PRESS RELEASE

An International Conference on the occasion of Silver Jubilee of the Indian Society of Industrial and Applied Mathematics (ISIAM) is scheduled during 29th -31st January 2016 at Sharda University, Greater Noida. Mainly it is the joint venture of Sharda University and ISIAM but Indian government agencies like NBHM, DST, INSA, DRDO, etc. and international agencies such as ICTP and CDC are also providing financial assistance for this conference. Internationally reputed scientists, engineers and mathematicians namely Prof. K.R. Sreenivasan (Ex-Director, ICTP, Trieste and now a senior functionary of New York University, USA), Prof. Leon O. Chua (University of Berkeley, renowned specialist of neural networks, chaos and non-linear circuits), Prof. Barbara Lee Keyfitz (Ohio State University, Former President ICIAM and Field Institute), Prof. Maria J. Esteban (CNRS, Paris and President ICIAM), Prof. Alistair Fitt (Vice Chancellor, Oxford Brooke University and Former Secretary ICIAM), Prof. R. Lozi (Nice, France, well known for Lozi Maps), Prof. Guenter Leugering (Vice President International Affairs Friedrich-Alexander University, Erlangen-Nurnberg, Germany), Prof. Maria Skopina (Euler Institute of Mathematical Sciences, Saint Petersburg State University, Russia), etc. have kindly agreed to participate and deliver lectures in this Conference. This Conference will provide an opportunity for young

scientists and engineers to learn systematic developments of those areas of mathematics which are essential for proper understanding of any challenging problems of the modern times. It will be clearly reflected in the Keynote Address of Prof. K.R. Sreenivasan and Prof. L. Chua.

ISIAM was established in 1990 to promote the teaching and research of those areas of mathematics which have great potential to solve problems of science, engineering, medical and social sciences. In the last 25 years the Society have endeavoured to achieve this goal. It has popularize this theme by organizing 12 international conferences in different institutions of India, publishing their proceedings with leading publisher like McMillan India, Longmann-Pitman Lecture Notes in Mathematics, Narosa, Kluwer Academic Publisher, Marshal Deker, Taylor and Francis, American Institute of Physics, World Scientific Publisher, Springer. More than three dozen eminent scholars like Prof. I. Sloan (past President ICIAM), Prof. Peter Markovich (Newton Institute, Cambridge), Prof. Alain Arneodo (France), Prof. I.S. Duff (Director, Rutherford Laboratory of Numerical Analysis, London), Prof. M. Broakate (Technical University Munich, Germany) have delivered lectures in our earlier conferences. Very recently ISIAM has entered into an agreement with Springer to bring out a series on Industrial and applied Mathematics. Two books have already been published while several proposals of distinguished mathematicians of the world are under review by the Editorial Board.

The Conference will be devoted to emerging themes of industrial and applied mathematics such as image processing with special focus on medical imaging, biometrics and tomography. It is not an exaggeration to say that these concepts have wide applications in oil industry, brain studies, seismology, and other branches of science and technology. A recent branch known as wavelet methods will be discussed by several experts attending this Conference. It is a refinement of Fourier analysis which is in practice since past 200 years. The striking point is that whenever the techniques of Fourier analysis are replaced by wavelet methods, we obtain better results. By Fourier series we can analyze a process in time domain that is we can study a process that when it has happened but we cannot say where it has happened. However by using wavelet method we can study that when it has happened at where it has happened. The Conference will also be dealing with various kinds of mathematical methods, models and algorithm for atmospheric science, finance and nanotechnology. Time series analysis and data mining will also be explored. Broad areas of mathematics like approximation theory, analytic and numerical solution of partial differential equations, modeling real world problems, functional analysis and harmonic analysis will be discussed.

India is well known throughout the world for its contribution to the ancient mathematics and even it is generally recognized by the good work in modern pure mathematics, specially by the work of Tata Institute of Fundamental Research, Bombay and Central Universities. Several

important conferences have been organized to promote and popularize the contribution of celebrated Indian mathematician, M.S. Ramanujan. It is well known that most of the educational institutions of higher learning in our country mainly focus on pure form of mathematics, definition, existence and uniqueness theorems, lemmas and corollaries. Generally problems are direct and well posed (solution exists which is unique and stable). In real world, most of the problems are not of this nature. Those problems which are not well posed and direct have been ignored for a long time. Illustration of mathematical problems with physical phenomenon or processes and interpretation of solutions and its visualization or formulation of physical phenomenon in appropriate mathematical concepts is not emphasized in the teaching of mathematics. The Society which is celebrating its 25 years of its existence was formed to provide training and research to solve the untouched problems which are quite challenging and related to many real world problems.

