

CURRICULUM VITAE

Dr. Rishi Ganesan, MBBS MD DM

Pediatric Critical Care Physician, Children's Hospital of Western Ontario
Assistant Professor, Department of Paediatrics, Western University
Assistant Professor, Department of Physiology & Pharmacology, Western University
Associate Scientist, Children's Health Research Institute (CHRI)
Associate Member, The Brain & Mind Institute (BMI), Western University
Assoc. Member (Neurosciences), School of Graduate & Postdoctoral Studies (SGPS)
Interim Program Director, Postgraduate Training – Paediatric Critical Care Medicine

A. DATE PREPARED: July 1, 2020

B. BIOGRAPHICAL INFORMATION

Legal Name	Saptharishi Lalgudi Ganesan
Clinical Address	Victoria Hospital – London Health Sciences Centre 800 Commissioners Road E Room C2-841, Department of Paediatrics London, Ontario N6A 5W9
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Author Names	Saptharishi L G (2015), S Lalgudi Ganesan (2016 onward)

1. EDUCATION

Degrees and Diplomas:

2018-2021	MSc., Neurosciences Institute of Medical Sciences, University of Toronto Toronto, Ontario
2013-2016	D.M., Paediatric Critical Care Post Graduate Institute of Medical, Education & Research, (PGIMER) Chandigarh, India
2010-2012	M.D., Paediatrics Post Graduate Institute of Medical, Education & Research, (PGMIER) Chandigarh, India
2004-2008	M.B., B.S. Jawaharlal Institute of Postgraduate Medical Education & Research Puducherry, India

Postgraduate, Fellowships, Research, and Specialty Training

2018-2019	Assistant Staff Physician, Critical Care Medicine The Hospital for Sick Children, University of Toronto, Ontario
2017-2018	Clinical-Research Fellow, Critical Care Medicine The Hospital for Sick Children, University of Toronto, Toronto, Ontario
2016-2017	Pediatric Neurocritical Care Fellow, Critical Care Medicine The Hospital for Sick Children, University of Toronto, Toronto, Ontario
2016	Chief Fellow, Pediatric Critical Care Post Graduate Institute of Medical, Education & Research, (PGIMER) Chandigarh, India
2013-2015	Pediatric Critical Care Fellow Post Graduate Institute of Medical, Education & Research, (PGIMER) Chandigarh, India
2013	Senior Resident, Paediatric Emergency Medicine Post Graduate Institute of Medical, Education & Research, (PGIMER) Chandigarh, India
2010-2012	Junior Resident, Paediatrics Post Graduate Institute of Medical, Education & Research, (PGIMER) Chandigarh, India
2008-2009	Internship – Rotatory Jawaharlal Institute of Postgraduate Medical Education & Research Puducherry, India

Qualifications, Certifications, and Licenses

2019-Present	College of Physicians & Surgeons of Ontario (CPSO) #110481 - Academic
2016-2019	College of Physicians & Surgeons of Ontario (CPSO) #110481 – Educational
2016-Present	Medical Council of India (MCI) #17-27052: Pediatric Critical Care - Independent
2013-Present	Medical Council of India (MCI) #15-19514 – Pediatrics - Independent
2009-Present	Tamil Nadu Medical Council (TNMC), Medical Council of India #88470 – Physician – Independent

2. EMPLOYMENT

Current Appointments

UNIVERSITY / ACADEMIC APPOINTMENTS

- 2019-Present Assistant Professor, Department of Paediatrics, Schulich School of Medicine & Dentistry, University of Western Ontario, London, Ontario
- 2020-Present Assistant Professor, Department of Physiology & Pharmacology, Schulich School of Medicine & Dentistry, University of Western Ontario, London, Ontario
- 2020-Present Interim Program Director, Paediatric Critical Care Medicine, Schulich School of Medicine & Dentistry, University of Western Ontario, London, Ontario

HOSPITAL APPOINTMENTS

- 2019-Present Paediatric Intensivist, Division of Paediatric Critical Care Medicine, Children's Hospital of Western Ontario, London Health Sciences Centre, London, Ontario
- 2020-Present Hospital Donation Physician, Trillium Gift of Life Network (TGLN), Children's Hospital of Western Ontario, London Health Sciences Centre London, Ontario
- 2018-2019 Assistant Staff Physician, Critical Care Medicine, The Hospital for Sick Children, Toronto, Ontario

RESEARCH APPOINTMENTS

- 2019-Present Associate Scientist, Child Health Research Institute, Lawson Health Research Institute, London, Ontario
- 2019-Present Associate Member, The Brain and Mind Institute, The University of Western Ontario, London, Ontario
- 2019-Present Associate Member, Program in Neurosciences, School of Graduate and Postdoctoral Studies (SGPS), University of Western Ontario, London, Ontario

3. HONOURS AND CAREER AWARDS

Distinctions & Research Awards

- 2018 Ernst A. Rodin Distinguished Fellowship
American Clinical Neurophysiology Society (ACNS) & American Clinical Magnetoencephalography Society (ACMEGS)

