

# DINESH SINGH

## RESUME

**Former Vice Chancellor (President)  
University of Delhi (Oct.'10-Oct.'15)**

**Distinguished Professor  
Shoolini University, Solan, HP**

**Professor of Mathematics  
University of Delhi**

**Chancellor  
KR Mangalam University  
Gurgaon, NCT, Haryana**

**Honorary Professor  
IIT, Delhi**

**Adjunct Professor  
University of Houston**

**Distinguished Academic Consultant  
Middlesex University, London**

## HONOURS

### PADMA SHRI

*One of India's highest civilian awards, by the President of India "in recognition of distinguished service in the field of Literature and Education", 2014*

### HONORARY DOCTORATES

- **University of Edinburgh, UK** conferred **Degree of Doctor *honoris causa*** "in recognition of his inspirational leadership of the University of Delhi", 2014
- **University of Houston, Texas, USA** conferred **Degree of Doctor of Humane Letters *honoris causa*** "in recognition of exceptional record as an educator, mathematician, and higher education administrator", 2014
- **National University of Ireland, (UC Cork), Ireland, UK** conferred **Degree of Doctor of Science *honoris causa*** for "academic prowess in the discipline of mathematics and leadership in transforming higher education", 2014
- **National Institute of Technology, Kurukshetra, India** conferred **Degree of Doctor of Science *honoris causa*** "in recognition of his eminent contributions and attainments", 2014

## OTHER SELECT RECOGNITIONS

- **Distinguished Senior Fellow, Advanced Hackspace, Imperial College, London (2015-2018)**
- **Member, Scientific Advisory Committee to the Union Cabinet, Govt. of India (2011- 2018).**
- **Member, Jnanpith Award Jury-one of the highest literary prizes in India (October, 2012-2014).**
- **President, Ramanujan Mathematical Society (2016-19). India's Premier Math. Society.**
- **Dhahan Public Lecture at Ottawa "India in the Twenty First Century: Towards a Knowledge Economy" Carleton University, Ottawa, Canada. (2015)**
- **Keynote Address at Houston "Empowering Nations Through Science & Technology: The Example of India" at the International Space Medicine Summit (ISMS), Baker Institute, Rice University, Houston, Texas & Baylor College of Medicine (2014).**
- **Keynote Address at Denmark "Gandhi's as a Social Entrepreneur" at the International Conference on Co-Creating Social Entrepreneurship for Growth. Copenhagen Business School Denmark (2014)**
- **Convocation Address "The Meaning of Education " at Utkal University of Culture Distinguished Guest and State Guest of Govt. of Odisha at Bhubaneswar, Odisha (2015)**
- **17<sup>th</sup> Sir Ganga Ram Oration "India in the 21<sup>st</sup> Century" at the Founder's Day of Sir Ganga Ram Hospital New Delhi, India (2014)**
- **Xavier Lifetime Achievement Award "in recognition of contribution in the field of Education and Research". (2014)**
- **Skoch Challenger Award in the field of Education "for the reforms brought in under his tenure" (2014)**
- **Platinum Jubilee Lifetime Achievement Award – Association of Microbiologists of India (AMI), (2013)**
- **Plenary Address, Association of Commonwealth Universities (ACU), London- Centenary Conference, "Dealing with Change" (2013)**
- **Platinum Jubilee Lifetime Achievement Award – Association of Microbiologists of India (AMI), 2013**
- **President, Mathematical Sciences, Indian Science Congress Association in its Centenary Year at Kolkata, India in (2012 - 2013) (The PM of India was the General President)**
- **Lalith Athulathmudali Memorial Oration at Bandaranaike Centre for International Studies (BCIS), Colombo, Sri Lanka "Towards a Policy for Education in South Asia" (2011)**

## OTHER SELECT RECOGNITIONS (continued from page 2)

- **Indian Science Congress- Platinum Jubilee Lecture (Mathematical Sciences) (2009)**
- **Indian Mathematical Society- Ramaswamy Aiyar Award Lecture** in its centenary year **(2007).**
- **Career Award in Mathematics** of the University Grants Commission, India, **(1994).**
- **The Indian Mathematical Society-AMU Prize (1989).**
- **Mukherji-Ram Behari Mathematics Prize** of St. Stephen's College for the Best Pass in M.A. **(1977).**
- **Best Undergraduate in Mathematics Prize** of St. Stephen's College, **(1974).**

