

DSE - TIES 2013

Conference on



INDIAN ECONOMY

ISSUES AND PERSPECTIVES



August 23 - 24, 2013

PROGRAMME



Department of Economics
Delhi School of Economics
University of Delhi

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प्रधान मंत्री

Prime Minister

MESSAGE

I am very happy to know that the Department of Economics, of the Delhi School of Economics, University of Delhi is organising a conference on the broad theme of "Indian Economy: Issues and Perspectives" as part of the Golden Jubilee Celebrations of The Indian Econometric Society (TIES).

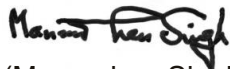
The Indian economy is presently passing through a critical phase. There has been a decline in the growth rate of GDP, there are persisting inflationary pressures, the current account deficit is relatively high and the rupee has depreciated substantially vis-a-vis the dollar. These are important issues for study by policy practitioners and academics alike.

The Indian Econometric Society has a glorious record of excellence with most of our pre-eminent economists having been associated with its work. It has made significant contributions to our understanding of economic problems and issues, using the most rigorous scientific tools. I extend my best wishes to the Indian Econometric Society in its future endeavours.

I am confident that by hosting the DSE-TIES Conference 2013, the Department of Economics of the Delhi School of Economics will promote greater interest in econometric methods for research especially among our young researchers.

I wish DSE-TIES 2013 all success.

New Delhi
20 August, 2013


(Manmohan Singh)

Message from the Head of the Department

The Department of Economics, Delhi School of Economics, University of Delhi is pleased and privileged to host the DSE-TIES 2013 conference on “Indian Economy: Issues and Perspectives”. This conference is being organized as part of the Golden Jubilee celebrations of The Indian Econometric Society (TIES), the pre-eminent society for economists in India.

The Department has a long-standing association with TIES. Three former faculty members of the Department, viz., Professors Sukhamoy Chakravarty, Amartya Sen and A. L. Nagar were among the founders of TIES and played a major role in its promotion and development. Professor A. L. Nagar continues to serve as a life member of the Board of Trustees of the TIES Trust along with Professors K. L. Krishna and V. Pandit who have been instrumental in carrying the work forward. Professors Sukhamoy Chakravarty, A. L. Nagar, K.L. Krishna and V. Pandit have also served as Presidents of TIES. Another former faculty member, Professor Kaushik Basu, is currently the President of TIES.

The Journal of Quantitative Economics run by TIES was also housed in the Department since its inception in 1983 through 2000 with Professor A. L. Nagar as Editor-in-Chief. Professor K. L. Krishna served as Managing Editor and Professor Kaushik Basu as Joint Managing Editor until 1994. From 1995 through 2000, Professor R.K. Das served as Managing Editor while Professor T. C. A. Anant was Joint Managing Editor.

Therefore, the DSE-TIES 2013 conference is a small way of celebrating the close ties between the Department of Economics and the Indian Econometric Society.

The conference covers various aspects of the Indian economy including policy perspectives; climate change; environmental, productivity, labour and poverty issues as well as macroeconomic challenges facing the Indian economy.

I extend a warm welcome to all participants and take this opportunity to acknowledge and thank those whose contributions made this conference possible. First and foremost, I thank the speakers and session chairs for their participation. Their work is the *raison d'être* for this conference. I hope that this conference sparks fresh ideas and forges new research partnerships. I profusely thank EXIM Bank for its generous financial support. I also thank the United States-India Educational Foundation (USIEF) for its kind support. I am very grateful to the University of Delhi for providing state-of-the-art infrastructural support to host DSE-TIES 2013.

I also thank the members of the Department of Economics, both faculty and students, who helped with the organizational tasks related to the conference. I am also very grateful to the staff of the Department of Economics and the Centre for Development Economics for their invaluable back office support.

Pami Dua

Head, Department of Economics
Delhi School of Economics
University of Delhi
and
Vice President, TIES

Department of Economics, Delhi School of Economics, University of Delhi

The Delhi School of Economics (DSE) was established in 1949 as a centre for training and research in economics, with India's first Prime Minister, Pandit Jawaharlal Nehru, as its President and V.K.R.V. Rao, as its Founder-Director. Over time, other disciplinary departments have been added to DSE which now comprises the Departments of Economics, Geography and Sociology of the University of Delhi, India's leading University.