- 2018 IFCN Fellowship
American Clinical Neurophysiology Society (ACNS) & International Federation of Clinical Neurophysiology
- 2017 Young Investigator Travel Award
Neurocritical Care Society (NCS)
- 2017 Best Research Abstract
SickKids Annual Brain & Mental Health Day
- 2016 ISHLT Travel Fellowship
International Society for Heart & Lung Transplantation (ISHLT)
- 2016 Best Research Paper
Global Health Summit (Category: Clinical and Patient-Based Research)
- 2016 S.T. Achar Endowment Award for Best Research
National conference of Indian Academy of Pediatrics
- 2015 Best Research Abstract
Indian National Assembly of Pediatric Emergency Medicine (NAPEM)
- 2013 Best Postgraduate Thesis
Indian Journal of Pediatrics (IJP)
- 2009 Best Research Paper of the year
Indian Journal of Community Medicine (IJCM)
- 2009 JIPMER Alumni Association (JAANA) Award
Jawaharlal Institute of Postgraduate Medical Education & Research
- 2008 Dr. Vijai Narain Memorial Award - Best Research
All-India Preventive & Social Medicine Conference (AIPSMCON)
- 2007 JIPMER Scientific Society (JSS) Award for Best Research
Jawaharlal Institute of Postgraduate Medical Education & Research

Clinical, Academic & Teaching Honors

- 2019 Inaugural A. Kotsakis Teaching Award

RESIDENCY

- 2014 Best Resident (Bronze Medal)
PGIMER, Chandigarh, India
- 2013 Indian National Champion
Indian Academy of Pediatrics (IAP) Postgraduate Medical Quiz
- 2012 Best Resident Academic Rounds
- 2011 Best Resident Academic Rounds

INTERNSHIP

2010 Best Intern of the Class of 2010

MEDICAL SCHOOL

2010 Best Outgoing Graduate of the Class of 2010

Valedictorian of Class of 2010

2009 S Selvaradjou Memorial Prize
Highest aggregate grade in Pediatrics

Dr. V Murali Memorial Award
Highest aggregate grade in Medicine

Dr. V Udayaraj Gold Medal
Exemplary clinical skills in Medicine

Mrs. S Santhoshwati Memorial Prize
Highest aggregate grade in Surgery

Nishamani Parija Endowment Prize
Highest aggregate grade in practical assessments in Surgery

Dr. Uvathy Memorial Endowment Prize
Highest aggregate grade in Obstetrics & Gynecology

Dr. Vijay Kumar Moorthy Endowment Prize
Highest aggregate grade in Orthopedics

Brigadier Nilakanthan Memorial Prize
Best Student of final year of Medical School

2008 V Manickaswamy Endowment Prize
Exemplary Practical Work in Public Health

Indian Psychiatric Society (IPS) South Zone Endowment Prize
Highest aggregate grade in Psychiatry

2007 Dr. Vijay Kumar Moorthy Endowment Prize
Highest aggregate grade in Microbiology

Dr. Vijay Kumar Moorthy Endowment Prize
Highest aggregate grade in Pathology

21st Annual Conference of Association of Pathologists and
Microbiologists Prize - Exemplary Practical Work

The Institute Medal in Forensic Medicine
Highest aggregate grade in Forensic Medicine & Toxicology

Sri Sudhir Chandra Bhattacharya Memorial Endowment Prize
Best Student of second year of Medical School

2005 Dr. S C Mitra and Mrs. Geetha Mitra Endowment Prize
Highest aggregate grade in Anatomy

Smt. Nisha Mani Parija Endowment Prize
Highest Aggregate Grade in Physiology

Dr. M K Ramanathan Memorial Prize
Highest Aggregate Grade in Biochemistry

Mr. Ajay J Mathews Memorial Prize
Best Student of first year of Medical School

SECONDARY SCHOOL

2004 Indian National Biology Olympiad Gold Medalist
One of Top 20 students in India

4. PROFESSIONAL ASSOCIATIONS

Leadership & Administration

2019-Present **Member**, Medical Advisory Board – Medical Innovation Fellowship, WORLD Discoveries - Western University, London, Ontario

2020-Present **Founding Member**, London Neurocritical Care in Children Interest Group, Children’s Hospital of Western Ontario, London Health Sciences Center

2020 **Member**, Candidate Selection Committee, Paediatric Neurology, London Health Sciences Centre, London, Ontario

2019-Present **Founding Member**, Early-career Child Health researchers of LONDON (ECHELON), Department of Paediatrics, Schulich School of Medicine & Dentistry, The University of Western, London, Ontario

2018-2019 **Member**, Trainee Council Neurosciences & Mental Health Program Peter Gilgan Center for Research & Learning (PGCRL), SickKids, Toronto, Ontario

2017-2019 **Co-Chair**, Social Media Management, Critical Care Medicine, SickKids, Toronto, Ontario

2016 **Chief Fellow**, Pediatric Critical Care Medicine, Post Graduate Institute of Medical Education & Research (PGIMER), Chandigarh, India

2014 **Treasurer**, Association of Resident Doctors and Fellows, Post Graduate Institute of Medical Education & Research (PGIMER), Chandigarh, India

2014 **Organizing Secretary**, Resident Doctors and Fellows’ Cultural and Sports Festival, Post Graduate Institute of Medical Education & Research (PGIMER), Chandigarh, India

2007 **President**, JIPMER Students Association, Jawaharlal Institute of Postgraduate Medical Education & Research, Puducherry, India