## **EDUCATION**

### **• Imperial College of Science, Technology and Medicine, London, England**

1981 Ph.D. (Mathematics)

1981 D.I.C. (Mathematics)

### **• University of Delhi, Delhi, India**

1978 M.Phil. (Mathematics)

### **• St. Stephen's College, University of Delhi, Delhi, India**

1977 M.A. (Mathematics)

1975 B.A. (Hons.) (Mathematics)

## **LEADERSHIP POSITIONS/ROLES HELD**

- **Member, Board of Trustees, The Association of Commonwealth Universities (ACU) Council, U.K. for Constituency II (2013-15).**
- **Member, Governing Body, All India Institute of Medical Sciences (AIIMS) (2010-15).**
- **Member, Board of Governors, Indian Institute of Technology (IIT), Mumbai (2011-15).**
- **Member, Steering Committees on Science & Technology, 12<sup>th</sup> Plan for India, Planning Commission, Govt. of India (2011-13).**
- **Member, Steering Committees on Higher & Technical Education, 12<sup>th</sup> Plan for India, Planning Commission, Govt. of India (2011-13).**
- **Chairman, Executive Committee, National Science Centre, Delhi (2011-15).**
- **Member, National Board for Higher Mathematics (NBHM) (2011-15).**
- **Member, Senate, Academy of Scientific & Innovative Research (2011-14).**
- **Member, Executive Organising Committee of the International Congress of Mathematicians (2010).**
- **Member, Governing Body of National Council of Science Museums (NCSM), India (2011-15).**
- **Member, Governing Council, Inter-University Centre for Astronomy & Astrophysics (IUCAA) (2011-14).**
- **Member, Governing Council of Software Technology Parks of India, Department of Electronic & Information Technology, Government of India (2013 -15).**
- **Member, National Training Council, Department of Personnel & Training, Government of India (2013).**
- **Member, National Advisory Committee of the Kishore Vaigyanik Protsahan Yojana (2013).**
- **Member, General Assembly of the Indian Council for Cultural Relations (ICCR) (2012 -15).**
- **Member, Academic Advisory Committee of the Indian Council for Cultural Relations (ICCR) (2013-15).**
- **Honorary Member, Advisory Committee, National Corporate Crime Database of India (NCCDi) (2013).**
- **Member, Advisory Committee of the World Summit on Accreditation (WOSA2014).**
- **Member First Council of Deemed to be Universities, HRD Ministry, Government of India (2012 -14).**
- **Member, Sector Innovation Council, Education Sector, Ministry of Human Resource Development, Government of India. (2013-14).**
- **Member of the National Road Safety Council (2013).**

## INVITED PRESTIGIOUS LECTURES

- **Fudan University, Shanghai, China-** “History of Indian Mathematics” (2015).
- **University of London-**“MOOCs: What have we learned, emerging themes and what next” (2014).
- **University of Birmingham-** “Education in A Global Setting: The Needs of the 21st Century” (2014).
- **University of Warwick-**“The Role of a University: Driving Change” (2014).
- **Chief Guest and Keynote Speaker** at the session “**India transitioning from service to a product nation**” organized by **Software Technology Parks of India** at 4<sup>th</sup> Bharatiya Vigyan Sammelan, Goa (2015).
- **University of Houston, Houston, USA,** Public lecture “**India in the Twenty First Century: The Role of Education**” (2014).
- **National University of Ireland, University College, Cork, Ireland-**Global Challenges Lecture “India in the 21<sup>st</sup> Century” (2014).
- **Panjab University, Chandigarh & Society for Promotion of Science & Technology in India-**“India in the 21<sup>st</sup> Century: The Role of Higher Education” and “From the Indus Valley to Srinivasa Ramanujan: A History of Indian Mathematics” (2014).
- **10<sup>th</sup> Annual Edition of India’s premier ICT Event, Government of Kerala** at Kerala- Keynote speaker in the inaugural session “Skill Development Initiatives to Boost Employability” at eINDIA 2014 – (2014).
- **Bangalore University-** Special Lecture to Principals of affiliated colleges, Deans of Faculties and Chairpersons of Boards of Studies about restructured undergraduate courses in the University of Delhi (2013).
- Public Lecture “**Higher Education in India: The Need For Change**” at **Indian Institute of Science Research and Education, Bhopal** (2013).
- **Fr. Racine International Mathematics Congress RMC at Loyola College, Chennai-** Inaugural “R.P. Ranga Memorial Lecture” “Education in Modern India” (2012).
- **ACU Members’ Day, London-** Towards a ‘Glocal’ Institution on the session Partnerships – MoUs or Mo ‘Use (2012).
- **Association of Commonwealth Universities (ACU), London, U.K.-** Plenary speaker on “New Routes to support expansion: What role for the private sector?” at the 18 CCEM Post-Secondary and Higher Education Leaders’ Forum (P2HELFF) (2012).