The Department of Economics is considered to be one of the country's premier academic institutions and is acknowledged as a centre for excellence in post-graduate teaching and research. The Department has been the home of the prestigious Indian Economic Review since 1952. It also publishes an active working paper series which features the research of its faculty and visitors.

The Department supports Masters, M.Phil and Doctoral programmes in Economics. The Masters programme draws a huge number of applicants from all over the country and many from abroad, and is regarded as one of the best in Asia. It has a strong theoretical and quantitative focus with an emphasis on empirical applications. Its hallmark is the dynamic curriculum offered, that is continuously reviewed and updated in line with latest developments in the field. The Department also continues to attract research students for its M.Phil. and Ph.D. programmes that have grown considerably over the past few years.

The Department regularly organizes conferences, workshops and seminars. An annual event is the Winter School which brings in distinguished economists from around the world to interact with doctoral students and faculty.

In 2012, the Department organized two major international conferences, namely, a conference in memory of Professor Suresh Tendulkar with the theme *Perspectives on Indian Economic Development and Policy* and the *Asian Meeting of the Econometric Society* (AMES 2012). The international Econometric Society is the most prestigious learned society in the field of economics. The Asian Meeting is one of the five regional meetings of the Society and this was the first time that the unified Asian Meeting was held in India.

The Department is proud of its many past faculty members who have made significant contributions to the economics discipline. Foremost among these are the Nobel laureate Amartya Sen (Welfare Economics and Social Choice Theory), Jagdish Bhagwati (Trade Theory) and Sukhamoy Chakravarty (Capital and Development Theory). A later generation of significant contributors includes A. L. Nagar (Econometric Theory), Prasanta Pattanaik (Social Choice Theory), Pranab Bardhan (Development Theory), Kaushik Basu (Microeconomic and Development Theory) and Bhaskar Dutta (Social Choice Theory). A large number of other distinguished economists have served as faculty in the Department.

The Department is also proud of its numerous alumni who have gone on to distinguished academic careers, including a large number of Fellows of the Econometric Society and awardees of other academic honours and prizes. Department alumni can be found in most major Economics, Business and Public Policy departments worldwide, very often as members of the faculty, and even more commonly, as doctoral students.

We are proud to say that our Prime Minister, Dr. Manmohan Singh, was a member of the Department faculty. His career highlights the Department's service to the nation and its continuing engagement with policy-formulation and planning. Various members of the faculty, past and present, and alumni have served as ministers and high-level functionaries in the government, as central bank governors, as economic advisers to the government and international bodies, as members of the Planning Commission, as regulators, as members of important government commissions and committees, as public intellectuals and as public-spirited activists.

The Department's alumni represent an important point of engagement with the private corporate sector of the economy. While the Department's students have always found jobs in journalism, the media, finance, consultancy and other areas of the private sector, the number of alumni in these fields has grown manifold in the past two decades of economic growth and liberalization. We are proud of the many alumni who are now leaders of corporate India in many fields.

The Department is building on this evolving tradition of distinction and continues to perform the functions of academic research, training and public service. The current faculty specializations span a wide spectrum of sub-disciplines. Based on its research profile, the Department is currently ranked highest amongst economics departments in India by RePEc (Research Papers in Economics), a global electronic archive of working papers and publications in economics and finance. Faculty profiles are listed on www.econdse.org/faculty/.

In its continuing quest for excellence, the Department is privileged to be supported by the University in having a state-of-the-art computing and physical infrastructure and a world class library.

INDIAN ECONOMY : ISSUES AND PERSPECTIVES

Conference organized by
**Department of Economics, Delhi School of Economics,
University of Delhi**
as part of the Golden Jubilee Celebrations of The Indian Econometric Society (TIES)

Friday, August 23rd and Saturday, August 24th, 2013

Venue:

Sessions: 1 - 3 & 9 : Swami Vivekananda Hall, Delhi School of Economics
Sessions: 4 - 8 : AMEX Seminar Room, Delhi School of Economics

P R O G R A M M E

☑ FRIDAY, AUGUST 23

REGISTRATION & TEA

9:00 a.m. – 9:30 a.m.

SESSION 1 : INAUGURAL

9:30 a.m. – 11:00 a.m.

