

# **Dr. K N Anil Kumar**

**Assistant Professor**

**Department of Mathematics**

**Bapuji Institute of Engineering and Technology,**

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## **RESEARCH INTEREST:**

Graph Theory, Numerical Methods, Differential Equations, Differential Geometry.

## **TEACHING EXPERIENCE:** Having 13 years of teaching experience

Worked as:

- Lecturer in Mathematics Department, Vyshnavi Chethana P.U College, Davangere from June 2012 to Aug 2012.
- Lecturer in Chethana Hitech College of management, Davangere from Sep 2012 to Feb 2014.
- Assistant Professor from Feb 2014 to till date

## **EDUCATION**

- Ph.D. (Mathematics) from VTU, Belagavi, 2022.
- M.Sc. (Mathematics) from Davangere University, Davangere, 2012 with first class.
- B.Ed. (Mathematics & Physics) from Kuvempu University, Nuthana College of Education, Davangere, 2009 with Distinction.
- B.Sc. (Mathematics, Chemistry & Physics) from Kuvempu University, D.R.M Science College, Davangere, 2008 with First class with Distinction.

## **PROFESSIONAL MEMBERSHIP**

- Member of Indian Society for Technical Education ( **LM125354** )

## **PUBLICATIONS**

- 1) M.C. Shanmukha, N.S. Basavarajappa, **K.N. Anil Kumar**, A Usha, “Molecular structure investigation of Anticancer drugs by topological indices”, Italian Journal of Pure and applied Mathematics (Scopus), Vol. 46 (2021), 972-983.
- 2) **K.N. Anil Kumar**, M.C. Shanmukha, N.S. Basavarajappa, C.M. Veena, K.C. Shilpa, “Cyclohexane based isomers discrimination using topological indices”, Malaya Journal of Matematik, Vol. 9, No.1, (2021), pp. 524-532, <https://doi.org/10.26637/MJM0901/0088> (IF-4.529).
- 3) M.C. Shanmukha, N.S. Basavarajappa, **K.N. Anil Kumar**, K.C. Shilpa, “Generalized reciprocal sanskruti index: chemical applicability and bounds”, Letters in Applied NanoBioScience, Vol. 9 No.4, (2020), pp. 1595-1601 <https://doi.org/10.33263/LIANBS94.15951601>,
- 4) **K.N. Anil Kumar**, N.S. Basavarajappa, M.C. Shanmukha, A. Usha, “Reciprocal Atom-bond connectivity and Fourth Atom-bond connectivity indices for Polyphenylene structure of molecules”, Eurasian Chemical Communications, Vol. 2, (2020), pp. 1202-1209, <https://doi.org/10.22034/ECC.2020.255902.1095>
- 5) **K.N. Anil Kumar**, N.S. Basavarajappa, M.C. Shanmukha, K.C. Shilpa, “Degree-Based Topological Indices on Asthma Drugs with QSPR Analysis during Covid-19”, European Journal of Molecular & Clinical Medicine, Vol. 7 No. 10, (2020), pp. 53-66. (IF- 8.11)
- 6) M.C. Shanmukha, N.S. Basavarajappa, **K.N. Anil Kumar**, A. Usha, “Degree based topological indices for DOX-loaded PEG-PASP polymer”. Jnanabha, Vol. 50 No.1, (2020) pp. 92-104.
- 7) M.C. Shanmukha, **K.N. Anil Kumar**, N.S. Basavarajappa, K.M. Niranjan, “Topological indices on properties of line graph of subdivision of plane graphs”, Advances in Mathematics: Scientific Journal, Vol. 9 No. 4, (2020), pp. 2121-2135, <https://doi.org/10.37418/amsj.9.4.72>, (IF- 1.494).
- 8) **K.N. Anil Kumar**, N.S. Basavarajappa, M.C. Shanmukha, “QSPR analysis of Alkanes with certain degree based topological indices”. Malaya Journal of Matematik, Vol. 8, No. 1, (2020) pp. 314-330. <https://doi.org/10.26637/MJM0802/0003>, (IF-4.529).
- 9) M.C. Shanmukha, N.S. Basavarajappa, **K.N. Anil Kumar**, “Predicting Physico-chemical Properties of Octane isomers using QSPR approach”, Malaya Journal of Matematik, Vol. 8, No. 1, (2020) pp. 104-115, <https://doi.org/10.26637/MJM0504/0018>, (IF-4.529).
- 10) N.S. Basavarajappa, **K.N. Anil Kumar**, “Conservative concircular curvature Tensor with respect to semi-symmetric metric connection on  $K$  – Contact and Trans-Sasakian Manifolds”, Int. Jour of Latest Tech. in Engineering Management and Applied Sciences, Vol. 4, No. 3, (2015), pp. 104-109. (IF- 5.471)

