

## **Abridged Biodata of Professor Abul Hasan Siddiqi**

Prof. Abul Hasan Siddiqi has started his academic career after obtaining post-graduation in Mathematics in 1962 and subsequently Ph.D. degree in 1967. Since then he is actively engaged in teaching and research of diverse areas of mathematics and its applications such as Functional Analysis, Approximation Theory, Variational Inequalities, Wavelet and Gabor Analysis with Their Applications to Finance, Car Industry, Meteorological Data Analysis and Oil Industry. He has served the Aligarh Muslim University in different capacities between 1965 and 1998 such as Chairman, Department of Mathematics, Provost of Prestigious Hall of Residence, Dean, Faculty of Sciences, Pro-Vice Chancellor and even as the Acting Vice Chancellor. In view of his valuable contributions, he is the only person whose name was recommended continuously 3 times by the Executive Council of the Aligarh Muslim University for its Vice Chancellorship position. He has held visiting assignments in different parts of the world including the USA, Canada, Germany, Saudi Arabia, Oman . He has visited practically all industrialized nations for giving lectures and participating in international conferences. He has actively collaborated with few distinguished German Professors such as Prof. Dr.Helmut Neunzert, Prof. Dr. Martin Brokate. He has been associated with Dr. Abdus Salam International Center of Theoretical Physics, Trieste, Italy (UNESCO Organization) since 1987 in different capacities such short and long time visitor ,Regular Associate, Senior Associate, ICTP Consultant to Turkey and 7 times as the guest of three former Directors and current Director. He has benefited a lot from these activities

He has acted as expert for selection committees of Professor in different universities of India and Saudi Arabia (King Fahd University of Petroleum and Minerals).

He has acted as advisers to interview boards of the Union Public Service Commission Shahjahan Road New Delhi, Rajasthan Public Service Commission, Jammu & Kashmir Public Service Commission, Bihar Public Service Commission & Madhya Pradesh Public Service Commission

He has acted as an expert for selecting candidates for Commonwealth fellowships, Fulbright fellowships and Hungarian Fellowships. He has supervised more than two dozen Ph.D. students .who are holding important positions in different parts of the world

He has published more than 100 research papers which have been extensively cited by other researchers in his field of specialization. He has published 3 post-graduate level books, publishers are Chapman & Hall/CRC Press, Taylor Francis Group, ANSHAN, UK, World Scientific Publisher Marcel-Dekker, New York; Kluwer Academic Publishers, Boston-Dordrecht-London and Tata McGraw-Hill, Delhi-London-Madras. He has edited 8 international conference proceedings published by Longman/CRC, London; Kluwer Academic Publishers, Boston-Dordrecht-London; Narosa, Delhi-London (2); Mcmillan India, Banglore-Delhi-Madras and Anamaya, New-Delhi. He has been visiting professor in Tabriz University, Iran(Dec,1973-August,1975), Constant University, Algeria(1980-1983), Kaiserslautrn University, Germany(April1997-Oct.1997, McMaster University, Canada(March1996-May1996). He has visited various universities of Europe and North America to deliver invited talk such as Tennessee University, USA, Concordia University, Canada, Laval University, Canada, Erlangen University, Manheim University, Trier University, Heidelberg University, Darmstadt University (All Germany), Rome University, Pavia University, Pisa University, etc. (all Italy), University of Brussel, Nice-University, Paris University (Orsay Centre), both France..

He is a member of the International Council of Industrial and Applied Mathematics since 1999. He is the recipient of the German Academic Exchange Programme Fellowship thrice. He has been Professor of Mathematics at the King Fahd University of Petroleum and Minerals, Dhahran Saudi Arabia during the period 1998-2007. He was also Director of a research Lab. for Wavelet and Variational Methods in KFUPM.

He has been visiting consultant to the university of Sultan Qaboos university ,Muscat,Oman in 2009,2010 and 2011.He has been research consultant of famous oil company,ARAMCO, Dhahran ,Saudi Arabia and research projects of Sultan Qaboos University,Oman and Koceali University,Turkey in last couple of years.

While in AMU he organized fairly good number of reputed conferences with the financial support of NBHM and ICTP. In 2009,he organized an International Conference on Modeling of Engineering and Technological Problems in Agra with the financial support of AICTE,NBHM,ICTP,ICIAM,CSIR,INSA and Sharda Group of Institutions.More than 30 distinguished experts participated from abroad.The Proceedings of this conference was published in August 2009 by the American Institute of Physics,Philadelphia,USA.( Editors A.H.Siddiqi,A.K.Gupta,M.Brokate)

He was the main organizer of the Satellite Conference of ICM2010 on Mathematics for Science and Technology ,15-17 July 2011,New-Delhi.The Proceedings volume is being published by the World Scientific Publisher Singapore( Editors A.H.Siddiqi, R.C.Singh and,P.Manchanda)-In Press. On this occasion a workshop on wavelets and Inverse Problems was also organized by him in collaboration with Dr Ms Mani Mehra of IIT Delhi and supported by DST. Leading experts participated. He was the local host of ICIAM Board Members representing 29 member societies of the World on 14<sup>th</sup> August 2010 at IHC. He also attended ICM2010 in Hyderabad and chaired a session.