- **Welcome Address**
Prof. Pami Dua, Head, *Department of Economics, Delhi School of Economics, University of Delhi & Vice-President, TIES*
 - **Inaugural Address**
Prof. Dinesh Singh, *Vice Chancellor, University of Delhi*
 - **Keynote Address**
THE INDIAN ECONOMY - SOME IMMEDIATE CONCERNS
Dr. C. Rangarajan, *Chairman, Economic Advisory Council to Prime Minister*
 - **Vote of Thanks**
Prof. N. R. Bhanumurthy, *National Institute of Public Finance & Policy and Secretary, TIES*
- Chair:** Prof. Santosh Panda, *Director, Delhi School of Economics*

TEA BREAK

11:00 a.m. – 11:30 a.m.

SESSION 2 : DISTINGUISHED LECTURE

11:30 a.m. – 12:15 p.m.

- PROSPECTS AND CHALLENGES FOR TWELFTH PLAN
Shri Montek Singh Ahluwalia, *Deputy Chairman, Planning Commission*
- Chair:** Prof. Pulin B. Nayak, *Delhi School of Economics*

SESSION 3: CLIMATE CHANGE

12:15 p.m. – 1:00 p.m.

- CLIMATE CHANGE, GREEN GROWTH AND INDIA
Prof. Charles D. Kolstad, Stanford University

Chair: Prof. E. Somanathan, *Indian Statistical Institute, Delhi*

LUNCH BREAK

1:00 p.m. – 2:00 p.m.

SESSION 4: ENVIRONMENTAL ISSUES

2:00 p.m. – 3:30 p.m.

- CLIMATE CHANGE, FOOD PRICES, AND POVERTY IN INDIA
Prof. Bharat Ramaswami, Prof. E. Somanathan & Eshita Gupta, *Indian Statistical Institute, Delhi*
- LONG-TERM RAINFALL TRENDS IN INDIA: AN EXPLORATORY ANALYSIS
Dr. Subir Gokarn, *Brookings India* & Dr. Indrajit Roy, *Reserve Bank of India*
- CARBON SENSITIVE PRODUCTIVITY, CLIMATE AND INSTITUTIONS
Prof. Surender Kumar, *Department of Business Economics, University of Delhi* &
Dr. Shunsuke Managi, *Graduate School of Environmental Studies, Tohoku University*

Chair: Prof. Manoj Panda, *Institute of Economic Growth*

TEA BREAK

3:30 p.m. – 4:00 p.m.

SESSION 5: PRODUCTIVITY ANALYSIS

4:00 p.m. – 4:45 p.m.

- MEASUREMENT AND DECOMPOSITION OF A COBB DOUGLAS-LOWE INDEX OF TOTAL FACTOR PRODUCTIVITY GROWTH IN INDIAN BANKING
Prof. Subhash C. Ray, *University of Connecticut*

Chair: Prof. Rajat Kathuria, *Indian Council for Research on International Economic Relations*

☑ SATURDAY, AUGUST 24

SESSION 6: ASPECTS OF POVERTY

9:30 a.m. – 11:00 a.m.

- GROWTH, POVERTY AND MALNUTRITION: THE STATUS EFFECT
Prof. Sugata Marjit, *Centre for Studies in Social Sciences*
- FEMALE LABOR FORCE PARTICIPATION AND CHILD EDUCATION IN INDIA: EVIDENCE FROM THE NATIONAL RURAL EMPLOYMENT GUARANTEE SCHEME
Dr. Farzana Afridi, *Indian Statistical Institute, Delhi*

Chair: Prof. Aditya Bhattacharjea, *Delhi School of Economics*

TEA BREAK

11:00 a.m. – 11:30 a.m.

SESSION 7: LABOUR ISSUES

11:30 a.m. – 1:00 p.m.

- EMPLOYEE REFERRAL, SOCIAL PROXIMITY AND WORKER DISCIPLINE: THEORY AND EVIDENCE FROM INDIA
Prof. Amrita Dhillon, *University of Warwick*
- DETERMINANTS OF WOMEN'S LABOUR SUPPLY IN URBAN ORGANIZED SECTOR IN MUMBAI
Prof. Neeraj Hatekar, *University of Mumbai*

Chair: Prof. Sunil Kanwar, *Delhi School of Economics*

LUNCH BREAK

1:00 p.m. – 2:00 p.m.