INVITED PRESTIGIOUS LECTURES (continued from page 5)

- **2<sup>nd</sup> Summit of South Asian Science Academies, Indian National Science Academy-“Technology as a Tool in Education”** (2012).
- **University of Kashmir, Hazratbal, Srinagar, Jammu and Kashmir-** “From the Indus Valley to Srinivas Ramanujan: A History of Indian Mathematics” (2012).
- **Popular Lecture Series, University of Delhi** lecture "Infinity and the Art of Counting" (2012).
- **Plenary lecture** at annual conference of **Ramanujan Mathematical Society** “Interpolation and Invariance on Holomorphic Spaces” (2011).
- **Shastri Indo-Canadian Institute-Kanta Marwah Inaugural Lecture**, “Education in the 21<sup>st</sup> Century” at India International Centre (IIC) (2011).
- **16<sup>th</sup> Professor Maheswar Neog Commemoration Lecture** “India in the 21st Century: The role of education and the youth” at Guwahati (2011).
- **“History of Indian Mathematics: From the Indus Civilization to Srinivas Ramanujan”** at **Islamic University of Science and Technology, Srinagar, Kashmir** (2011).
- **National Education Summit at Mahatma Mandir in Gandhinagar, Gujarat-** Keynote address at the National Seminar on Indian Heritage: Perspective and Prospects (2014).
- **The Kerala State Higher Education Council, Government of Kerala-** Keynote address, ‘Transnational Education’ at the Inaugural Session of the International Meet on Transnational Education at Thiruvananthapuram (2014).
- **Indian Institute of Science, Bangalore-** Plenary address titled “Operators on Function Spaces and Applications of the  $H_1$  – BMOA Duality” at XXIVth International Workshop on Operator Theory and its Applications (2013).
- **Keynote address** at the interactive seminar on “New Paradigm in quality – Through Accreditation” at University of Mumbai, Mumbai (2013).
- **Invited address on ‘Higher Education’ to all Vice Chancellors, Registrars, Officials from Higher Education Department of State Universities of Chhattisgarh** (2013).
- **Annual South and Central Asia Fulbright Conference, Kochi, Kerala -** Keynote address “Meaning of Education” (2012).

## **THINKER, POLICY MAKER, IMPLEMENTER**

**At the international level** I have served on the Board of Trustees of the Association of Commonwealth Universities and also on the EC of Universitas 21. In addition I have played a decisive role on the EOC of the International Congress of Mathematicians in 2010, which is organised once every four years. I have travelled several times officially with the President of India and also with the Union HRD Minister as well as on other official delegations on visits to various countries to foster greater cooperation with other countries in research and education. I have created special and beneficial ties between India and several nations and my views and actions were highly appreciated. I have also generated very tangible and productive relationships between the University of Delhi and several institutions abroad. This has included academic cooperation, student visits, faculty visits and academic activities. I have also created policy awareness and insight through numerous plenary talks and invited addresses at international forums in many parts of the globe over the past several years. Many of my ideas and actions in India have found great appreciation and interest in several parts of the globe as is borne out by the numerous invited lectures at important gatherings and also by the honorary doctorates. My activities in research and teaching at the University of Houston over the past several years have received international recognition. I have separately

**At the national level** I have played a significant role in several ways in the shaping and directed growth of education in India. The reforms initiated by me at the Delhi University were highly appreciated in several parts of India and also in many other parts of the world. I was also a member of two key committees of the Government of India that gave direction and shape to Science and Technology and to Education in terms of policy and funding. I refer to the Steering Committee on Science and Technology and the Steering Committee on Education of the Planning Commission of the Government of India for the Twelfth Five Year Plan of India. As a member of the Scientific Advisory Committee to the Union Cabinet (SAC-C) I have taken part in important deliberations of the SAC-C. I have also been responsible for other activities related to science and to mathematics. I have chaired the National Science Centre at Delhi for four years and have also been first the Vice President and currently the President elect of the Ramanujan Mathematical Society. I have also served on the National Board of Higher Mathematics that funds all major mathematical research in India. I serve and have served on several decision-making bodies of several important institutions.