He has published more than 40 papers in last 6 years in reputed journals like Chaos,Soliton,& Fractals(volume 39 and 40,pp164-189,pp 181-190),besides 3 Proceedings of International Conferences and 3 books.See list attached..

.He is the chief editor of Indian Journal of Industrial and Applied Mathematics ( organ of ISIAM) published jointly by Anamaya and Taylor and Francis..He is guiding 3 Ph.D..students of Sharda University and helping researchers in Northern part of the country in many ways..He was invited to organize a thematic symposium in ICIAM2011 in 3 sessions on Applications of Wavelets to Meteorology and Oil Exploration. Besides him there were 10 other speakers from different countries. His visit to ICIAM2011 to Vancouver,17-24,July 2011 was sponsored by the National Board of Higher Mathematics, Department of Atomic Energy, Government of India. A Volume based on this thematic mini symposium will be published by the world scientific Publisher within couple of months.

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**Publications of Prof. Abul Hasan Siddiqi Recent**

**I. Published / Accepted Books in the last 10 years.**

- 1 A.H Siddiqi, P. Manchanda, M.Brokate, Calculus with Applications written under a project of ICTP, Trieste, Italy, IK International publisher, 2011.
- 2 A.H.Siddiqi, Applied Functional Analysis, Anamaya Publisher 2010.
- 3 A.H. Siddiqi, K. Ahmad, P. Manchanda, *Introduction to Functional Analysis*, Anamaya/Anshan, New Delhi/London, 2006.
- 4 A. H. Siddiqi. *Applied Functional Analysis*. Marcel Dekker, New York, 2004.
- 5 Helmut Neunzert and A. H. Siddiqi. *Topics in Industrial Mathematics, Case Studies and Related Mathematical Methods*. Kluwer Academic Publishers, Boston-Dordrecht-London, 2000. (Now Springer)
- 6 A. H. Siddiqi, P. Manchanda, *Introduction to Differential Equations*, Macmillan India, New-Delhi/Banglore June 2006

**In Press: K. Adziewski and A.H.Siddiqi, Introduction to Partial Differential Equations for Science and Technology, CRC Press, Taylor and Francis Group, U.S./U.K.**

## II. Published/Accepted Research papers in the last 8 years.

- 1 Z. Aslan, P. Manchanda, A.H.Siddiqi, Temperature and Precipitation variability over Euro-near east Asia, Journal of Food, Agriculture and Environment, 9 (3&4)(2011)912-932.
- 2 A.H.Siddiqi, H-Sevindir, Z.Asalam, A wavelet based energetic approach for the analysis of electroencephalogram, Special Volume of Sultan Qaboos University General of Science,2012(In Press,SQUJS-22SVR)
- 3 P.Manchanda, Meenakshi, A.H.Siddiqi, Wavelat associated with non Uniform Multi resolution Analysis, International Journal of Wavelets Multi resolution Analysis and Image Processing, Singapore (to Appear in 2012).
- 4 P.Manchanda, Meenakshi, A.H.Siddiqi, A special type of multi resolution analysis, International Journal of Wavelets with application, Otto University Canada (accepted for publication).
- 5 S.Rehman, A. H. Siddiqi, Wavelet based correlation coefficient of time series of Saudi Meteorological data, Chaos, Solitions and Fractals (Elsevier), 39 (2009) 1764-1789
- 6 S.Rehman, A. H. Siddiqi, Wavelet based hurst exponent and fractal dimensional analysis of Saudi climatic dynamics, Chaos, Solitions and Fractals (Elsevier), 40 (2009) 1081- 1090.
- 7 S.Fridli, P. Manchanda, A.H.Siddiqi Approximation by Walsh-Norlud means Acta Sci. Math.(Szege) 74 (2008), 593-608
- 8 A.H Siddiqi and H.H Khan, jamil Ahmed Siddiqi and his contribution to the world of Mathmatics,Aligarh Bulletin of Mathematics, 27 (1) (2008) 1-6
- 9 A.H Siddiqi and F.A shah Construction of Wavelet packets with multi resolution analysis Aligarh Bulletin of Mathematics, 27 (1) (2008) 13-22
- 10 P. Manchanda, Meenakshi and A.H Siddiqi Haar-Vilenkin Wavelet 27 (1) (2008) 59-73
- 11 A.H.Siddiqi,Rais Ahmad, Ishikawa *type iterative algorithm for a generalized nonlinear quasi-variational like inclusions in Banach spaces*,Math.Comp.Modelling45(2007),5-6,594-605
- 12 A. H. Siddiqi, and Rais Ahmad “Mixed Variational Like Inclusion and Proximal operator Equation in Banach Spaces, Journal of Mathematical Analysis and Applications, 265 (2007) no1,515-524.
- 13 7. A.H. Siddiqi, Role of Mathematics for Economics and Scientific Development, Proc. 2<sup>nd</sup> Conference on Planning and Development of Education and Scientific Research in the Arab States, 24-27, Feb 2008 at KFUM, Dhahran, Saudi Arabia (Invited Paper) pp. 987-992 (peer Reviewed Paper).
- 14 A.H. Siddiqi and S Irfan, completely generalized Co-complementary problems Involving P-Related Accretive operators with Fuzzy Mappings, Accepted for Publication in Professor George Isac (Canada) Memorial Volume, Springer, New York, (edited by Prof. Panos Pardalos (USA), Prof. T.M. Rassias (Greece) and Prof. A.Khan (USA)2009 (to be published).