## **SHORT TERM COURSES/WORSHOPS**

### **Attended:**

- **“National Webinar on Fluid Mechanics and its Applications in Engineering Science”** held during 24<sup>th</sup> to 27<sup>th</sup> June -2020 at Department of Mathematics, PES Institute of Technology and Management, Shivamogga, Karnataka.
- Webinar on **“Biofuel - A Promising Alternative Fuel”** held on **22<sup>nd</sup> June, 2020** at Department of R & D and Chemistry, **Don Bosco Institute of Technology, Bengaluru** in association with Institution of Engineers (India), KSC and IEEE.
- Webinar on **“Applications of Differential Equations”** on **19th June 2020** at Department of Mathematics, **Cambridge Institute of Technology North Campus Kundana, Bengaluru-562110.**
- Online one week Faculty development Programme on **“Recent Advances in Material Science and Mathematical Application”** held during **15th June to 19th June 2020** organized by Department of Basic Science, **Ghousia College of Engineering, Ramanagara-562159**, Karnataka, India.
- Webinar on **“Boost your Immune system by Natural-Biotics”** on **12<sup>th</sup> June 2020** at Department of Chemistry, **RV College of Engineering**, Bengaluru-59, Karnataka.
- National Conference on **“Recent Developments of Mathematics in Industrial Applications”** held on 11<sup>th</sup> and 12<sup>th</sup> April, 2019 at Department of P G Studies and Research in Mathematics Kuvempu University, Shankaraghatta, Shivamogga.
- **“GanitaShikshakaraKaryagara”** held on 18<sup>th</sup> and 19<sup>th</sup> January, 2019 at Department of Mathematics, BIET ,Davanagere.
- Two days workshop on **“Advanced Mathematical Techniques in Research and Engineering Applications** held on 29<sup>th</sup> and 30<sup>th</sup> January 2018 at GMIT, Davangere, Karnataka, India.
- One day Orientation Program on **“Preparation for UGC-NET and SLET examination”** organized by MCA Forum and in association with NSS of Bapuji Institute of engineering and technology, Davangere on 19<sup>th</sup> April 2017.
- International conference on **“Differential Geometry, Analysis and Fluid mechanics”** held on 4<sup>th</sup> to 5<sup>th</sup> February, 2016 at Department of P G Studies and Research in Mathematics Kuvempu University, Shankaraghatta, Shivamogga.
- Workshop on **“Modern Approach for Effective Management of Municipal Solid Waste”** held on 14<sup>th</sup> November, 2015 at Department of Civil Engg. BIET, Davangere.
- Workshop on **“A Pedagogy for Effective Use of Mathematics for Research in Science and Technology”** held on 27<sup>th</sup> to 31<sup>st</sup> July ,2015 at JNNCE, Shivamogga, Karnataka, India.

### **Organized:**

- Organized Two days National level Webinar on “Advances in Mathematical Sciences and its Applications in Engineering and Research (AMSAER)-2021” by Department of Mathematics, Bapuji Institute of Engineering & Technology, Davangere, Karnataka on 11<sup>th</sup> and 12<sup>th</sup> July 2021.
- Organized Student Induction Program Phase II for First Year students from 10-02-2020 to 15-02-2020
- Organized National Mathematics Day in the Department of Mathematics, BIET on 28.12.2019.
- Organized Student Induction Program Phase I for First Year students from 01-08-2019 to 10-08-2019.
- Coordinator for Student Induction program from 2018-19 and 2019-20.
- Summer Internship conducted for Rural High School Students on “**Technology Barrier Reduction program**” between **22<sup>nd</sup> April 2019 to 10<sup>th</sup> May 2019** at Bapuji Institute of Engineering & Technology, Davangere, Karnataka, Organized by Foundation for Advancement of Education and Research and sponsored by Zebra Technologies, Bangalore.
- “One day National Conference on Recent Trends on the Applications of Science in Engineering” (NCRSE-2018) on 28<sup>th</sup> September 2018 at BIET, Davanagere.
- Summer Internship conducted for Rural High School Students on “**Technology Barrier Reduction program**” between **16<sup>th</sup> April 2018 to 5<sup>th</sup> May 2018** at Bapuji Institute of Engineering & Technology, Davangere, Karnataka, Organized by Foundation for Advancement of Education and Research and sponsored by Zebra Technologies, Bangalore.
- “**One Day Seminar on Science in Engineering**” (SSE-2017) on 15<sup>th</sup> December, 2017 at Dept. of Mathematics, BIET, Davangere.
- Summer Internship conducted for Rural High School Students on “**Technology Barrier Reduction program**” between **24<sup>th</sup> April 2017 to 12<sup>th</sup> May 2017** at Bapuji Institute of Engineering & Technology, Davangere, Karnataka, Organized by Foundation for Advancement of Education and Research and sponsored by Zebra Technologies, Bangalore.
- Summer Internship conducted for Rural High School Students on “**Technology Barrier Reduction program**” between **18<sup>th</sup> April 2016 to 6<sup>th</sup> May 2016** at Bapuji Institute of Engineering & Technology, Davangere, Karnataka, Organized by Foundation for Advancement of Education and Research and sponsored by Zebra Technologies, Bangalore.

## **PAPERS PRESENTED**

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- Paper entitled “QSPR Analysis of Alkanes with Certain Distance Based topological indices” in International conference (ICICST-2019) organized by Don Bosco Institute of Technology, Bengaluru from 19<sup>th</sup> – 23<sup>rd</sup> December 2019.

## **RESPONSIBILITIES**

Worked as:

- QPDS member for VTU examinations
- Admission committee member
- Website coordinator for department
- Asst. Coordinator for VTU Valuations December-January 2018 at BIET Valuation Centre, Davangere
- KSCST Seminar Projects-2018 on 10<sup>th</sup> August 2018 at BIET, Davanagere.
- Guest Committee member for “National Seminar on New Trends in Bio-Technology and 14<sup>th</sup> Conference of Society of Cytologists and Geneticists” from 06<sup>th</sup> to 8<sup>th</sup> March 2019 at BIET, Davanagere.
- Judge Committee member in DAVANA-2019

## **SUBJECTS TAUGHT**

Engineering Mathematics I , Engineering Mathematics II , Engineering Mathematics III , Engineering Mathematics IV, Advanced Mathematics I , Advanced Mathematics II, Calculus and Linear algebra, Advanced Calculus and Numerical Methods.

Residential Address

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