Prof. Dinesh Singh

Title	Prof.	First Name	Dinesh	Last Name	Singh	Photograph
Designation		Vice Chancellor				
Address Office		Department of Mathematics, University Of Delhi, Delhi-110007.				
Phone No Office						
Residence						
Email		vc@du.ac.in				

Educational Qualifications

Degree	Institution	Year
Ph.D.	Ph.D. (Maths), Imperial College of Science, Technology and Medicine, London, England.	1981
M.Phil.	M.Phil (Maths), University of Delhi	1978
PG	M.A. (Maths), St. Stephen's College, University of Delhi	1977
UG	B.A. (Hons. – Maths), St. Stephen's College, University of Delhi	1975

Career Profile

29th October, 2010 - till date: Vice Chancellor, University of Delhi.

13th August, 2010 - 29th October, 2010: Officiated as Pro Vice Chancellor, University of Delhi.

2005 – 2010: Director, University of Delhi South Campus, University of Delhi.

1999: Adjunct Professor, Dept. of Mathematics, University of Houston, Houston, Texas, USA.

1997: Professor, Department of Mathematics, University of Delhi.

1995 – 1997: Reader, Department of Mathematics, University of Delhi.

1994 – 1996: Visiting Scientist, Indian Statistical Institute, New Delhi, India.

April, 1994 – December, 1994: Assistant Professor, Indian Institute of Technology, New Delhi, India.

1987 – 1995: Lecturer, Dept. of Mathematics, University of Delhi.

1985 – 1987: Lecturer, St. Stephen's College, University of Delhi.

1984 – 1985: Research Associate, (Major UGC Project), Department of Mathematics, University of Delhi.

1981 -1983: Lecturer, St. Stephen's College, University of Delhi.

Administrative Assignments
29th October, 2010 - till date: Vice Chancellor, University of Delhi. 13th August, 2010 - 29th October, 2010: Officiated as Pro Vice Chancellor, University of Delhi. 2005 – 2010: Director, University of Delhi South Campus, University of Delhi. July, 2003 - till date: Chairman, Institute of Informatics & Communication. 15th December, 2004 – 22nd September, 2005: Head, Department of Mathematics, University of Delhi.
Areas of Interest / Specialization
Functional Analysis, Operational Theory and Harmonic Analysis
Subjects Taught
Various subjects at the undergraduate and post graduate levels
Research Guidance
Supervision of awarded Doctoral Thesis Thukral, Virender. 1998. Some Results on De Brages Spaces. University of Delhi. Aggarwal, Sanjeev. 1995. De Branges Spaces and related Invariant Subspaces, University of Delhi. ***Supervision of Doctoral Thesis, under progress*** Sahani, Niteesh. Functional Analysis & Applications. University of Delhi. (Date of Registration: 27.02.2004) ***Supervision of M.Phil dissertations, under progress*** Gupta, Nisha. 2009. Invariant Subspaces. Neelima. 2008. Fundamental Theorem of Algebra. Bhola, Jyoti. 2007. Study of Essentionally Hankei Operator. Jain, Naveen Kumar. 2007. Backward Shieft Invariant Subspaces on the BIDISC. Walia, Shalini. 2002. Some Aspects of Von Neumann's Inquality. Arora, Bharti. 2001. Some Applications of the World Decompositions. Nigam, Preety. 1992. Decomposition of Isometrics. Satija, Poonam. 1991. Uniqueness of the Adjoint Operation.

Rawat, Savitri. 1990. Compact Endomorphisms & Related Operator.

Publications Profile

Books/Monographs (Authored/Edited)

Singh, Dinesh, J Prestin, P K Jain and N Mhaskar, ed. 2001. *Wavelets.* New Delhi: Narosa.

Singh, Dinesh, K B Sinha, Rajeeva Karandikar, Aloke Day and S Pattanaik 2000. *Understanding Mathematics*. Hyderabad: University Press.