On the Silver Jubilee occasion of ISIAM, development of industrial and applied mathematics in India has been reviewed and the article based on it is published in the Souvenir to be brought out on this occasion. We observe that India has produced brilliant applied mathematicians notably Nobel Laureate Subrahmanyam Chandrasekhar, Prof. Srinivasan S.R. Vardhan, Abel Prize winner and recipient of US National Medal of Science, Prof. C.R. Rao (recipient of US National Medal of Science) and Prof. Thomas Kailath (recipient of US National Medal of Science), Prof. K.R. Sreenivasan (a member of the National Academy of Sciences, National Academy of Engineering, a fellow of the American Academy of Science and Arts and former Director ICTP- a very prestigious UNESCO organization). Currently there is a strong group of applied mathematics at IIT-Bombay led by Prof. A.K. Pani. The Tata Institute of Fundamental Research, Centre of Applicable Mathematics, Bengaluru and Indian Institute of Sciences, Bengaluru are carrying substantial research work in industrial and applied mathematics. We are delighted to note that these three centers of industrial and applied mathematics are well represented in this Conference. In fact, ISIAM is honouring during its Silver Jubilee celebration Prof. A.K. Pani, IIT-Bombay, Prof. G. Rangarajan, IISc Bengaluru and Prof. G.V.D. Gowda, TIFR CAM Bengaluru for their outstanding contribution in the field of industrial and applied mathematics. On this occasion Dr. Zakir Husain Award established by the Duty Society of Aligarh Muslim University will be presented to Prof. A. Adimurthi, TIFR, CAM, Bengaluru and Prof. Mushahid Husain, Vice Chancellor, M.J.P. Rohilkhand University, Bareilly.

On this occasion- Silver Jubilee celebration of ISIAM 2016, the Indian Institute of Technology Bombay has plane to organized a 5 days advanced level workshop on an emerging theme – Variational Inequality and Applications under national programme on Differential Equations: Theory Computation & Applications. Fifty brilliant research scholars & young faculty members from all over the country have been selected to participate in this workshop. Distinguished

experts of this field from India & abroad will deliver series of lectures between 24th and 28th of January, 2016. Participants of the workshop will also attend the conference.

It is not out of place to say few words about the institution hosting the Conference. The Sharda University was established in 2009 by untiring efforts of Mr. P.K. Gupta, Chancellor and Mr. Y.K. Gupta, Pro-Chancellor. Currently, Sharda University having highly qualified faculty members has students from more than 30 countries. It comprises of Schools of Basic Sciences & Research, Engineering and Technology, Medical Sciences and Research, Architecture and Planning, Art, Design and Media Studies, Law, Allied Health Science, Language and Culture, Nursing Science and Research. Its faculty members are publishing their research papers, books, monographs, conference proceedings with leading publishers of the world such as Springer, Taylor and Francis, American Institute of Physics, World Scientific Publisher, Elsevier, etc.

Although Sharda University is comparatively young Institution but determination of the Chancellor and Pro-Chancellor has made it possible to organize a conference of this magnitude at this scale. Honb'le Shri Rajnath Singh, Home Minister, Govt. of India who is Physicist by profession, has kindly squeezed time out of his extremely busy schedule to inaugurate Silver Jubilee Conference of ISIAM on 29th January 2016. This shows his keenness to promote science and technology in the country. Hon'ble Minister will also inaugurate the Cardiovascular Unit of School of Medical Sciences and Research.

Professor Amiya Kumar Pani
IIT, Bombay

Dr. Amiya K. Pani is Professor at IIT, Bombay. He is well known for his research work in the area of numerical approximations of partial differential equations. His expertise includes construction, stability and convergence analysis of finite element methods, finite difference schemes, orthogonal spline collocation methods for free boundary problems, partial integro-differential equations, coupled equations in Oil Reservoir Studies, evolutionary variational inequalities and scientific computations for industrial applications.

Professor Pani has collaborated with distinguished mathematicians like Prof. Graeme Fairweather (Colorado School of Mines) on alternate mixed finite element methods and orthogonal spline collocation methods for partial integro differential equations, Prof. Jin Yun Yuan and Prof. D. Pedro (UFPR, Curitiba, Brazil) on the theoretical analysis and computational methods for Viscoelastic Fluid Flow Problems, and Prof. S. K. Chung (Seoul National University, Korea) on finite element analysis of fourth order evolution equations and Prof. Kannan Moudgalya (Chemical Engineering Department, IIT Bombay) on efficient numerical methods for differential algebraic equations and on mathematical as well as computational methods for Particle Size Distributions in Emulsion Polymerisation Process.

Professor Pani is a fellow of Indian Academy of Sciences and National Academy of Sciences, India. Dr. Pani was awarded the Best Young Mathematician for his outstanding contributions to Numerical Analysis, Partial Differential Equations and Industrial Mathematics by the Indian Society for Industrial and Applied Mathematics.

Indian Society of Industrial and Applied Mathematics (ISIAM) honours Professor Pani for his outstanding contribution in Applied Mathematics on the occasion of Silver Jubilee of ISIAM (2016).