**I have outlined below in greater detail some of my landmark achievements as Vice Chancellor and in my earlier avatar as the Director, South Campus, University of Delhi**

## **LANDMARK ACHIEVEMENTS**

## AS VICE CHANCELLOR

**The notable paradigm shifts and innovative achievements of my tenure as the VC have included:**

- **Number One Ranking for Delhi University.** During my second year as the Vice Chancellor Delhi University attained the Number one rank amongst universities in India. It retained this number one spot for the rest of my term till 2015. **In most international rankings the University stayed above all Indian universities and several IITs.**
- **Successfully transitioned to the Semester System:** Given the size (more than 200000 students) and nature of the University, this has been a major achievement.
- **Created and implemented the Four Year Undergraduate Programme (2013-14):** Brought about a radical and multifaceted reform (the first of its kind in India) in the undergraduate programme of study. This was hailed across the land and abroad as a welcome step. The programme addressed the needs and challenges of India through a paradigm shift in pedagogy with a unique combination of trans-disciplinarity, knowledge and skills-based learning with 'hands on' project based learning and centered around the needs and challenges of society and the nation. Some of its facets included guaranteed jobs for thousands of graduates, entrepreneurial skills and funding through incubation centers for the creation of startups, multiple degree options, flexibility and freedom to study more than one discipline, credit for sports and other activities, access to high end technology, enhanced infrastructure, etc. At the end of the first year, the programme received extraordinary endorsement through written anonymous feedback from thousands of students. The role and use of IT in education was created and support infrastructure such as city wide free wifi and the provision of 60,000 laptops for UG's was made in a first for any university in India. Unfortunately the programme was withdrawn at the instance of the UGC through what are perceived in the public eye as illegal/irregular diktats. **However it must be noted that the FYUP has attracted attention and drawn accolades from several parts of India and the world.**
- **Created the Cluster Innovation Centre (CIC).**  
The CIC has been set up to dedicatedly seek and drive innovation in industrial clusters, slum clusters, village clusters and education clusters through an innovative, trans-disciplinary approach. Various degrees offered at the CIC. The focus is to foster innovation and creativity through various learning, research and hands on projects that includes the fostering of a large number of start ups through incubation centres. I established, through personal initiative and with largely my ideas, the Cluster Innovation Center (CIC). The main theme of the CIC is to seek, drive and build an education platform of innovation through industrial clusters, slum clusters, village clusters and education clusters through an innovative, trans-disciplinary approach. It is the aim of the CIC to set in motion an interaction between development in education and development in social reality through innovative teaching and research programmes. More than half the learning at the CIC happens through 'hands on' project work where students work in groups and connect through the projects with challenges of society. The Center has begun to attract the attention of some of the leading scientists and thinkers of the world as also the attention of some leading educational institutions of the world.

## LANDMARK ACHIEVEMENTS AS



## VICE CHANCELLOR

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- **Some pioneering activities at the Cluster Innovation Centre:**
  - **India's first Meta College:** B.A. (Hons) Humanities and Social Sciences-Design Your Degree. Half the learning is through mentored projects. A student works in mentored groups and has access to the entire range of UG courses of the Delhi University from where s/he can gain credit according to needs and desires.
  - **B.Tech.- IT with Math Innovations:** A student can specialize in this program in Mol. Bio. Or Robotics or Comp. Science or Electronics. Half the learning is through mentored projects.
  - **India's first Meta University-**Masters in Math. Education: jointly with Jamia Milia University
  - **Graduate Program in Cancer Biology:** with the participation of leading institutions from UK, USA. This program draws upon some of India's great strengths in the ancient medicinal system of Ayurveda and combines it holistically with molecular biology and genetics in a trans-disciplinary and hands on manner.
  - **Design Innovation Centre:** This is a centre where innovative designs are created and taken from start to finished product. Students work here from the various degree programmes of the cIC and they create products.
  - **Incubation Centre for Startups:** This incubation centre has adequate expertise and funding to help guide students of the CIC through projects
  - **Incubating Star Innovation Colleges**
- **College on Wheels-The Gyanodaya Express:**

Conceived and actualized this unique experiment in education.
- **Some salient features of the Gyanodaya Express:**
  - The train has a classroom, a library, full wifi based internet, laptops and other amenities.
  - About 1000 students ride on each journey that can last up to two weeks.
  - Five successful journeys have been undertaken to different parts of India and on different themes.
  - It takes learning out of the classroom and exposes students in a direct manner with various issues and themes that they will not easily encounter otherwise.

## LANDMARK ACHIEVEMENTS AS

## VICE CHANCELLOR

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- **Some more salient features of the Gyanodaya Express:**
  - The students work on mentored projects that vary from the design and functionality of the train to aspects of physics to the history, ecology, culture, environment, and economics and such themes that make them better understand and learn about and express themselves make students aware of the social and political realities in the country.
  - Inspired from Mahatma Gandhi's experiences of traveling in trains.
  - More than a 100 students of the United Kingdom from two of the world's top 25 universities have travelled on the train.
  