SESSION 8 : MACROECONOMIC CHALLENGES IN INDIA

2:00 p.m. – 3:30 p.m.

- ESTIMATING THE INDIAN NATURAL INTEREST RATE AND EVALUATING POLICY
Prof. Ashima Goyal, *Indira Gandhi Institute of Development Research*
- ASYMMETRIC PRICE ADJUSTMENT: EVIDENCE FOR INDIA
Prof. M. Ramachandran, *Pondicherry University*
- DETERMINANTS OF MANUFACTURING GROWTH
Dr. Himanshu Joshi & Dr. Sonna Thangzason, *Reserve Bank of India*

Chair: Prof. D. M. Nachane, *Indira Gandhi Institute of Development Research*

TEA BREAK

3:30 p.m. – 4:00 p.m.

SESSION 9 : VALEDICTORY

4:00 p.m. – 5:00 p.m.

- **Valedictory Address**
INDICATORS FOR ASSESSING GOVERNMENT PERFORMANCE: PRINCIPLES AND CAVEATS
Prof. T.C.A. Anant, Secretary & Chief Statistician of India, Ministry of Statistics & Programme Implementation & Professor, Delhi School of Economics.
Chair: Prof. V. Pandit, *Sri Sathya Sai University and Formerly, Delhi School of Economics*
- **Closing Remarks**
Dr. Shreekant Gupta, *Delhi School of Economics*

A B S T R A C T S

SESSION 3: CLIMATE CHANGE

CLIMATE CHANGE, GREEN GROWTH AND INDIA

Charles D. Kolstad (*Stanford University*)

One of the major concerns of governments around the world contemplating reining in greenhouse gas emissions is what effect this will have on conventional economic growth. Few politicians are willing to appreciably slow down their economy in the process of reducing greenhouse gas emissions. Although this applies in developed countries, it is even more salient in developing countries with significant populations of the very poor. This paper will look at climate change through the lens of economics, with a particular emphasis on strategies for controlling greenhouse gas emissions without compromising growth. Detail from the Indian experience will be included.

SESSION 4: ENVIRONMENTAL ISSUES

CLIMATE CHANGE, FOOD PRICES, AND POVERTY IN INDIA

Bharat Ramaswami, E. Somanathan and Eshita Gupta (*Indian Statistical Institute, Delhi*)

We develop a simple two-sector (food and non-food) general equilibrium model for studying the long-run impact of climate change on food prices and the distribution of welfare in India. If the economy is closed to trade, a landless poor person is made significantly worse off by climate change as the price of food rises considerably. If agricultural productivity falls by 10%, then such a person's real income falls by 12%.

For nearly all farmers, landholdings are too small for the resulting higher land rent to compensate for the fall in real income. Opening the economy to trade makes the poor (who depend mainly on labor rather than land for their incomes) better off by moderating the rise in the price of food. Thus, it really matters to a landless poor person, what happens in the rest of the world due to climate change. Preliminary analysis suggests that assumptions about growth rates dominate climate change impacts.

LONG-TERM RAINFALL TRENDS IN INDIA: AN EXPLORATORY ANALYSIS

Subir Gokarn (*Brookings India*) and Indrajit Roy (*Reserve Bank of India*)

Rainfall is a critical variable in both macroeconomic and political economy considerations in India. The productivity of many crops, the incomes of rural households in many areas and the patterns of government expenditure, among other things, are all directly impacted by the quantum of rainfall every year. On the other side of the equation, climate change may be affecting the long-term trend in rainfall. This paper examines these long-term trends against the backdrop of various factors that may be causally or consequentially linked to these trends.

CARBON SENSITIVE PRODUCTIVITY, CLIMATE AND INSTITUTIONS

Surender Kumar (*Department of Business Studies, University of Delhi*) and

Shunsuke Managi (*Graduate School of Environmental Studies, Tohoku University*)

Institutions might be crucial in lowering the vagaries of climate change impacts in terms of productivity. This study measures the relationships with productivity measures adjusted for the regulation of carbon emission and institutions along with climate change of the world. This paper finds there is higher potential for reduction of CO₂ emissions in developing countries at lower cost. However, the costly disposal of the emissions lowers their growth potential in terms of loss in productivity growth. Better institutions help in lowering the negative impacts on climate change by improving the process of technological adoption in developing countries. Climate change reduces the productivity growth in developing countries by lowering the process of technological adoption, and better institutions results in higher productivity.

