

Eligibility & Regulations:

1. <http://research.vtu.ac.in/>,
2. <https://vtu.ac.in/en/ph-d/#>
3. <https://vtu.ac.in/en/msc/>
4. <https://vtu.ac.in/en/ph-d-syllabus/>,

Research Supervisor:

SI No.	Name	Designation	Specialisation
1.	Dr.C S Nagabhushana	Professor & HOD	Numerical quadrature

Publications:

1.Dr C S Nagabhushana, Ksrinivasa rao, some degree-based connectivity indices of Tad-pole Graph ,International journal of Innovative Technology and Exploring Engineering (IJITEE),ISSN:2278-3075,Volume-8,Issue-2S6,August-2019

2.C.S. Nagabhushana and H M Chudamani Split and equitable Domination of some special graph International journal of Science Technology and engineering vol 4 issue2 page50-60 Aug-2017 ISSN 2349-784X

3.H.T. Rathod and C.S. Nagabhushana Finite Element Analysis of Linear Elastic Torsion for Regular Polygons International journal of engg and computer science.ISSN:2319-7242 Vol 5 issue 10 oct-2016 ,page no 18413-18427

4.H.T. Rathod and C.S. Nagabhushana Numerical Integration Over A And Gauss Legendre Formulas International journal of engg and computer science

ISSN:2319-7242 Vol 5 issue 4April-2016 ,page no 16272-16242

5.H.T. Rathod and C.S. Nagabhushana ,A New Approach to Automatic Generation of All Quadrilateral Finite Element Mesh for Planar Multiply Connected Regions .International journal of Engg and computer science

6.H T Rathod, C S Nagabhushana “SYMBOLIC COMPUTATION OF HIGH ORDER GAUSS LEGENDRE QUADRATURE RULES VARIABLE PRECISION ARITHMETIC” International e-Journal of Numerical Analysis and related Topics volume(6), March 2011, pp.1-8.ISSN:1687-787X

7.H T Rathod, C S Nagabhushana “SYMBOLIC COMPUTATION OF HIGH ORDER GAUSS BOND QUADRATURE FORMULAS WITH VARIABLE PRECISION

ARITHMETIC” International e-Journal of Numerical Analysis and related Topics volume(6), March 2011, pp.1-18.ISSN:1687-787X

8.H T Rathod, C S Nagabhushana “SYMBOLIC COMPUTATION OF HIGH ORDER GAUSS LOBATTO QUADRATURE FORMULAS WITH VARIABLE PRECISION ARITHMETIC” International e-Journal of Numerical Analysis and related Topics volume(6), March 2011, pp.52-85ISSN:1687-787X

9.H T Rathod, C S Nagabhushana “*SYMBOLIC COMPUTATION OF HIGH ORDER NEWTON COTES CLOSED FORMULAS WITH VARIABLE PRECISION ARITHMETIC*” International e-Journal of Numerical Analysis and related Topics volume(6), March 2011, pp.9-27.ISSN:1687-787X

10.H T Rathod, C S Nagabhushana “*SYMBOLIC PROCESSING TO COMPUTE THE NEWTON COTES CLOSED FORMULAS OF HIGH ORDER*” International e-Journal of Numerical Analysis and related Topics volume(5), September 2010, pp.43-62.ISSN:1687-787X

Research Projects:

Ongoing Project 1:

Research Supervisor: Dr. CS Nagabhushana			
Title: All pentagonal Mesh generation over a plane regions for Finite element Analysis			
Research Scholar	USN	Full time/ Part time	Status of Progress
CHUDAMANI h m	1HK16PGJ03	Part time	Course Work going on

Numerical Quadrature

Numerical integration or quadrature is a very important and interesting topic of numerical methods. The main objective in numerical integration is to develop techniques that efficiently estimate the value of a definite integral. Numerical methods for integration approximate a definite integral of a given function by a weighted sum of function values at specified points. Of course many integrals can be evaluated in closed form by identifying the integrand as derivative of another function and then applying the fundamental theorem of integral calculus. Hand book of table of integrals are available for this purpose. There is also commercial software available for performing symbolic computations that include the evaluation of common derivatives and integrals. However, there are instances where closed form expressions for an integral do not exist. Even when an explicit primitive is known, its use may not be easy. Another difficulty is encountered in practice, such as those cases in which

the function is defined in terms of discrete data, not a formula. These are the primary motivations for studying the techniques of numerical integration..