- **The Innovation Projects Programme.**

Conceived and introduced the Innovation Projects Programme for undergraduate students.
  
- **Some Salient features of the Innovation Projects Programme.**
  - Has been running for four years and several thousand students have participated.
  - In this programme, for each project, groups of 10 students participate in theme based research of their own choosing and design that are centered on some practical problems and are hands on in nature.
  - In each project the students are necessarily drawn from more than one discipline.
  - The projects are aimed at analysing and proposing solutions to some of the major challenges facing India in the 21<sup>st</sup> century.
  - Several very interesting ideas, activities and patents have emerged from these projects. A first for the University of Delhi.
  - Undergraduates have produced several research papers and have set up numerous startups emanating from these projects.
  
- **Startups for Undergraduates:**

About three years ago conceived, conceptualized and executed in partnership with the Ministry of Small and Medium Enterprises the setting up and funding of Incubation Centres for several colleges of the University. Numerous startups have been set up or are under process at these colleges. The University of Delhi has become a pioneer in this programme amongst educational institutions.

## LANDMARK ACHIEVEMENTS AS

## VICE CHANCELLOR

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- **The Antardhwani Event-Showcasing Delhi University:**

Created and conceptualized the Antardhwani event which is spread over three days and is a platform where the entire University of Delhi system is showcased in all its glory and strength.

- **Some salient features of the Antardhwani event.**

- On each of the three days over 60,000 students and a few thousand faculty attend.
- All aspects and activities of the Delhi University are showcased.
- An Innovation Plaza showcases all the innovation projects of the University.
- A very large number of creative cultural and academic activities are also showcased.
- A platform for academia-industry interface is also present.
- All PG depts. and UG colleges have stalls where their best activities and practices are presented.

- **The Electropreneur Park**

Set up the Multi-million dollar Electropreneur Park in collaboration with the Software Technology Parks of India. The Park is a platform for mentoring and assisting in practical ways Delhi University students who have ideas for startups of a special nature that shall help alleviate India's electronics hardware import bill. Of course the Park shall also look at new ideas for manufacture and design of chips. The mentoring shall be effected by a group of industry seniors and leaders.

- **The Sound & Light Show--A History of Delhi University**

Conceptualised and enabled the showcasing at the historic Viceregal Lodge-from where five Viceroys ruled India-the Sound & Light Show called *The University of Delhi: A Legend-1857 to 1947*. This highly acclaimed and immensely popular show depicts the historic origins and the establishment of the Delhi University and how it is tied up with the freedom struggle, with the well being of the nation with some of India's greatest personalities-including Mahatma Gandhi.

- **Imparting Skills Training and Expertise to Undergraduates**

A unique agreement was entered into with the National Skills Development Corporation (NSDC) to impart special skills that will empower students of Delhi University to acquire suitable jobs. This programme has the capacity to empower thousands of students. The NSDC has also undertaken to place the students if they enroll through a special package.

- **Enabling Sports Activities at a High Level**

Through special efforts Delhi University regained its long lost pre-eminence in sports. For the first time in the history of Delhi University, sports teams were sent abroad for better exposure and training. Special facilities and support systems such as provision of full time professional coaches and better travel facilities were accorded sports teams and funds were set aside for support systems.

## LANDMARK ACHIEVEMENTS

AS

VICE CHANCELLOR

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- Brought about major **administrative reforms**: Initiated the process to put all systems of the university on an Enterprise Resource Planning (ERP) Platform.
- Brought about major **examination process reforms**: For the first time, enabled examination processes to be completed from the start of examination to declaration of results - within a month. For the first time, students receive their results mark sheets and transcripts online.
- **Heritage Walk** (first-ever in the University): guided tours by well-trained students of the many sites of historical importance on campus
- **Enabling students with special needs**: Complete waiver of all kinds of fee; free Public Road Transport; free laptops with loaded software to enable learning. Arranged group tours to foreign universities as a learning integration process..
- Created a comprehensive **University Information Centre**.
- Setting up of a **Credit Transfer Facility**: Empowering exchange programmes between DU and noted international universities for faculty and students and making them academically tenable.
- Creating possibilities for **faculty and students to further research and attend international conferences**.
- **Developing infrastructure**: new buildings with state-of-the-art infrastructure; enabling classrooms with laptops and LCD projectors; free Wi-Fi connectivity; launched ERP projects in five colleges; footpaths and walkways around campus; cleanliness drive
- **Compiling a database of over 10,000 faculty** (for the first time in the history of the University)
- **Foundation Day** celebrated for the first time ever (since 2012): **honouring the distinguished contributors and recognizing teaching excellence**.