Singh, Dinesh B S yadav, ed.1992. *Functional Analysis and Operator Theory, Springer Verlag Lecture Notes in Mathematics, Vol. 1511.*

Research papers Published In Indexed/ Peer Reviewed Journals

Singh, Dinesh and M Raghupathi. Function Theory in Real Hardy Spaces. *Mathematische Nachrichten*. (Accepted for publication)

Singh, Dinesh, Sneh Lata and M Mittal. A Finite Multiplicity Helson-Lowdenslager-de Branges Theorem in L2. *Studia Mathematica*. (Accepted for publication)

Singh, Dinesh, K Davidson, V I Paulsen and M Raghupathi. 2009. A Constrained Nevanlina-Pick Interpolation Problem. *Indiana University Mathematics Journal*. 58(2): 709-732.

Singh, Dinesh and V I Paulsen. 2006. Modules over Subalgebras of the Disk Algebra. *Indiana University Mathematics Journal.* 55(5): 1751-1766.

Singh, Dinesh and V I Paulsen. 2006. Extensions of Bohr's Inequality. *Bull. London Math. Soc*. 38(6): 991-999.

Singh, Dinesh. 2006. The Spectrum in a Banach Algebra. *Amer. Math. Monthly*. 113(8): 756-758.

Singh, Dinesh and V I Paulsen. 2004. Bohr's Inequality for Uniform Algebras. *Proc. Amer. Math. Soc*. 132(12): 3577-3579.

Singh, Dinesh. 2004. The Infinitude of the Primes. *Amer. Math. Monthly*. 111: 863.

Singh, Dinesh, V I Paulsen and G Popescu. 2002. On Bohr's Inequality. *Proc. London Math. Soc.* 85(3): 493-512.

Singh, Dinesh and V I Paulsen. 2000. A Helson-Lowdenslager-De Branges Theorem in L2. *Proc. Amer. Math. Soc*. 129: 1097-1103.

Singh, Dinesh and V Thukral. 1998. Invariant Subspaces of Shifts on the Hardy Spaces of the Circle and the

Torus. Fourier Series, Approximation Theory and Applications. New age International. 301-311.

Singh, Dinesh, R Bhatia and K B Sinha. 1998. Differentiation of Operator Functions and Perturbation Bounds. *Communications in Mathematical Physics*. 191: 603-611.

Singh, Dinesh and V Thukral. 1997. Multiplication by Finite Blaschke Factors on de Branges Spaces. *Journal of Operator Theory*. 37: 223-245.

Singh, Dinesh and S Agrawal. 1995. De Branges Spaces Contained in Some Banach Spaces of Analytic Functions. *Illinois Journal of Mathematics.* 39: 351-357.

Singh, Dinesh and U N Singh. 1994. Invariant Subspaces in VMOA and BMOA. *Michigan Math. Journal*. 41: 211-218.

Singh, Dinesh and S Agrawal. 1994. De Branges Modules in l2-valued Hardy Spaces of the Circle and Torus. *Journal of Math. Sciences.* 28: 235-266. (U N Singh Memorial Volume)

Singh, Dinesh, On a Theorem of De Branges (with U. N. Singh) Indian Journal of Mathematics (U.N. Singh Memorial Volume), 33(1991), 1-5.

Singh, Dinesh. 1990. Brangesian Spaces in the Polydisk. *Proc. Amer. Math. Soc*. 110: 971-977.

Singh, Dinesh. 1990. A Trace Inequality for Operators. *Journal of Mathematical Analysis and Applications*. 150: 159-160.

Singh, Dinesh and A A W Mehanna. 1987-89. Invariant Subspaces in H1 with Real Taylor Coefficients. *The Aligarh Bulletin of Mathematics*. 12: 45-50.

Singh, Dinesh. 1984-1992. BMOA and the Backwards Shift on H1. *Journal of Math. Sciences.* 19-27: 56-66.

Singh, Dinesh. 1984-1992. Spectral Shifts. *Journal of Math. Sciences*. 19-27: 67-71.