- 2007 **Organizing Secretary**, All-India Students' Cultural, Literary and Sports Festival Jawaharlal Institute of Postgraduate Medical Education & Research, Puducherry, India
- 2007 **Panel Representative**, Autonomy for JIPMER Movement, Jawaharlal Institute of Postgraduate Medical Education & Research, Puducherry, India
- 2005-2006 **Leader**, Medical Students' Movement for Equality Student Movement, Jawaharlal Institute of Postgraduate Medical Education & Research, Puducherry, India
- 2005-2007 **Class Representative**, JIPMER Jawaharlal Institute of Postgraduate Medical Education & Research, Puducherry, India

Medical / Scientific Organizations-Memberships

- 2019- Canadian Critical Care Trials Group (CCCTG)
- 2019- Pediatric Neurocritical Care Research Group (PNCRG)
- 2019- Critical Care EEG Monitoring Research Consortium (CCEMRC)
- 2019- Ontario Medical Association (AMA)
- 2019- Canadian Medical Association (CMA)
- 2017- American Clinical Neurophysiology Society (ACNS)
- 2017-2018 Neurocritical Care Society (NCS)
- 2016- Indian Society of Critical Care Medicine (ISCCM)
- 2015- Intensive Care Chapter - Indian Academy of Pediatrics
- 2013- Indian Academy of Pediatrics (IAP)

Peer Review Activities

EDITORIAL BORDS:

- 2020- Associate Editor (SM), Journal of Clinical Neurophysiology

JOURNAL PEER-REVIEWER:

- 2019- Neurocritical care
- 2019- Pediatric Critical Care Medicine
- 2019- The Canadian Journal of Neurological Sciences
- 2019- Acta Neurological Belgica
- 2019- Epilepsy Research
- 2016- Indian Journal of Pediatrics
- 2015- Indian Pediatrics

C. ACADEMIC HISTORY**1. RESEARCH STATEMENT**

My research program aims to improve the long-term cognitive and functional outcomes in critically ill children through the real-time tracking of physiological and pathological brain states to enable precision pediatric neurocritical care. Defining the clinical and neurophysiological trajectories in critically ill children in this manner would allow us to predict prognosis and identify appropriate interventions. This inter-disciplinary research program sits at the intersection of multimodal neuromonitoring, signal processing and artificial intelligence.

My research program will enable bedside critical care providers to identify brain pathological brain states quickly and deliver neuroprotective or neurorestorative interventions in a timely manner. In addition, this line of research will also allow us to determine neurological prognosis more objectively in comatose critically ill children.

2. RESEARCH AWARDS**Grants, Contracts, and Clinical Trials****PEER REVIEWED GRANTS****Ongoing**

2020-2022

Co-Investigator

Sedation Efficacy of Dexmedetomidine versus Midazolam in Critically Ill Ventilated Children
 AMOSO Innovation Fund
 Primary Investigator: Dr. Douglas Fraser
 Operating Grant: 108,000 CAD

Completed

2017-2019

Trainee Investigator

Electroencephalography as an Ischemia Detection Tool in High-Risk Critically Ill Children
 Research Training Competition (RESTRACOMP) Fellowship Award
 Mentors: Dr. A-M. Guerguerian, Dr. C. Hahn
 Salary Support: 20,000 CAD p.a.

2017-2019

Trainee Investigator

Electroencephalography as an Ischemia Detection Tool in High-Risk Critically Ill Children.
 Center for Brain & Mental Health (C-BMH) Integrative Research Fellowship Award
 Mentors: Dr. A-M Guerguerian, Dr. C. Hahn
 Salary Support: 20,000 CAD p.a.

- 2014-2015 **Trainee Investigator**
Airway Pressure Release Ventilation in Pediatric Acute Respiratory Distress Syndrome – a Randomized Controlled Trial.
Advanced Pediatrics Center Research Grant
Mentors: Dr. M. Jayashree, Dr. S. Singhi
Operating Grant: 100,000 INR
- 2007-2008 **Trainee Investigator**
Community-Based Randomized Controlled Trial of Non-Pharmacological Interventions in Hypertensive Young Adults.
Indian Council of Medical Research – Short Term Studentship Grant
Mentor: Dr. B. Soudarssanane
Salary Support: 5,000 INR
- 2006 – 2007 **Trainee Investigator**
CETP Gene Polymorphisms and Severity of Coronary Artery Disease in South Indian Population.
Indian Council of Medical Research – Short Term Studentship Grant
Mentor: Dr. C. Adithan
Salary Support: 5,000 INR

D. PUBLICATIONS

Journal Articles (Published, Accepted, and/or In Press)

1. **Lalgudi Ganesan S**, Mehta A, Keshavmurthy L, Jayashree M, Gautam V, Ray P. Community-acquired Methicillin-resistant Staphylococcus aureus infections in acutely ill children: a retrospective case-control study. *Indian J Pediatr* 2020 [In Press: IJPE-D-19-00868]
2. Din F, **Lalgudi Ganesan S**, Akiyama T, Stewart CP, Ochi A, Otsubo H, Go C, Hahn CD. Seizure detection algorithms in critically ill children: a comparative evaluation. *Crit Care Med* 2020; 48(4):545-552.
3. Reddy MV, **Lalgudi Ganesan S**, Narayanan K, Jayashree M, Singhi SC, Nallasamy K, Bansal A, Baranwal AK. Liquid mosquito repellent ingestion in children. *Indian J Pediatr* 2019; 87: 12-16.
4. **Lalgudi Ganesan S**, Hahn CD. Electrographic seizure burden and outcomes following pediatric status epilepticus. *Epilepsy & Behavior* 2019; 101 (B): 106409.
5. **Lalgudi Ganesan S**, Jayashree M. Reply to Dong et al.: Airway Pressure Release Ventilation: Is it really different in adults and children? *Am J Respir Crit Care Med* 2019; 200(6).
6. **Lalgudi Ganesan S**. Airway Pressure Release Ventilation in Children. *Curr Opin Crit Care* 2019; 25(1):63-70.

