

Adjunct Faculty at National Institute of Advanced Studies (NIAS)

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Curriculum Vitae



May I please introduce myself as one of the Adjunct Faculty at the National Institute of Advanced Studies (NIAS) in Bangalore. (www.nias.res.in). I have an interdisciplinary Educational and Research background, as summarized here below:

Educational Background (2 Master Degrees and 2 Bachelor Degrees)

- 1) MD in Medical Physiology (Rajiv Gandhi University of Karnataka)
- 2) MSc in Cognitive and Computational Neuroscience (University of Sheffield, United Kingdom)
- 3) BSc in Physics (Major) and Mathematics (Minor) (Indira Gandhi University, Delhi)
- 4) MBBS (Mahatma Gandhi University, Kerala)

Research Background:

Here below, have given a Summarized list of my Research works, which can be googled and viewed under the following headings:

- 1) A Mathematical Treatise of Polychronous Wavefront Computation and its Application into Modeling Neurosensory Systems (ResearchGate 2014)
- 2) The Geometry of Polychronous Wavefront Computation (ResearchGate 2014)
- 3) A Theoretical Reformulation of the Classical Double Slit Interference Experiment (ResearchGate 2014)
- 4) Mathematical Metaphysics: Modeling Determinism and Free-Will along the lines of Theological Compatibilism (ResearchGate 2014)
- 5) A Novel Trilateration Algorithm for Localization of a Transmitter/Receiver Station in a 2D Plane using Analytical Geometry (ResearchGate 2014)

Paper Published:

A Comparative Study of the Effects of Superbrain Yoga and the Aerobic Exercise on Cognitive functions – Dr. Joseph Ivin Thomas, Dr. Venkatesh D: National Journal of Philosophy, Pharmacy and Pharmacology (July 2017)

Contact Address in Ras Al Khaimah, UAE:
Post Box: 4925, Ras Al Khaimah,
Tel: 050 490 1996 (C/o Mr. Thomas)

Dissertation – MSc Cognitive & Computational Neuroscience:

“A Cartesian Approach to Modeling the Rodent Whisker Barrel Cortex System”:

Dr. Joseph Ivin Thomas, Dr. Stuart Wilson

Department of Psychology, University of Sheffield, United Kingdom. (Aug 2013)

Dissertation – MD Medical Physiology (To be published soon):

A Comparative Study of Sensory-motor coordination, Executive function and Testosterone levels in Hypothyroid and Euthyroid Males”:

Dr. Joseph Ivin Thomas, Dr. Venkatesh D

Department of Physiology, MS Ramaiah Medical College, Bangalore (2016)

Poster Presentation:

“Influence of Anthropometric Factors in Audiovisual Response Latency”:

Dr. Joseph Ivin Thomas, Dr. Venkatesh D

Venue: 36th Annual Conference of Indian Association of Biomedical Sciences at Pondicherry University,

Department of Biotechnology, School of Life Sciences, Pondicherry

Oral Presentation:

“A Comparative Study of Attention Control and Working Memory in newly diagnosed Hypothyroid and Euthyroid Males” :

Dr. Joseph Ivin Thomas, Dr. Venkatesh D:

Venue: ENVOCCON 2016, International Conference on Environment and Occupational Health, Sree Balaji Medical College & Hospital, Department of Physiology, Chennai, Tamil Nadu (Sep 2016)

General Articles:

- Thomas J - What makes a great scientist? ResearchGate 2014
- Thomas J - An Essay on Hindu Philosophy from a Mathematician's Perspective: ResearchGate 2014
- “Actually, they are Disservice Calls”: The Hindu Newspaper Opinion page – can be found in their Web Page www.thehindu.com/profile/author/dr.-joseph-ivin-thomas/

Citations Received:

- 1) [Implementing Multilayer Neural Network Behavior Using Polychronous Wavefront Computation](#)
Highland F & Hart C (2016):
Procedia Computer Science, 95, 159-167
- 2) [Unsupervised Learning of Patterns Using Multilayer Reverberating Configurations of Polychronous Wavefront Computation.](#)
Highland F & Hart C (2016):
Procedia Computer Science, 95, 175-184
- 3) [Adaptation of Spike-Timing-Dependent Plasticity to Unsupervised Learning for Polychronous Wavefront Computation](#)
Highland F & Hart C.B (2015):
Procedia Computer Science, 61, 314-321

Teaching Experience:

- 1) At Ramaiah Medical College in Bangalore, I have taught 3 successive batches of students in the following streams:
 - a) MBBS
 - b) Physiotherapy
 - c) Dentistry
 - ❖ This amounts to a total of around 750 Students during the 3-year period spanning from 2014 to 2017
 - ❖ The subject taught: Medical Physiology both the Theory and Practical part in extensive detail
- 2) Besides this, I have also coached students with Special Needs and Disabilities, on a voluntary basis while at Ramaiah Medical College, in my spare time.