## **Achievements As**

## Director, South Campus University of Delhi

2010-15

- Set up and administered the first **Technology Business Incubator** of the University for Biotechnology.
- Created a **Products and Services Division** at the Institute of Informatics and Communication.
- **Conceptualised first ever live online learning programme between the North and South Campus of the University.**
- Successfully headed the University of Delhi's gigantic effort to implement **Enterprise Resource Planning** for the entire University system
- Chaired many committees of the University related to administering reforms
- Created many facilities for students' welfare
- Supervised the South Campus wing of the **Institute for Life Long Learning** that created pioneering programmes
- Created the first professional and **practical e-learning environment** at the University
- Reformed courses of study in Mathematics as well as in the discipline of Computer Science
- Enabled all colleges of Delhi University with **IT and laboratory equipment.**

### Other Notable Achievements

- **Pioneered the use of Information Technology and television-in India- for purposes of education.** (1992 onwards)
- **Delivered several live lectures on TV** (1992 '93 '94 '95)
- Played an important role in successfully organising several international and national conferences. Of particular importance is the role as Principal Organiser of the highly successful international conference

**“Mathematics in the Twentieth Century”** held in 2006 commemorating the birth centenary of Andre Weil which was **jointly sponsored by the French Mathematical Society and the Mathematical Sciences Foundation.**

- **Envisioned, founded & established the ICICI Centre for Mathematical Sciences (ICMS)** at St. Stephen’s College. Played a significant role in its functioning as an Honorary Director for a period of five years.
- The ICMS has now metamorphosed into the **Mathematical Sciences Foundation (MSF)**. The MSF has successfully conducted many pioneering activities in higher education that have now received recognition internationally for their quality and effectiveness in education and research. **Several leading citizens are the founding members of this Mathematical Foundation.**
- Conceptualised and organised a unique Mathematical activity **‘Inviting All Young Minds’** 2009 and in 2010 and 2011. Every year, 60 students from thousands who applied from India were chosen to find highly innovative solutions to real world problems through mathematics.
- Delivered invited lectures at various universities of the United States, Canada, UK, Australia, Thailand and Egypt including the University of California at Berkeley, University of Houston, Auburn University, SUNY Albany, the University of Syracuse, Imperial College, Liverpool University, McQuarie University, University of NSW, Dalhousie University.

### **Important Administrative Assignments**

- **Vice Chancellor**, University of Delhi (29<sup>th</sup> October, 2010 - till date)
- **Officiated as Pro Vice Chancellor**, University of Delhi (August, 2010 - October, 2010)
- **Director, South Campus**, University of Delhi (2005 – 2010)

- **Chairman, Institute of Informatics & Communication** (July, 2003 - 2010)
- **Head, Department of Mathematics**, University of Delhi (December, 2004 - September, 2005)

### **Academic Assignments**

- **Professor**, Department of Mathematics, University of Delhi, Delhi, India (1997- till date)
- **Distinguished Senior Hackspace Fellow, Imperial College** of Science, Tech. and Medicine, London (2016-2018)
- **Honorary Professor, IIT Delhi** (2016-till date)
- **Adjunct Professor**, Dept. of Mathematics, University of Houston, Houston, Texas, USA (1999- till date)
- **Visiting Scientist**, Indian Statistical Institute, New Delhi, India (1994-1996)
- **Reader**, Department of Mathematics, University of Delhi, Delhi, India (1995-1997)
- **Assistant Professor**, Indian Institute of Technology, New Delhi, India (April, 1994- December,1994)
- **Lecturer**, Department of Mathematics, University of Delhi (1987-1995)
- **Lecturer**, St. Stephen's College, University of Delhi, Delhi, India (1985-1987)
- **Research Associate** (Major UGC Project) Dept. of Mathematics, University of Delhi (1984-1985)
- **Lecturer**, St. Stephen's College, University of Delhi, Delhi, India (1981-1983)

### **Area of Mathematical Specialisation**

- Functional Analysis and Harmonic Analysis
- Operators and Function Theory

### **Books**

Co-Edited: Wavelets. Narosa Publishing House, New Delhi, 2001

Co-author (with K.B. Sinha et.al.): Understanding Mathematics. Universities Press, Hyderabad, 2000

Joint Editor: Functional Analysis and Operator Theory, Lecture Notes in Mathematics Vol. 1511. Springer Verlag, 1992

### **Research Papers**

1. A Class of Sub-Hardy Hilbert Spaces Associated With Weighted Shifts (with S. Lata) Houston Journal of Mathematics, 44(1) (2018), 301-308.

