

**Name:** Dr. Abhishek Das  
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**Educational Qualification(s):**

Qualification(s)	University
M.Sc.	IIT Guwahati
PhD	IIT Guwahati

**Other Information:**

a) Publication details.

1. Deepti Moyi Sahoo, Abhishek Das & Snehashish Chakraverty, Interval data-based system identification of multistorey shear buildings by artificial neural network modelling, *Architectural Science Review*, 58, 244-254, 2015
2. A. Das, S. Natesan, Uniformly Convergent Hybrid Numerical Scheme for Singularly Perturbed Delay Parabolic Convection-Diffusion Problems on Shishkin Mesh, *Applied Mathematics and Computation*, 271, 168 - 186, 2015.
3. A. Das, S. Natesan, Second-Order Uniformly Convergent Numerical Method for Singularly Perturbed Delay Parabolic Partial Differential Equations, *International Journal of Computer Mathematics*, doi:10.1080/00207160.2017.1290439.

(b) Details of Seminar/Workshop/Conference.

Seminar

1. Quantum computer

It is just a new type of computer that promises to provide mind boggling performance that can do a big job in a matter of seconds. Combining physics, mathematics and computer science, quantum computing has developed in the past two decades from a visionary idea to one of the most fascinating areas of quantum mechanics. In 1982, the Nobel prize-winning physicist Richard Feynman thought up the idea of a 'quantum computer', a computer that uses the effects of quantum mechanics to its advantage. The recent excitement in this lively and speculative domain of research was triggered by Peter Shor (1994). Classical computing is based on bits. It is based on qubits. By quantum computing we can speed-up classical computation.

2. Perturbation Methods for Differential Equations

The governing equations of physical, biological and economical models often involve features which make it impossible to obtain their exact solution. I will describe the application of perturbation expansion techniques to the solution of such differential equations. This analytical techniques provides an alternative to the direct computer solution.

## Conference

(1) A. Das and S. Natesan. Uniformly Convergent Hybrid Numerical Scheme for Singularly Perturbed Delay Parabolic Convection-Diffusion Problems on Shishkin Mesh. NCRAMA 2014, Babasaheb Bhimrao Ambedkar University.

(2) A. Das and S. Natesan. Richardson Extrapolation Technique for Singularly Perturbed Delay Parabolic Convection-Diffusion Problems on Shishkin Mesh. ICFM 2015, Gauhati University.

(3) A. Das and S. Natesan. The Parameter Uniform Numerical Method for Two-Dimensional Singularly Perturbed Parabolic Delay Convection-Diffusion Problems on Shishkin Mesh. ICMMDESCA 2016, IIT Kanpur.

## Workshop

Advanced Level Workshop on Singularly Perturbed Partial Differential Equations: Theory, Computation and Application (AWSPPDES-2016), held at IIT Kanpur, March 23th-27th, 2016.

(c). Professional membership of reputed bodies if any.

Member of the American Mathematical Society. (Oct, 2015 – April, 2017)