7. **Lalgudi Ganesan S**, Stewart CP, Atenafu EG, Sharma R, Guerguerian AM, Hutchison JS, Hahn CD. Seizure identification by critical care providers using quantitative electroencephalography. *Crit Care Med* 2018; 46(12): e1105-e1111.
8. **Lalgudi Ganesan S**, Jayashree M, Singhi S, Bansal A. Airway Pressure Release Ventilation in Pediatric Acute Respiratory Distress Syndrome: an open-label, parallel-arm randomized controlled trial. *Am J Respir Crit Care Med* 2018; 198(9): 1199-1207.
9. **Lalgudi Ganesan S**, Jayashree M. Reply to Daxon and Kyo et al. *Am J Respir Crit Care Med* 2018; 198(11):1460-1462.
10. Lal N, Bhardwaj S, **Lalgudi Ganesan S**, Sharma R, Jain P. Case of hypomagnesemia with secondary hypocalcemia with a novel TRPM6 mutation. *Neurol India* 2018; 66(6): 1795-1800.
11. **Lalgudi Ganesan S**. Intracranial pressure-cerebral perfusion pressure time integral: Is it a better predictor of clinical outcomes in children with severe traumatic brain injury? *Pediatr Crit Care Med* 2016; 17(9): 904.
12. **Lalgudi Ganesan S**. Costs associated with determinants of adherence: Essential for evaluation of the cost-effectiveness of any guideline-driven care? *Pediatr Crit Care Med* 2016; 17(9): 901.
13. **Lalgudi Ganesan S**, Jayashree M. Dopamine in Pediatric Fluid-refractory septic shock: Too early to sound the death knell? *Crit Care Med* 2016; 44(2): e110-111.
14. Saini AG, Sahu JK, **Lalgudi Ganesan S**, Sodhi KS, Rao KL, Singhi P. Steroid-responsive encephalopathy, dropped head syndrome, and hypertension in a toddler: Is there a clue? *Pediatr Neurol* 2016; 57: 95-7.
15. **Saptharishi LG**, Jayashree M, Singhi S. Development and validation of the Pediatric Risk of Nosocomial Sepsis (PRiNS) score for health care-associated infections in a medical pediatric intensive care unit of a developing economy—a prospective observational cohort study. *J Crit Care* 2015; 32: 152-158.
16. **Saptharishi LG**, Baalaaji M, Singhi SC. Ventilator-associated pneumonia or bacterial colonization of airway - What do probiotics decrease? *Intensiv Care Med* 2015; 41(6): 1161.
17. Singhi S, **Saptharishi LG**, Karthi N. Maintenance intravenous fluids for children with central nervous system infections. *Indian J Pediatr* 2015; 82(1):1-2.
18. **Saptharishi LG**, Vaidya PC. HIV status non-disclosure in HIV-infected families. *Indian Pediatrics* 2015 Sep; 52: 811.
19. Sankhyan N, **Saptharishi LG**, Sasidaran K, et al. Clinical profile of scrub typhus in children and its association with hemophagocytic lymphohistiocytosis. *Indian Pediatrics* 2014; 51:651-653.
20. **Saptharishi LG**, Singhi S. Reply to InFocus: Think twice before routinely administering oxygen. *Emergency Medicine News* 2014; 36(3):8-11.
21. **Saptharishi LG**. Ten 'out-of-the-box' lessons for pediatric emergency physicians. *Emergency Medicine News* 2014; 36 (5B).

22. Saini AG, Singhi P, Sahu JK, **Saptharishi LG**, Vyas S, Rao S, Sachdeva MU. Hyperactivity, Unexplained speech delay, and coarse facies – Is it Sanfilippo syndrome? *J Child Neurol* 2013; 29 (8).
23. Subramanian H, Soudarssanane MB, Jayalakshmy R, Thiruselvakumar D, Navasakthi D, Sahai A, **Saptharishi LG**. Non-pharmacological interventions in hypertension: A community-based cross-over randomized controlled trial. *Indian J Community Med* 2011; 36(3): 191-6.
24. **Saptharishi LG**, Soudarssanane M, Thiruselvakumar D, et al. Community-based Randomized Controlled Trial of Non-pharmacological interventions in prevention and control of hypertension among young adults. *Indian J Community Med* 2009; 34(4): 329-34.