Research Interest:

- Mathematical modelling of Neural Systems
- Research into Computational nature of Cognitive processes such as 'Learning & Memory' in particular and 'Human Consciousness' in general.
- Keen desire to understand the Physical and Neural Network basis of the Sensory-motor devices and Brain-machine interfaces.

Other Qualifying Examinations - GRE & IELTS:

	Name of Examination	Date of Exam	Aggregate Score & Remarks	
1)	Revised Graduate Record Examination General Test (GRE)	14 Oct 2013	Quantitative Reasoning	: 72 nd Percentile (158) : Scale of 130 - 170
			Verbal Reasoning	: 73 rd Percentile (157) : Scale of 130 - 170
			Analytical Writing	: 54 th Percentile (4.0) : Scale of 0 - 6
2)	International English Language Testing System (IELTS)	12 Oct 2013	Reading : 8.5 Listening : 8.5 Writing : 8.5 Speaking : 8.5	<u>Overall Score : 8.5</u>

Special Postings attended during the MD Medical Physiology Program 2014 - 2017:

	Posting	Area of Training	Year & Duration
1)	NIMHANS, Bangalore	Neurophysiology	2015, 2 Weeks
2)	Institute of Aerospace Medicine	Aviation Physiology	2015, 1 Week
3)	Sports Authority of India	Sports & Exercise Physiology	2015, 2 Weeks

Certifications:

	Certificate	Certifying Body	Year
1)	ANLP Clinical Hypnotherapy Member of the Association of Neurolinguistics Programmers	David J Lincoln International United Kingdom	2009
2)	Observer-ship in Department of Neurophysiology	National Institute of Mental Health & Neurosciences, Bangalore	2015

Conferences Attended:

	Conference Name	Place & Organizing Body	Year
1)	NBNI Workshop on Neurobiology & Neuroinformatics	Cochin University of Science & Technology Centre for Neuroscience, Department of Biotechnology, Cochin	2008
2)	Translational Sciences: Bridging Ancient & Modern Biomedicine, 36 th Annual Conference of Indian Association of Biomedical Sciences	Pondicherry University, Department of Biotechnology, School of Life Sciences, Pondicherry	2015
3)	CME Program: “E = M4 Rediscovered Formula of Well Being”	Adichunchanagiri Institute of Medical Sciences, Department of Physiology In association with APPI – Bangalore Chapter, Mandya	2015
4)	ENVOCCON 2016 International Conference on Environment & Occupational Health	Sree Balaji Medical College & Hospital Department of Physiology, Chennai, Tamil Nadu	2016
5)	CME Program: ENVIRONS 2016, Environmental Psychology	JSS Medical College, Department of Physiology, Mysore, Karnataka	2016
6)	CME Program: Art of Scientific Publication	MS Ramaiah Medical College International Medical School, Bangalore	2016
7)	Neuroscience 2017: Recent Advances in Research in Brain & Diseases	MS Ramaiah Medical College Department of Physiology, Bangalore	2017

Scholastic Achievements & Awards - In College while studying for BSc, MSc and MD:➤ **BSc Physics Major Degree:**

Topped the University Records of the past 5 years, scoring 92% for all the Physics modules combined & 85% for all the Mathematics modules combined. The Overall score which includes Humanities & Language was 80%.

This achievement was acknowledged by a specially drafted letter, issued by the Director of the School of Sciences of the University.

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➤ **MSc Cognitive & Computational Neuroscience Degree:**

Scored the highest in my batch at [Sheffield University](#) for the Computational modules in both the 1st and the 2nd Semesters. Passed the course with a Distinction and overall second position in the class.

The University was kind enough to award me a '[Special Department Bursary](#)' amounting to UK Pounds 1500.

➤ **MD Medical Physiology Degree:**

I presented an Oral Paper in Sree Balaji Medical College, Chennai, as part of the ENVOCCON 2016 Conference.

It was based on my dissertation work, for which I was [kindly awarded the 1st Prize](#).