- 15 A.H. Siddiqi, Identification and characterization of oil Reservoirs by Wavelet Base Well Log Processing, International Conference on Mathematical Modelling, 23-36 February 2009, Sultan Qaboos University, Muscat, Oman
- 16 A.H. Siddiqi, A.K. Verma, Noor-e-Zahra, Reservoir Flow simulation by Wavelet Techniques, International Conference on Mathematical Modelling, 23-26 February 2009, Sultan Qaboos University, Muscat, Oman.
- P. Manchanda, Meenakshi and A.H. Siddiqi, A special type of Non-uniform Multiresolution Analysis, p. 112 of Abstract Book, International Conference on Modelling of Engineering and Technological Problems, & 9<sup>th</sup> Biennial Conference of ICIAM 14-16, January 2009 (likely to be included in Proc., American Institute of Physics, New York USA).
- 17 F.A. Shah, Abdul Khaliq and A.H. Siddiqi, Conference of a Class of Non-Orthogonal Wavelet Expansions Associated with Dilation Matrix, p. 136 of Abstract Book, International Conference on Modelling of Engineering and Technological Problems, & 9<sup>th</sup> Biennial Conference of ICIAM 14-16, January 2009 (likely to be included in Proc., American Institute of Physics, New York USA).
- 18 M.K. Ahmad, J. Iqbal and A.H. Siddiqi, Sharp Operator Based Diffusion Filter, P. 157 of Abstract Book, International Conference on Modelling of Engineering and Technological Problems, & 9<sup>th</sup> Biennial Conference of ICIAM 14-16, January 2009 (likely to be included in Proc., American Institute of Physics, New York USA).
- 19 Ashish Mittal, A.H. Siddiqi and R. Bhardwaj, p.101 of Abstract Book, International Conference on Modelling of Engineering and Technological Problems, & 9<sup>th</sup> Biennial Conference of ICIAM 14-16, January 2009.
- 20 S. Bhateja, A.H. Siddiqi, R. Bhardwaj, Analysis of Meteorological Data using Daubechies Wavelet (DBS), p. 102 of Abstract Book, International Conference on Modelling of Engineering and Technological Problems, & 9<sup>th</sup> Biennial Conference of ICIAM 14-16, January 2009 .
- 21 Rais Ahmad, Abul Hasan Siddiqi, Shakib Irfan, Journal of Inequalities and Applications, Appeared in 2007 No. 1, pp. 515-524
- 22 M.El Gebeily and A.H. Siddiqi, Wavelet Packets for Saudi Meteorological Time Series Analysis, Proceedings, International Workshop III: on Applications of Wavelets to Real World Problems, May 28-29, 2008, p.p 1-21.
- 23 K.M. Furati, P. Manchanda, A.H. Siddiqi, Wavelet Methods in Oil Industry, Proceedings, International Workshop III on Applications of Wavelets to Real World Problems, May, 28-29, 2008, 26-36 .

