

**Prof. Dr. Pudji Astuti**

Institut Teknologi Bandung, Indonesia.

**Prof. Dr. Mahmut Kuzucuoglu**

Middle East Technical University, Turkey.

**Prof. Dr. Ismail Guloglu**

Dogus University, Turkey.

**Prof. Dr. Nikolai Vavilov**

St. Petersburg State University, Russia.

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Indian Institute of Technology Madras, India.

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Indian Institute of Science, India.

**Prof. Dr. Sumana Hatui**

Indian Institute of Science, India.

**Prof. Dr. Mamta Balodi**

Indian Institute of Science, India.

## CALL FOR PAPERS

Topics include, but are not limited to:

- ◆ Group Theory
- ◆ Abstract and Linear Algebra
- ◆ Finite and Infinite Groups
- ◆ Presentation and Representation Theory of Groups
- ◆ Linear Groups and Related Topics
- ◆ Geometric Groups
- ◆ Combinatorial Groups
- ◆ Topological Groups
- ◆ Algebraic Graph Theory
- ◆ Probabilistic Methods in Group Theory
- ◆ Crystallographic Groups, Quantum Groups and Quantum Computations
- ◆ Number Theory and Cryptography
- ◆ Algebraic Structures of Fuzzy Sets, Rough Sets, Soft Sets, Neutrosophic Sets and Other Systems
- ◆ Algebraic Structures for Fractals, Chaos and Dynamical Systems
- ◆ Algebraic Structures in Data Science, Artificial Intelligence and Security Systems
- ◆ Applications of Group Theory in Science, Engineering and Technology

Research papers in other fields having algebraic related topics are also welcome.

## IMPORTANT DATES

Last Date for Abstract Submission : **20<sup>th</sup> January 2021**  
Acceptance Notification : **31<sup>st</sup> January 2021**  
Last Date for Registration : **10<sup>th</sup> February 2021**  
Registration Confirmation : **15<sup>th</sup> February 2021**  
Conference Dates : **04<sup>th</sup> – 06<sup>th</sup> March 2021**

## ABSTRACT SUBMISSION DETAILS

The authors are pleasingly invited to submit the extended abstract of papers of their original, unpublished, research contribution which is not currently under review by another conference or journal. Only the accepted and registered papers will be allowed to present in the conference.

The authors are requested to electronically submit their extended abstract as per the given template (available in Downloads menu of the conference website) through **EasyChair Conference Management System** by using the following web link.

<https://easychair.org/conferences/?conf=6bigtc2021>  
<https://easychair.org/cfp/6BIGTC-2021>



## REGISTRATION DETAILS

Participants Category	Registration Fee*	
	Indian Delegates	Foreign Delegates
Students (UG / PG / Research Scholars)	300 (INR)	25 (USD)
Academicians / Faculties	500 (INR)	50 (USD)
Industrialists / Others	1000 (INR)	100 (USD)

\*The registration fee has to be paid along with GST (Tax) through the conference website.

## CONTACT DETAILS

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