ST. THOMAS COLLEGE, KOZHENCHERRY

DEPARTMENT OF PHYSICS

FACULTY BIOSKETCH

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- **Brief Overview :**

Completed his Master's degree in Physics From Mahatma Gandhi University in 1985 and Ph.D. from Cochin University for Science and Technology in 2003. He joined St. Thomas College, Kozhenchery in 1986 as Lecturer. He is a vibrant researcher, eminent academician, and a distinguished scientist. He has a good number of International /National publications and an equal number of conference proceedings to his tally. He is guiding 5 Research Scholars; one has already submitted his thesis. His expertise includes hardware and software development on parallel, standalone, web based and data and computation intensive platforms. He was responsible for setting up a 16 node cluster computing facility at IUCAA in 2003 and has been one of the organizers of the national workshop in cluster computing, held at IUCAA in 2004. He initiated the setting up of the Santhom Computing Facility in St.Thomas College and has also designed and set up a cluster computing facility in the college. He is the author of the ATMA (Automated Transmigration Algorithm) module that enables Linux operating system to migrate from one machine to another and provide the user with a working environment for both research and development without installing any software on the local machine. He is also the author of the DBNN data mining software that is widely used in astronomy and other data intensive research areas.

Area of Specilization : Machine Learning and Cryptography.

- **Publications :**

- Boosting the Differences: A Fast Bayesian classifier neural network , Ninan Sajeeth Philip and K. Babu Joseph, Intelligent Data Analysis, 4(2000) 463-473, IOS press, nl.
- Adaptive Basis Function for Artificial Neural Networks, Ninan Sajeeth Philip and K. Babu Joseph, Neurocomputing, Vol.47, 1-4, (Aug 2002), pp.21-34 Elsevier,nl.
- A Neural Network Tool for Analyzing Trends in Rainfall, Ninan Sajeeth Philip and K. Babu Joseph, Computers and Geosciences, (2003), Vol. 29, no. 2, pp. 215-223, Elsevier, Canada.
- A difference boosting neural network for automated classification, N.S. Philip, Yogesh Wadadekar, Ajit Kembhavi, K. Babu Joseph, Astronomy and Astrophysics,(2002), 385(3): 1119–1133.

- Automated Galaxy Morphology: A Fourier Approach, S.C. Odewahn , S.H. Cohen R.A. Windhorst, N.S. Philip, (2002), Astrophysical Journal, 568, 539.
- (f) Modeling Chaotic Behavior of Stock Indices Using Intelligent Paradigms Ajith Abraham, Ninan Sajeeth Philip and P. Saratchandran, International Journal of Neural, Parallel & Scientific Computations, (2003), Volume 11, issues 1 & 2, pp 143 to 160.
- Rainfall Forecasting Using Soft Computing Models and Multivariate Adaptive Regression Splines, Ajith Abraham, Ninan Sajeeth Philip and Dan Steinberg,IEEE SMC Transactions: Special, 2001. [a collaborative project where all of us are co-principal investigators.
- Soft Computing Models for Weather Forecasting, Ajith Abraham, Ninan Sajeeth Philip submitted to SCS Journal. (www.scs.org).
- Effect of substrate temperature on structural, optical and electrical properties of spray pyrolitically grown nanocrystalline SnO_2 thin films, 2007, Physica Status Solidi(a), 204(10), 3305.
- Nanostructural and surface morphological evolution of chemically sprayed SnO_2 thin films, Applied Surface Science 254 (2008) 2179 - 2186.
- Results from the supernova photometric classification challenge, Richard Kessler et al., Publications of the Astronomical Society of the Pacific, 2010, 122, 1415.
- A Learning Algorithm based on High School Teaching Wisdom, Ninan Sajeeth Philip, Paladyn Journal of Behavioral Robotics, 2010, 1(3), 160.
- A Photometric Catalogue of Quasar and Other Point Sources in the Sloan Digital Sky Survey, Sheelu Abraham, Ninan Sajeeth Philip, Ajit Kembhavi, Yogesh G. Wadadekar and Rita Sinha, MNRAS, 2012, 419, p80-94. III . Publications.
- Feature Selection Strategies for Classifying High Dimensional Astronomical Data Sets, Proceedings of Scalable Machine Learning: Theory and Applications, IEEE BigData 2013, Santa Clara, CA, USA.
- Spectral variability of IRAS 18325-5926 and constraints on the geometry of the scattering medium, 2013, APJ, 773, 130.
- A Wavelet Based Algorithm for the Identification of Event Related Potential Components, 2014, Journal of Neuroscience Methods, 06, p10. Chaos for Stream Cipher, in proc. of Recent Advances in

Computing and Communications, ADCOM2000, Tata McGraw-Hill, (2000) pp 35-42.