Abstracts

1. Din F, **Lalgudi Ganesan S**, Ochi A, Otsubo H, Go C, Whitney R, Chau V, Cortez M, Sharma R, Hahn CD. Clinical utility of critical care EEG monitoring in a Canadian Paediatric Centre. 54th Annual Congress of the Canadian Neurological Sciences Federation. *Can J Neurol Sci* 2019; 46(s1): S10-S11.
2. **Lalgudi Ganesan S**, Stewart CP, Atenafu EG, Ochi A, Otsubo H, Go C, Hahn CD. Factors that reduce the accuracy of seizure identification using quantitative EEG displays. International Congress of Clinical Neurophysiology (ICCN) Washington DC, USA 2018. *Clin Neurophysiol* 2018; 129(1 Suppl): e30-e31.
3. Baalaaji M, **Lalgudi Ganesan S**, Singhi SC, Jayashree M, Bansal A, Nallasamy K. Clinical profile and outcomes of children with malignancies admitted to the pediatric intensive care unit of a resource-limited setting. World Federation of Societies of Intensive & Critical Care Medicine (WFSICCM), Seoul, South Korea 2015. *J Crit Care* 2015; 30(4): 853-854.
4. **Saptharishi LG**, Narayanan K, Jayashree M, Singhi SC, Bansal A. Can arterial oxygen levels influence the risk of healthcare-associated infections in critically ill children? Pediatric Intensive Care Congress (PICC), Istanbul, Turkey 2014. *Pediatr Crit Care Med* 2014; 15(4 Suppl): 159.
5. **Saptharishi LG**, Narayanan K, Jayashree M, Singhi SC, Bansal A. Ideal arterial oxygen levels in mechanically ventilated critically ill children during the acute phase of illness. Pediatric Intensive Care Congress (PICC), Istanbul, Turkey 2014. *Pediatr Crit Care Med* 2014; 15(4 Suppl):15.
6. Narayanan K, **Saptharishi LG**, Jayashree M, Singhi SC, Bansal A. Dysnatremias and sodium variability as predictors of outcome in critically ill children. Pediatric Intensive Care Congress (PICC), Istanbul, Turkey 2014. *Pediatr Crit Care Med* 2014; 15(4 Suppl):26.
7. **Saptharishi LG**, Narayanan K, Bansal A, Singhi S. Mosquito repellent liquidizer poisoning in young children in summer. What to anticipate? Pediatric Intensive Care Congress (PICC), Istanbul, Turkey 2014. *Pediatr Crit Care Med* 2014; 15(4 Suppl): 187.

Books / Chapters in Books / Proceedings

1. **Lalgudi Ganesan S**. Case vignette: EEG in Pediatric Stroke. *Neuromonitoring in neonatal and pediatric critical care* (2019: In Press). Editors: Courtney Wusthoff, Cecil D Hahn.

2. **Lalgudi Ganesan S**, Jain P. Status Epilepticus. Post Graduate Textbook of Pediatrics (2018). Editors: Piyush Gupta, PSN Menon, Siddharth Ramji. 2nd Edition. Jaypee Brothers Medical Publishers (P) Ltd. 2018. ISBN: 978-93-5270-231-2.
3. **Saptharishi LG**, Singhi S. Pediatric Septic shock. Critical Care (2016). Editor: Narendra Rungta, Rajesh Panda, Manish Munjal, Sudhir Khunteta. Jaypee Brothers Medical Publishers (P) Ltd. 2016. ISBN: 978-93-5152-213-3.
4. **Saptharishi LG**, Vaidya PC. Pediatric Pulmonary Hemorrhage. Case Reviews in Pediatric Pulmonology (2016). Editors: Sushil Kabra, Kana R Jat, Rakesh Lodha, Jhuma Sankar. Jaypee Brothers Medical Publishers. 2016. ISBN: 978-93-8589-186-1.
5. **Saptharishi LG**, Sankhyan N. Scrub typhus: From hills to plains. Current Pediatrics Practice (2015). Editor: Sunit Singhi, J L Mathew. PEEPEE publishers & Distributors (P) Ltd. February 28, 2015. ISBN: 978-81-8445-179-5.
6. **Saptharishi LG**, Vaidya PC. Medical Management of Pediatric Empyema Thoracis (2014). Editor: Meenu Singh. Published by the Pediatric pulmonology unit, Department of Pediatrics, Advanced Pediatrics Center, PGIMER, Chandigarh.

2. PUBLICATIONS SUBMITTED / UNDER REVIEW

Manuscripts

1. **Lalgudi Ganesan S**, Stewart CP, Atenafu EG, Ochi A, Otsubo H, Go C, Hahn CD. Factors influencing the sensitivity of quantitative electroencephalographic trends for seizure identification in critically ill children. *Epilepsia*
2. **Lalgudi Ganesan S**, Hahn CD. Spectrograms for seizure identification in critically ill children. *J Clin Neurophysiol*

E. PRESENTATIONS AND SPECIAL LECTURES

1. INTERNATIONAL

Invited Lectures and Conference Presentations

- | | |
|------|--|
| 2020 | Training bedside critical care providers to identify seizures on QEEG
American Clinical Neurophysiology Society, New Orleans, USA
Invited Speaker |
| 2019 | Airway Pressure Release Ventilation in Pediatric ARDS.
World Congress of Intensive Care, Melbourne, Australia
Invited Speaker |
| 2019 | Immersive Reality – In-Situ Simulation in the Intensive Care Unit.
Pediatric & Neonatal Cruise Conference
Invited Keynote Speaker |
| 2019 | Resuscitation in PICU – Putting it All Together.
Pediatric & Neonatal Cruise Conference 2019
Invited Speaker |