- 24 A.H. Siddiqi, A review of Wavelet-based analysis of biomedical signals, Plenary Lecture Schedule in an International Workshop, International Conference on Modelling of Engineering and Technological Problems, & 9<sup>th</sup> Biennial Conference of ICIAM 14-16, January 2009 (likely to be included in Proc., American Institute of Physics, New York USA).
- 25 A.H Siddiqi, Wave Packet on the unit Sphere, Proc. Tenth Conference on Systematics, cybernetics and Informatics, pp. 16-19 July 2006.
- 26 Salahuddin, M. K. Ahmad, and A. H. Siddiqi, "Parametric Problem of Completely Generalized Quasi-Variational Inequalities," Journal of Inequalities, no. 2, (2006) 1-12, ART ID86869
- 27 A.H. Siddiqi, Rais Ahmad, and S.S.Irfan, "Set-Valued Variational Inclusions with Fuzzy Mappings in Banach Spaces," Journal of Concrete and Applied Mathematics, vol. 4, no. 2, (2006) 171-181,
- 28 P. Manchanda, J.Kumar, and A.H.Siddiqi, "Mathematical Methods for Modelling Price Fluctuations of Financial Time Series," Journal of Franklin Institute, 344 (2007), 613 – 636.
- 29 K. M. Furati, H. Z. Tawfiq, and A. H. Siddiqi, "Simulation and Visualization of safing sensor by fastflo," American Journal of Applied Sciences, vol. 2, no. 8, (2005) 1261-1265.
- 30 K. M. Furati and A. H. Siddiqi, "Quazi-Variational Inequality Modeling Problems in Superconductivity," Numerical Functional Analysis and Optimization, vol. 26, no. 2, (2005) 193-204.
- 31 K. M. Furati and A. H. Siddiqi, "Fast Algorithm for the Bean Critical Model for Superconductivity," Numerical Functional Analysis and Optimization, vol. 26, no. 2, (2005) 177-192.
- 32 R. Ahmad, A. H. Siddiqi, and Z. Khan, "Proximal Point Algorithm for Genralization Multivalued Non-Linear Quasi-Variational like Inclusions in Banach Spaces," Applied Mathematics and Computation, vol. 163, (2005) 295-308.
- 33 A. Khaliq, A. H. Siddiqi, and S. Krishnan, "Some Existence Result for Generalized Vector Quazi-Variational Onequalities," Nonlinear Functional Analysis and Application, vol. 10, no. 3, (2005) 415-425.
- 34 M. K. Ahmad and A. H. Siddiqi, "New Distortion Measure in Image Processing," Journal of Sampling Theory in Signal and Image Processing, vol. 4, (2005) 151-167.
- 35 Z. Can, Z. Aslan, O.Oguz, and A. H. Siddiqi, "Wavelet transform of metrological parameters and gravity waves," Annales Geophysicae, vol. 23, (2005) 659-663.

- 36 Q. H. Ansari, Z. Khan, and A. H. Siddiqi, "Weighted Variational Inequalities,," *Journal of Optimization Theory and Applications*, vol. 127, no. 2, (2005) 263-283.
- 37 Salahuddin, M. K. Ahmad, and A. H. Siddiqi, "Existence results for generalized nonlinear variational inclusion," *Applied Mathematics Letters*, vol. 18, (2005) 859-864.
- 38 M.Yu Rasulova and A. H. Siddiqi, "Relationship Between the Solution of BBGK-Hierarchy of Kinetic Equations and the Particle Solution of Vlasov Equation," *Journal of Dynamical Systems & Geometric Theories*, vol. 2, (2004) 17-22.
- 39 A.H. Siddiqi, Shamsuddin Khan, and S. Rehman, "Wind Speed Simulation Using Wavelet," *American Journal of Applied Sciences*, vol. 2, no. 2, (2004) 557-564.

**Note:** Several papers are pending for publication in other journals

**Edited Proceeding of International Conferences in the last 8 years.**

- 1 A.H. Siddiqi, R. C. Singh, P. Manchanda, Proceeding of Satellite Conference ICM 2010 on Mathematics in Science and Technology, World Scientific Publisher, Singapore, 2011.
- 2 A.H Siddiqi, A.K Gupta, M. Brokate, Models of Engineering and Technological Problems, American Institute of Physics(AIP), USA 2009.
- 3 A. H. Siddiqi, I. Duff, O. Christensen (eds) Modern Mathematical Methods, Model and Algorithms, Anamaya/Anshan, New Delhi, London, 2006/2007.
- 4 K.M. Furati, Z. Nashed, A.H Siddiqi, Mathematical Models and Method for real worlds system, Marcel-Dekkar/Taylor & San/Fransis/Chapman/CRC, New-York, 2005
- 5 A. H. Siddiqi and M. Kocvara. Trends in Industrial and Applied Mathematics. International Conference Proceedings-Kluwer Academic Publishers (Now Springer) Boston, 2002.
- 6 P. Manchanda, Khalil Ahmad, and A. H. Siddiqi. Recent Trends in Industrial and Applied Mathematics. Anamya Publishers, New-Delhi/London 2002.
- 7 A. H. Siddiqi and K. Ahmad. Mathematics and its applications in industry and business Narosa, New-Delhi & London, 2000.

**In Press: A.H.Siddiqi ( Ed.) Application of wavelet Methods to Oil Industry and Meteorology, World Scientific Publishers**