SESSION 5: PRODUCTIVITY ANALYSIS

MEASUREMENT AND DECOMPOSITION OF A COBB DOUGLAS-LOWE INDEX OF TOTAL FACTOR PRODUCTIVITY GROWTH IN INDIAN BANKING

Subhash C. Ray (*University of Connecticut*)

Despite the predominance of public sector banks, India had a significant presence of private domestic banks and foreign banks even during the era of intense financial repression prior to the liberalization that came along with the overall economic reforms in the early 1990s. What the banking reforms have done is to create a more level playing field where banks of different ownership types compete within a new set of broad (and far more relaxed) regulations. Data on the performance of the three different categories of banks over the past two decades offer an opportunity to assess to what extent the regulatory changes have affected the productivity of banks of different ownership categories in the post-reform era. Two most commonly used measures of productivity in the banking literature are credit-deposit ratio and business per employee. In the intermediation approach, credit is one of the multiple outputs of a bank while deposit and the number of employees are two of its inputs. Thus, credit-deposit ratio is at best a partial and incomplete measure of productivity. Business (measured by the sum of deposits and credit) per employee has no productivity interpretation.

This paper develops a Cobb-Douglas Lowe index of total factor productivity for a multiple output multiple input firm through a geometric aggregation of output and input specific (partial) average productivities. This descriptive measure of productivity change is decomposed into two multiplicative components representing technical change and technical efficiency change by constructing a nonparametric production frontier for each year using Data Envelopment Analysis. Treating deposit, labor, physical assets and equity as inputs and credit, investment, and other income as outputs, this paper provides a comparative analysis of productivity change and its components for public, private, and foreign banks over the years 1992 through 2009.

SESSION 6: ASPECTS OF POVERTY

GROWTH, POVERTY AND MALNUTRITION: THE STATUS EFFECT

Sugata Marjit, Sattwik Santra and Koushik Kr. Hati (*Centre for Studies in Social Sciences*)

We consider a situation where the 'poor' are concerned about their relative income status with respect to a relevant reference group. Such a concern is explicitly introduced in a utility function to study the consumption and saving behavior of the poor in terms of a static and dynamic model. The static model points towards a possible conflict between income based and nutrition based measure of poverty. The dynamic model exhibits the possibility of a higher rate of accumulation coupled with inadequate nutritional intake relative to a situation where there is no such concern for status. Thus growth with malnutrition may also imply a conflict between different measures of poverty. Finally the paper looks at the empirical relationship between inequality and consumption across districts within states of India. The hypotheses that inequality will impact consumption pattern via status effect cannot be rejected. In fact the impact seems to be significant across Indian states.

FEMALE LABOR FORCE PARTICIPATION AND CHILD EDUCATION IN INDIA: EVIDENCE FROM THE NATIONAL RURAL EMPLOYMENT GUARANTEE SCHEME

Farzana Afridi, Abhiroop Mukhopadhyay and Soham Sahoo (*Indian Statistical Institute, Delhi*)

We exploit the implementation of India's National Rural Employment Guarantee Scheme to identify exogenous shifts in mothers' labor force participation and its impact on their children's educational outcomes. Using child level panel data, we find that mother's participation in the labor force results in almost two additional months of attendance in a school year by her children and reduces the gap between a child's actual and ideal grade by more than a quarter. These effects are robust for less landed households and for girls. We find evidence of greater household decision-making power of working mothers as an explanation of our results.

SESSION 7: LABOUR ISSUES

EMPLOYEE REFERRAL, SOCIAL PROXIMITY AND WORKER DISCIPLINE: THEORY AND EVIDENCE FROM INDIA

Amrita Dhillon (*University of Warwick*),
Vegard Iversen (*Jindal School of Government and Public Policy, India and University of Manchester*) and Gaute Torsvik (*University of Bergen and CMI*)

We study an important mechanism underlying employee referrals into informal low skilled jobs in developing countries. Employers can exploit social preferences between employee referees and potential workers to improve discipline. The profitability of using referrals increases with referee stakes in the firm, and, in most cases, with the strength of the social tie between the referee and the new recruit. We provide an empirical counterpart to these results using primary data covering low- and unskilled migrants in India. Consistent with the theoretical predictions, we find a high prevalence of workplace referral and strong kinship ties between referees and new recruits. Finally, workplace intermediaries are different from and typically in more 'prestigious' jobs than those recruited.