Scholastic Achievements & Awards - In School:

- Won a [Silver Medal](#) for securing the [2nd Position](#) in my Class for [Grade X](#), CBSE Board Examinations
- Received an [Honorary Award for coaching Physics to Grade XII students in my own School](#), at the invitation of my School Principal, during the months between completion of Senior High School and joining Medical School
- I had written an amateur Physics Thesis (unpublished) titled '[A Novel Theory of Evaporation Process](#)' while in [Grade XII](#), which was sent to a Professor of Aeronautical Engineering at the [IIT, Madras](#).

The Theory included an element of 'Einstein's Photoelectric Effect', in relation to the process of Surface evaporation from Liquids. This good Professor in turn had shown my manuscript to a [visiting German Professor in Physics](#), who was kind enough to comment that I ought to start directly working for a PhD, without wasting any more time.

Full Educational History (Starting from the Latest):

	Institution	University	Degree	Results	Period
1)	MS Ramaiah Medical College, Bangalore	Rajiv Gandhi University of Health Services	MD in Medical Physiology	Passed with 2 nd Class	Jun 2014 – Jul 2017
2)	Department of Psychology, Sheffield	University of Sheffield, United Kingdom	MSc in Cognitive & Computational Neuroscience	Passed with Distinction (2 nd Rank)	Sep 2012 - Aug 2013
3)	St Albert's College, Cochin	Indira Gandhi National Open University	BSc Physics Major with Mathematics Minor	Passed with 1 st Division (1 st Rank)	Jun 2008 – Dec 2012
4)	MOSC Medical College, Ernakulum	Mahatma Gandhi University	MBBS – Medicine & Surgery	Passed with 2 nd Class	Aug 2002 – Jun 2008
5)	Indian School, Ras Al Khaimah	CBSE, Delhi	Standards: IX to XII	Passed with Distinction	Jun 1988 – Jun 2002
6)	Indian Public School, Ras Al Khaimah	CBSE, Delhi	Standard VII to VIII	Passed with high grades in all subjects	Feb 1996 - Jun 1988
7)	English Speaking School, Ras Al Khaimah (British curriculum)	Managed by the British Community of Ras Al Khaimah	Nursery & Primary Classes until Standard VI (Junior 4)	Passed all Exams with Good Reports	Mar 1988 - Jan 1996

Social Services and Humanitarian work rendered:

- Volunteered to be the 'Scribe' for a **visually impaired** Super Specialist Doctor for his DM Endocrinology University Examinations held in July 2016
- Have offered cost-free coaching to Students with Special Needs and disabilities
- Was inducted into the Anti-Ragging Committee of MS Ramaiah Medical College for 2 successive years from 2015 to 2016.
- Took the initiative, at great risk to my person, to directly tackle the 'Drug Menace' in the Hostel grounds of my college campus by distributing pamphlets, raising social awareness among the new joiners, and doing one-to-one counseling sessions with Drug addicted students. These persistent efforts helped change the attitude of the College authorities in acknowledging the prevalence of this problem and spurred them to take the highly needed corrective actions.
- Have donated a number of useful instruments to my Physiology Department, incurring substantial personal expenses. The Equipment donated included items such as Tuning Forks, Knee Hammers, Snellen Distant Vision Charts and Jaegger Near Vision Charts
- Sponsored a local orphanage called Angels Orphanage in Bangalore with a sizeable one-time donation relative to my income. I have also donated a laptop so that the dear sweet children may benefit from the many blessings of e-literacy.
- In my spare time, I do General practice without charging any Consultation fee and also dispense free medication to the poor and needy.

Extracurricular Interests:

- Reading and discussing Philosophy, Popular Science, Recreational Mathematics and World History
- Watching TED Talks and NOVA Documentaries
- Playing the Violin, Pencil Sketching & Swimming

Contact Information:

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- Title: Doctor
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: Post Box 4925, Ras Al Khaimah
- Contact in India : 0091 88 6124 0282
- E Mail : dr.ivinthomas@yahoo.com

Personal Information:

- Date of Birth : 04 Dec 1984
- Place of Birth : Ras Al Khaimah, UAE
- Nationality : Indian
- Religion : Christian
- Gender : Male
- Marital Status : Single
- Father : Thomas Varghese, Training Manager, Aviation Training Centre, Dubai
- Mother : Dr. Annie Susan Thomas, MBBS, DCH (Dublin), Digdaga Medical Centre, Ministry of Health, Ras Al Khaimah Medical Region.
- Brother : Dr. Joe Thomas (MD - Dermatology)
- Sister : Dr. Shoba Mary Thomas (MBBS – ex-General Practitioner)