2. Invariance under Finite Blaschke Factors on BMOA (with A. Kumar, N.Sahni ) New York Journal of Mathematics, 23 (2017), 1641-1656.
3. Extensions of the Inequalities of Hardy and Hilbert (with V. I. Paulsen) (communicated)
4. Invariance Under Bounded Analytic Functions: Generalizing Shifts, New York Journal of Mathematics 22 (2016), 1249-1270
5. Lax-Halmos type Theorems on Hp spaces (with N. Sahni). Houston Journal of Mathematics 41(2)(2015), 571-587
6. Multiplication by Monomials on BMOA (with N. Sahni). Houston Jour. Of Math 40(3) (2014), 875-883
7. Function Theory in Real Hardy Spaces, (with M. Raghupathi). Math. Nach. 284 (2011), 920-930.
8. Invariant Subspaces of Certain Sub Hilbert Spaces of  $H^2$ , (with N. Sahni). Proc. Japan Acad., 87, Ser. A (2011), 56-59.
9. A Finite Multiplicity Helson-Lowdenslager-de Branges Theorem. (with M. Mittal and S. Lata) Studia Math. 200 (2010), 247-266.
10. A Constrained Nevanlina-Pick Interpolation Problem (with K. Davidson, V. I. Paulsen, M. Raghupathi) Indiana University Mathematics Journal 58(2)(2009), 709-732.
11. Harmonic Analysis on the Unit Circle: A Personal Perspective. (Ramaswamy Aiyar Award Lecture 2007) Mathematics Student 76 (2007) (2008), 137-155.
12. Modules over Subalgebras of the Disk Algebra, (with V. I. Paulsen) Indiana University Mathematics Journal 55(5) (2006), 1751-1766.
13. Extensions of Bohr's Inequality, (with V. I. Paulsen) Bull. London Math. Soc.38 (6) (2006), 991-999.
14. The Spectrum in a Banach Algebra, Amer. Math. Monthly 113(8) (2006), 756-758.
15. Bohr's Inequality for Uniform Algebras, (with V. I. Paulsen) Proc. Amer. Math. Soc. 132(12) (2004), 3577-3579.
16. The Infinitude of the Primes, Amer. Math. Monthly 111 (2004), 863.
17. On Bohr's Inequality, (with V. I. Paulsen and G. Popescu) Proc. London Math. Soc. (3)85 (2002), 493-512.
18. A Helson-Lowdenslager-De Branges Theorem in  $L^2$ , (with V.I. Paulsen) Proc. Amer. Math. Soc. 129 (2000), 1097-1103.
19. Differentiation of Operator Functions and Perturbation Bounds, (with R. Bhatia and K. B. Sinha) Communications in Mathematical Physics 191(1998), 603-611.
20. Invariant Subspaces of Shifts on the Hardy Spaces of the Circle and the Torus, (with V. Thukral) Fourier Series, Approximation Theory and Applic., New Age International; (1998),301-311.
21. De Branges Modules in  $H^2(C_k)$ , (with S. Agrawal) Harmonic Analysis and Hypergroups, Trends In Mathematics, Birkhauser Boston (1997), 1-11.
22. Multiplication by Finite Blaschke Factors on de Branges Spaces, (with V. Thukral) Journal of Operator Theory 37(1997), 223-245.
23. De Branges Spaces Contained in Some Banach Spaces of Analytic Functions, (with S. Agrawal) Illinois Journal of Mathematics 39(1995) 351-357.
24. Invariant Subspaces in VMOA and BMOA, (with U.N. Singh) Michigan Math. Journal 41(1994) 211-218.
25. De Branges Modules in  $l^2$ -valued Hardy Spaces of the Circle and Torus, (with S. Agrawal) Journal of Math. Sciences (U.N. Singh Memorial Volume) 28 (1994), 235-266.
26. De Branges Modules in  $H^2(C_k)$  of the Torus, (with S. Agrawal and B.S. Yadav) Lect. Notes in Math 1511 Springer Verlag (1992), 55-74.
27. On a Theorem of De Branges, (with U. N. Singh) Indian Journal of Mathematics (U.N. Singh Memorial Volume), 33(1991), 1-5.
28. Brangesian Spaces in the Polydisk, Proc. Amer. Math. Soc. 110(1990), 971-977.
29. A Trace Inequality for Operators, Journal of Mathematical Analysis and Applications 150 (1990), 159-160.