DETERMINANTS OF WOMEN'S LABOUR SUPPLY IN URBAN ORGANIZED SECTOR IN MUMBAI

Neeraj Hatekar (*University of Mumbai*)

The paper investigates the various determinants of women's labour supply in the urban unorganized sector in Mumbai. It was found that female participation and labour supply decisions respond positively and strongly to own-wage and negatively to the spouse's wage. We found backward bending labour supply curve but the turning point appears early for older woman. Utilising primary data collected in the city of Mumbai and its suburbs from 777 households, the study establishes the importance of human capital and shows that the labour force participation rate declines and then rises with human capital accumulation. The rise begins early for older woman. Econometric evidences also suggest that woman in woman headed households work eight more hours every day in the labour market in comparison to women in households headed by males.

SESSION 8: MACROECONOMIC CHALLENGES IN INDIA

ESTIMATING THE INDIAN NATURAL INTEREST RATE AND EVALUATING POLICY

Ashima Goyal and Sanchit Arora (*Indira Gandhi Institute of Development Research*)

We estimate the unobserved time-varying natural interest rate (NIR) and potential output for the Indian economy using the Kalman filter. This is a special challenge in an emerging market because of limited length of data series and ongoing structural change. A key result in the literature is the NIR is imprecisely estimated. Structural aspects of the economy used in our estimation turn out, however, to improve the precision of the NIR estimates, although potential output continues to be imprecisely estimated. Turning points are well captured and estimates obtained for the output gap elasticity of aggregate supply and the interest elasticity of aggregate demand. The estimated NIR is used as an indicator of the monetary policy stance, which is found to be broadly contractionary for the period under study.

ASYMMETRIC PRICE ADJUSTMENT: EVIDENCE FOR INDIA

Sartaj Rasool Rather, S. Raja Sethu Durai and M. Ramachandran (*Pondicherry University*)

We construct an error correction mechanism to examine whether firms' price adjustment is asymmetric as it is documented by Ball and Mankew (1994). We have used monthly time series data on prices of 418 commodities, which constitutes 99% of commodity prices used in the construction of WPI, for the period from April 1994 to August 2010. The empirical evidence indicates that there is asymmetry in prices adjustment; shocks that increases firms' desired prices causes quicker and larger rise in prices whereas shocks that lower desired prices causes smaller or no fall in prices. Also, we identify an inaction zone in price adjustment that varies across commodities which reflects the fact that menu-cost varies across firms. These evidences imply that larger relative price variability can trigger inflation even in the absence of demand shocks. Moreover, distribution of output is likely to be negatively skewed even if the demand shocks are symmetric.

DETERMINANTS OF MANUFACTURING GROWTH

Himanshu Joshi and Sonna Thangzason (*Reserve Bank of India*)

This paper makes an analytical exposition of the determinants of manufacturing growth in India using a number of relevant variables cited in the context of its recent slowdown. Manufacturing sector which has the largest weight in IIP has decelerated ever since July 2011 due to a host of factors such as, global slowdown, high interest rates, input price pressures, exchange rate among others. Besides, these oft mentioned factors attention could also be focused on the acceleration of food inflation that may have the potential to affect manufacturing growth by shrinking real wages/ demand or through reduced profitability of enterprises due to rising wages demanded by workers. Empirical results based on multivariate cointegration methodology suggest that, in the long run, input price pressures, electricity production followed by global industrial production are the most dominant factors affecting manufacturing growth adversely. Similarly, 36 country real effective exchange rate also affects manufacturing negatively, though in a relatively smaller measure. However, we find that magnitude wise food prices and weighted call money rate do not significantly influence manufacturing growth. The short term results suggest that manufacturing growth can revive appreciably in the event of faster turnaround in global growth, output of domestic core industries especially electricity, and business expectations.



O r g a n i z i n g C o m m i t t e e

- **Prof. Pami Dua (Chair)**

- **Prof. Pulin B. Nayak**

- **Prof. Aditya Bhattacharjea**

- **Prof. Sunil Kanwar**

- **Dr. Shreekant Gupta**

S p o n s o r s

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