- 2017 Neurocritical Care Workshop
National Conference of Pediatric Intensive Care, Chandigarh, India
Presenter & Facilitator
- 2017 Multimodal Neuromonitoring: The Faithful Watchdogs
National Conference of Pediatric Intensive Care, Chandigarh, India
Invited Faculty
- 2017 Quantitative Electroencephalography Use by Critical Care Providers to Detect Seizures in Critically Ill Children.
Annual Meeting, American Clinical Neurophysiology Society (ACNS)
Phoenix, Arizona
First & Presenting Author - Poster Presentation
- 2016 Prediction of Healthcare-Associated Infections in the Pediatric Intensive Care Unit.
Global Health Summit. New Delhi, India.
First & Presenting Author - Platform Presentation
Best Research Paper Award – Second Prize
- 2016 Clinical Profile and Predictors of Intensive Care Unit Admission in Pediatric Scrub Typhus: A Study from Northern India. ESP16-0973
European Society of Pediatric Infectious Diseases (ESPID), Brighton, United Kingdom
Co-Author - Platform Presentation
- 2016 Invasive Gastrointestinal Mucormycosis: An Unrecognized Killer in a Critically Ill Child - A Case Report.
European Society of Pediatric Infectious Diseases (ESPID), Brighton, United Kingdom
Co-Author - Platform Presentation
- 2012 Prediction of Nosocomial Sepsis in PICU by Means of a Bed-Side Scoring System – a Prospective Observational Cohort Study.
International Congress on Sepsis (SEPSIS), Paris, France
First & Presenting Author - Poster Presentation
- 2009 Community-Based Randomized Controlled Trial of Non-Pharmacological Interventions in the Prevention and Control of Hypertension Among Young Adults.
Asia- Pacific Medical Students' Symposium (APMSS), Taipei, Taiwan
First & Presenting Author - Platform Presentation.
- 2008 Community-Based Randomized Controlled Trial of Non-Pharmacological Interventions in the Prevention and Control of Hypertension Among Young Adults.
Annual Conference, Indian Association of Preventive & Social Medicine (AIPSMCON), Puducherry, India.
First & Presenting Author - Platform Presentation

2. NATIONAL

- 2019 Advanced Monitoring of the Neurocritical Care Patient - 'Timely detection of seizures in the ICU'.
54th Congress of the Canadian Neurological Sciences Federation (CNSF),
Montreal, Canada
Invited Speaker
- 2016 Development and Validation of the Pediatric Risk of Nosocomial Sepsis (PRiNS) score for Healthcare-Associated Infections in a Medical Pediatric Intensive Care Unit of a Developing Economy.
Annual Conference of Indian Academy of Pediatrics (PEDICON).
Hyderabad, India.
First & Presenting Author - Platform presentation
S T Achar Award - Best Research of the Conference.
- 2016 Airway Pressure Release Ventilation in Pediatric ARDS: An Open-Label, Parallel-Arm Randomized Controlled Trial.
Annual Conference of Indian Society of Critical Care Medicine. Agra, India
First & Presenting Author - Platform Presentation
- 2015 Pediatric Trauma Workshop
7th National Assembly on Pediatric Emergency Medicine, Coimbatore, India
Invited Faculty
- 2015 Predicting the Length of Mechanical Ventilation for Children with Landry Guillain Barre Syndrome Admitted to the Pediatric Intensive Care Unit of a Resource-Limited Setting: A Five-Year Experience-Based Analysis.
17th National Conference of Pediatric Critical Care (NCPCC), Jaipur, India.
Co-Author - Platform Presentation.
- 2015 Prediction of Clinical Outcomes in a Pediatric Emergency Using a Five-Level Triage System.
National Assembly of Pediatric Emergency Medicine (NAPEM), Coimbatore, India
First & Presenting Author - Platform Presentation
Best Research Presentation

3. PROVINCIAL / REGIONAL

- 2020 Timely detection of non-convulsive seizures in critically ill children
Seminar Series - Department of Physiology & Pharmacology, Western University, London, Canada
Invited Speaker
- 2019 Alpha-Delta Ratio Can Reveal Cerebral Dysfunction Associated with Elevated Body Temperature.
Art Slutsky Research Day 2019 – Interdepartmental Division of Critical

- Care, Toronto, Ontario
Presenting Author - Poster Presentation
- 2018 Automated Seizure Detection in Critically Ill Children: Man V. Machine.
Canadian Critical Care Forum (CCCF) Toronto, Ontario
Presenting Author - Podium Oral Presentation
- 2018 Factors That Make Seizure Identification on Quantitative EEG Displays Challenging.
Canadian Critical Care Forum (CCCF), Toronto, Ontario.
Presenting Author - Poster Presentation
- 2018 Factors that make seizure identification on quantitative EEG displays challenging.
Art Slutsky Research Day 2018 – Interdepartmental Division of Critical Care, Toronto, Ontario
First & Presenting Author - Oral Presentation
Finalist - Best Research Abstract
- 2018 Automated Seizure Detection in Critically Ill Children: Man V. Machine.
Art Slutsky Research Day 2018 – Interdepartmental Division of Critical Care, Toronto, Ontario
Presenting Author - Poster Presentation
- 2018 High Dose Phenobarbital Therapy in Children with Sustained Refractory Status Epilepticus.
Art Slutsky Research Day 2018 – Interdepartmental Division of Critical Care, Toronto, Ontario.
Non-Presenting Co-Author - Poster Presentation
- 2018 Prolonged Extra-Corporeal Membrane Oxygenation in Pediatric Respiratory Failure: Characteristics and Outcomes.
Art Slutsky Research Day 2018 – Interdepartmental Division of Critical Care, Toronto, Ontario
Non-Presenting Co-Author - Poster Presentation
- 2017 Can Critical Care Providers Be Trained to Reliably Detect Seizures Using Quantitative EEG In the Intensive Care Unit?
Canadian Critical Care Forum (CCCF) Toronto, Ontario
First & Presenting Author - Poster Presentation
- 2017 Seizure Identification by Critical Care Providers Using Quantitative EEG Displays and Determinants of Performance.
Annual Brain & Mental Health Research Day Conference, Toronto, Ontario
First & Presenting Author - Poster Presentation
Best Research Abstract Award
- 2017 Seizure Identification by Critical Care Providers on Quantitative EEG Display Trends.
Art Slutsky Research Day 2017 Interdepartmental Division of Critical