30. Invariant Subspaces of Analytic Functions, (with U.N. Singh) (survey article) Invariant Subspaces and Allied Topics. Editors; H. Helson and B. S. Yadav Narosa (1989) 40-50.
31. Invariant Subspaces in  $H_1$  with Real Taylor Coefficients, (with A.A.W. Mehanna) The Aligarh Bulletin of Mathematics 12(1987-89), 45-50.
32. BMOA and the Backwards Shift on  $H_1$ , Journal of Math. Sciences 19-27 (1984-1992) 56-66.
33. Spectral Shifts, Journal of Math. Sciences 19-27 (1984-1992) 67-71.
34. Zeros of Polynomials and the Shift Operator, Journal of Math. Sciences 19-27 (1984-1992) 72-74.
35. A Simple Proof of Bertrand's Postulate, The Mathematics Student, 45 (1977) 84 (written as an undergraduate). *Referred on page 116 Development of Prime Number Theory: W. Narkiewicz; Springer Monographs in Mathematics (2000).*

### Forthcoming Research

1. Bohr's Inequality for Matrices (with S. Lata), (under preparation)
2. A Necessary and Sufficient Condition for a Contraction to Have a Non-zero Fixed Point.

### In The Context of Elementary Mathematics The Following Shall be of Interest

**Professor Richard Libera**  
Associate Editor - *The American Mathematical Monthly*  
Dept. of Mathematical Sciences  
**University of Delaware**  
Newark, Delaware 19716

*September 24, 1986*

Dear Richard,

I am returning here enclosed the manuscript "**The Spectrum in a Banach Algebra**" (L-76) by Dinesh Singh

*I think it contains a nice new proof of a classical theorem, which is simpler than the usual proof through Liouville's theorem. It is short, clear and "genuinely useful in..... graduate instruction" (I intend to use it next semester in my course) I therefore recommend its publication.*

### Major Grants

1. Name of Project: **Linear Mappings Associated with Banach Spaces of Functions**

Position in Project: **Principal Co-Investigator**; Period: 1998-2003

Granting Agency: DST

2. Name of Project: **Mathematics in the Modern World**

Position in Project: **Principal Investigator**; Period: 1995-1996

Granting Agency: DST

### **Successful Doctoral Students**

- Sahni, Nitesh. 2014. Invariance in Hardy Spaces. University of Delhi.
- Thukral, Virender. 1998. Some Results on De Branges Spaces. University of Delhi.
- Aggarwal, Sanjeev. 1995. De Branges Spaces and related Invariant Subspaces, University of Delhi.

### **Doctoral Thesis (under progress)**

- Kumar, Ajay. University of Delhi. (Date of Registration: 2012)

### **M.Phil Dissertations**

- Gupta, Nisha. 2009. Invariant Subspaces.
- Neelima. 2008. The Fundamental Theorem of Algebra.
- Bhola, Jyoti. 2007. Study of Essentially Hermitian Operators.
- Jain, Naveen Kumar. 2007. Backward Shift Invariant Subspaces on the BIDISC.
- Walia, Shalini. 2002. Some Aspects of Von Neumann's Inequality.
- Arora, Bharti. 2001. Some Applications of the Wold Decompositions.
- Nigam, Preeti. 1992. Decomposition of Isometries.
- Satija, Poonam. 1991. Uniqueness of the Adjoint Operation.
- Rawat, Savitri. 1990. Compact Endomorphisms & Related Operator.

### **Popular Article**

The article (in Hindi) on the life of Evariste Galois has appeared in the magazine Naya Path entitled '*Ganitagya Evariste Galois: Hairatnak Zindagi Aur Maut Ki Kahani*' Naya Path, April-June 2009, 35-40.

### **Other Interests**

- Besides having travelled to many parts of the globe, travelled extensively in many parts of India-rural as well as urban-to conduct workshops and seminars for the purposes of Mathematics education.
- Helped organise numerous important international conferences.
- Reviewed/refereed papers for several publications in India and abroad including the Mathematical

Reviews.

- Served/Serving on several committees of the Government of India and of international agencies.
- Served/Serving on many governing boards of institutions ranging from schools and colleges to other institutions of higher learning.
- *An active painter who has held an acclaimed and successful independent exhibition of his paintings.*
- Deeply interested in philosophy, literature (English, Hindi, Urdu)
- Student of the Life and Philosophy of Mahatma Gandhi.
- Fond of traveling and public speaking (English, Hindi)
- Keenly interested in Sports and have actively participated in many sports activities and also gained college colours in volleyball.