Singh, Dinesh. 1984-1992. Zeros of Polynomials and the Shift Operator. *Journal of Math. Sciences*. 19-27: 72-74.

Singh, Dinesh. 1977. A Simple Proof of Bertrand's Postulate. *The Mathematics Student.* 45: 84.
(written as an undergraduate-this note is referred to on page 116 in Development of Prime Number Theory: W. Narkiewicz; Springer Monographs in Mathematics (2000)

Other Publications

Edited Works

Singh, Dinesh and S Agrawal. 1997. De Branges Modules in H2(Ck). In *Harmonic Analysis and Hypergroups,* 1-11.

Singh, Dinesh, S Agrawal and B S Yadav. 1992. De Branges Modules in H2(Ck) of the torus. In *Lecture Notes in Mathematics, Vol.1511*, 55-74. Verlag: Springer.

Conference Organization/ Presentations (in the last three years)

Organization of a Conference

Principal organizer, International conference Mathematics in the Twentieth Century, 2006.

Research Projects (Major Grants/Research Collaboration)

Name of Project: Linear Mapping Associated with Banach Spaces of Functions.

Position in Project: Principal Co-Investigator

Period: 1998-2003

Grant: DST Project

Awards and Distinctions

Career Award in Mathematics of the University Grants Commission, 1994.

The AMU Prize of the Indian Mathematical Society, 1989.

The Inlaks Scholarship to pursue the Ph.D. degree at the Imperial College, 1978.

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.

Association With Professional Bodies

Committees and Boards

Member, Executive Organising Committee of the International Congress of Mathematicians, 2010.

Memberships

Secretary, Ramanujan Mathematical Society, 2010.

Other Activities

Adjunct Professor, University of Houston, Houston, Texas, USA, 1999.

Painter

Student of Gandhian philosophy

Fond of traveling and literature (English, Hindi).

Have helped organise numerous important international conferences.

Have reviewed/refereed papers for several publications in India and abroad including the Mathematical Reviews.

Served/serve on several Committees of institutions such as UGC, Govt. of India, various Universities.

Research Interests

Functional Analysis and Harmonic Analysis especially where Operator Theory, Function Theory and real variable methods on the disk interact closely. This research centres around the study of properties of such spaces as De Branges Spaces, BMOA, Hardy Spaces and the operators and functions defined on them.

Published numerous research papers in major international journals many of which have been cited in books and papers.

Successfully guided two doctoral students whose work has been well received. Currently guiding one doctoral student. Their work has been connected with some aspects of De Branges Spaces and Invariant Subspaces. Successfully guided nine students for their M.Phil. dissertations.

Also published papers on topics in elementary mathematics where new ingenious proofs of well known classical results are presented.

Survey Articles

2007. Harmonic Analysis on the Unit Circle: A Personal Perspective> (Ramaswamy Aiyar Award Lecture 2007 in the centenary year of the Indian Math. Soc.) The Mathematics Student. 76: 137-155.

1989. Invariant Subspaces of Analytic Functions, (with U.N. Singh) Invariant Subspaces and Allied Topics. Narosa. 40-50.

Popular Article

Article in Hindi on the life of Evariste Galois: Ganitagya Evariste Galois: Hairatnak Zindagi Aur Maut Ki Kahani. Naya Path. June 2009, 35-40.

Delivered Lectures

Delivered the Platinum Jubilee Lecture (Mathematics) at the Indian Science Congress, 2009.

Delivered the Ramaswamy Aiyar Award Lecture of the Indian Mathematical Society, 2007.

Forthcoming Research

The Inequalities of Hardy and Hilbert (with V.I. Paulsen)

A General Lax-Halmos Theorem on the Hardy Spaces (With N. Sahni)

Invariant Subspaces in Uniform Algebras (with V.I. Paulsen and M. Raghupathi)

Non-Commutative Factorisation in Vector Valued Hardy Spaces (with V. Thukral)