Care, Toronto, Ontario

First & Presenting Author - Poster Presentation

- 2016 Airway Pressure Release Ventilation in Pediatric ARDS: An Open-Label, Parallel-Arm Randomized Controlled Trial.
Pediatric Intensive Care Congress (PICC) 2016, Toronto, Ontario
First Author - Poster Presentation
- 2016 Biomarkers in Pediatric ARDS: Effect of Modes of Ventilation and Determinants of Outcomes.
Pediatric Intensive Care Congress (PICC) 2016, Toronto, Ontario
First Author - Poster Presentation

F. TEACHING AND CURRICULUM DESIGN

Postgraduate Teaching

- 2017-2019 ACTS Clinicians Training
Topic: Management of Neurological Emergencies for Acute Care Transport Service (ACTS)
Institution: The Hospital for Sick Children, Toronto
- 2017 ACTS Teaching Bootcamp - Transport Fellows & Physicians
Topic: Management of Neurological Emergencies
Institution: The Hospital for Sick Children, Toronto
- 2017 PERLs Resident Teaching Half-Day
Topic: Hands-On Procedural Teaching Session
Institution: The Hospital for Sick Children, Toronto (*Evaluations available*)
- 2017 PERLs Resident Teaching
Topic: Code Blue Cases
Institution: The Hospital for Sick Children, Toronto (*Evaluations available*)
- 2016-2019 ACRP Resident Teaching
Topic: Managing Neurological Emergencies
Institution: The Hospital for Sick Children, Toronto
Evaluation: >4.5 out of 5 for Teaching Performance
- 2016-2018 Radiology and EEG Rounds - Fellow Lead
Institution: The Hospital for Sick Children, Toronto
Developed a standard template for dissemination of weekly case list and facilitated discussion of clinical, radiological and neurophysiological data
- 2016-2018 PICU/CCCU Fellows Teaching
Institution: The Hospital for Sick Children, Toronto (*Evaluations available*)
Led interactive teaching session on MRI brain, status epilepticus and evoked potentials in critically ill children

- 2016-2018 PICU/CCCU Monthly Resident Lecture Series
Topics: Management of Raised Intracranial Pressure, Traumatic Brain Injury, Shock Management, Blood Gas Analysis, Respiratory Failure
Institution: The Hospital for Sick Children, Toronto, Ontario
Evaluations: > 4.5 out of 5 for Teaching Performance
- 2013-2016 PICU/CCCU Fellow Academics
Topic: ICU (Journal Clubs, Seminars, & Case Vignettes)
Institution: Post Graduate Institute of Medical Education & Research (PGIMER), Chandigarh, India
- 2013-2016 PICU/CCCU Resident Lecture Series
Topics: Raised ICP, Shock, Airway, Blood Gas, Respiratory Failure, Status Epilepticus, Diabetic Ketoacidosis, Mechanical Ventilation
Institution: Post Graduate Institute of Medical Education & Research (PGIMER), Chandigarh, India

Simulation-based Education

- 2019- PCCU -Resident Simulation session, Department of Paediatrics
Topics: Status Epilepticus, Acute coma
Institution: Children's Hospital of Western Ontario - LHSC
- 2019 TACTICS Simulation Bootcamp
Topic: Complications of Traumatic Brain Injury
Institution: Canadian Critical Care Forum
Co-Facilitators: Dr. Geraldine Patterson & Dr. Nicole McKinnon
- 2018 TACTICS Simulation Bootcamp
Topic: Cerebral Edema in Diabetic Ketoacidosis
Institution: Canadian Critical Care Forum
Co-Facilitator: Dr. Jonathan Duff
- 2017-18 Immersive Reality – In-unit simulation-based team training
Topic: Multiple PCCU and CCCU scenarios
Institution: Hospital for Sick Children, Toronto
Developed scenarios and facilitated high-fidelity immersive reality sessions for fellows, nurses, respiratory therapists and the ICU team.
- 2018 SIM Half Day for Fellows
Topic: Cerebral Edema in Diabetic Ketoacidosis
Institution: Hospital for Sick Children, Toronto (*Evaluation available*)
Co-Facilitators: Dr. Brian Kavanagh & Dr. Briseida Mema
- 2017 Fellows Simulation Bootcamp
Topic: Neurological Determination of Death
Institution: Canadian Critical Care Forum
Co-Facilitators: Dr. Sonny Dhanani & Dr. Briseida Mema