- A Bayesian Approach for star-galaxy classification, N.S.Philip, K.Babu Joseph,Ajit
  Kembhavi, Yogesh Wadadekar, in proc. Automated Data Analysis in Astronomy,
  Narosa Publishing house, (2000) pp.125-132.

- On the predictability of Rainfall in Kerala: an application of ABF Neural Network, Lecture Notes in Computer Science(LNCS 2074), Springer Verlag, Germany,(2001) pp 400-408.
- Distorted English Alphabet Identification: An application of Difference Boosting Algorithm, In proc. of Recent Advances in Computing and Communications, ADCOM2000, Tata McGraw-Hill, (2000) pp 139-143 [Referee's Best Paper Selection].
- Will we have a wet summer? Soft computing models for Long-term rainfall forecasting, Ajith Abraham, N.S. Philip, K. Babu Joseph,In proc. of 15th European Simulation Multiconference (ESM2001), Modeling and Simulation 2001, Prague (2001), pp 1044-1048. [Best Paper Award Selection].
- Studies in Artificial Neural Network Modeling, Ph.D Thesis (Nov. 2001). Performance Analysis of Connectionist Paradigms for Modeling Chaotic Behavior of Stock Indices, Ajith Abraham, Ninan Sajith Philip, Baikunth Nath, P. Saratchandran, Second InternationalWorkshop on Intelligent Systems Design and Applications, (ISDA'02), Computational Intelligence and Applications, Dynamic Publishers Inc., USA, ISBN 096403980X, pp. 181-186, Atlanta, USA, 2002.
- Optimal Selection of Training Data for the Difference Boosting Neural Networks, ADASS-2003, Strasbourg, France, October 2003. Optimal Section of Training Data for the Difference Boosting Neural Networks,iAstro-2003, Nice, France, October 2003.
- What is there in a Training Sample? Ninan Sajeeth Philip, 2009World Conference on Nature and Biologically Inspired Computing (NaBIC-2009), IEEE, ISBN: 978- 1-4244-5612-3.
- "Photometric Classification of Quasars from the Sloan Survey" Rita Sinha, N. S. Philip, Ajit Kembhavi, Ashish Mahabal, IAU HIGHLIGHTS

OF ASTRONOMY, Volume 14: Special Session 3: The Virtual Observatory in Action: New Science, New Technology, and Next Generation Facilities Ninan Sajeeth Philip.

- Photometric identification of Quasar candidates, Sheelu Abraham and Ninan Sajeeth Philip, Astronomical Data Analysis Software and Systems XIX, ASP Conference Series, 2010, 434.
- Poster Presentation at JSPS-DST Asia Academic Seminar: CPS 8th International School of Planetary Sciences Challenges in Astronomy: Observational Advances, September 26 - October 1, 2011, Minami-Awaji Royal Hotel, Hyogo, Japan.
- Classification by Boosting Differences in Input Vectors, International Workshop on Stellar Libraries, Proceedings of a conference held 5-9 December, 2011 at University of Delhi, India. Edited by Philippe Prugniel & Harinder P. Singh. ISBN: 978-81-922926-4-9. Astronomical Society of India Conference Series, Vol. 6, 2012, p. 151.
- Feature Selection Strategies for Classifying High Dimensional Astronomical Data Sets, Proceedings of Scalable Machine Learning: Theory and Applications, IEEE BigData 2013, Santa Clara, CA, USA.

- **Career Profile:**

  - Member The International Statistical Institute, http://www.isi-web.org
  - Member Astrostatistics and Astroinformatics Portal, Penn State, USA
  - Member Virtual Observatory, India and International Virtual Observatory Alliance