2015-2016 Pediatric Advanced Life Support Training
 'Indian Academy of Pediatrics – Pediatric Advanced Life Support'
 Certified Basic & Advanced Life Support Instructor

Curriculum Development & Testing

2018-2019 PICU & CCCU Nurses & Fellows QEEG Education (Fellow Lead)
 Topic: Basics of Critical Care EEG and Seizure Identification Using
 Simplified Quantitative EEG Tools
 Institution: The Hospital for Sick Children, Toronto, Ontario

2016 Pediatric Procedural Sedation Module
*I developed and implemented an interactive educational module on
 procedural sedation for training residents, fellows and nurses.*
 Post Graduate Institute of Medical Education & Research (PGIMER),
 Chandigarh, India
 Mentor: Dr. M. Jayashree

2016 Pro-Con Debate Sessions - Fellows
*As chief fellow, I initiated monthly pro-con evidence-based debate
 sessions on clinically relevant critical care questions for fellows.*
 Post Graduate Institute of Medical Education & Research (PGIMER),
 Chandigarh, India

2015 Medical Quiz
ICU Infections and Antibiotic Stewardship for Residents
 Participants: 110 (screening round) & 12 (final round)

2014 Medical Quiz
Welcome Quiz for Residents (Medical Trivia)
 Participants: 24 (final round)

2013 Medical Quiz
Annual Sepsis Day for Residents and Fellows
 Participants: 85 (Screening Round) & 12 (Final Round)

G. RESEARCH SUPERVISION / MENTORSHIP

1. GRADUATE EDUCATION

2020-Present **Primary Research Supervisor, Megha Shetty**
 Institution: Paediatric Critical Care Medicine, London Health Sciences
 Centre, London, Ontario
 Project Title: International survey of neuroprognostication practices in
 acutely comatose critically ill children
 Currently: MD Student, Schulich School of Medicine & Dentistry, Western
 University

2020-Present **Primary Research Supervisor, Brennan Donville**
 Institution: Paediatric Critical Care Medicine, London Health Sciences

Centre, London, Ontario
Project Title: Systematic review of prognostic accuracy of neuromonitoring modalities in critically ill children with traumatic and anoxic brain injury
Currently: MD Student, Royal College of Surgeons, Dublin

3. POSTGRADUATE EDUCATION

Clinical-Research Fellows

- 2018-2019 **Co-Supervisor & Research Project Advisor**, Dr. F. Din
Institution: The Hospital for Sick Children, Canada Division of Paediatric Neurology, Department of Paediatrics
Project Title: Seizure detection algorithms in critically ill children – a comparative evaluation
Currently: PGY1 – Pediatric Neurology, SickKids, Toronto
- 2015-2016 **Mentor & General Advisor**, Dr. L. Keshavamurthy (Pediatric Critical Care Fellow)
Institution: Post Graduate Institute of Medical Education & Research (PGIMER), Department of Paediatrics, Chandigarh, India
Supervisor: Dr. M. Jayashree
- 2015-2016 **Mentor & General Advisor**, Dr. S. Madhu (Pediatric Critical Care Fellow)
Institution: Post Graduate Institute of Medical Education & Research (PGIMER), Department of Paediatrics, Chandigarh, India
Supervisor: Dr. M. Jayashree
- 2015-2016 **Mentor & General Advisor**, Dr. J. Ismail (Pediatric Critical Care Fellow)
Institution: Post Graduate Institute of Medical Education & Research (PGIMER), Department of Paediatrics, Chandigarh, India
Supervisor: Dr. M. Jayashree
- 2015-2016 **Mentor & General Advisor**, Dr. M. Reddy (Pediatric Critical Care Fellow)
Institution: Post Graduate Institute of Medical Education & Research (PGIMER), Department of Paediatrics, Chandigarh, India
Supervisor: Dr. M. Jayashree

Postdoctoral Fellows

- 2019-Present **Mentor**, Bashar Yafouz, Wagner H. Souza, Maryam Majedi, Sathyanarayanan Sridhar, Adam Paish, Jeiran Eskandari
Institution: London Heath Sciences Centre, Children's Hospital, London, Ontario
Currently: Western Medical Innovation Fellows

H. PROFESSIONAL DEVELOPMENT

Courses and Workshops

- 2019 Grant Writing
Two half-days grant writing workshop led by Dr. Hannah Wunsch – Nuts & Bolts of Research (NABOR)
Grant Reviewers: Dr. D Scales, Dr. J Marshall, Dr. N Adhikari
- 2019 Education Retreat
The Incoming Director of the Residency and Fellowship Programs of the Department of Critical Care Medicine, Sickkids, Toronto, Ontario
Retreat Director: Dr. B Mema
- 2019 ICU EEG Course
Two-Day Course -The American Clinical Neurophysiology Society (ACNS) Meeting, Las Vegas
Course Directors: Jong Woo Lee, Courtney J. Wusthoff
- 2019 Evoked Potentials Course
American Clinical Neurophysiology Society (ACNS) Meeting, Las Vegas
Course Directors: Elayna O. Rubens, Viet Nguyen
- 2019 Autonomic Neurophysiology Course
American Clinical Neurophysiology Society (ACNS) Meeting, Las Vegas
Course Directors: Claus Reinsberger, Jeffrey Liou
- 2019 Neonatal EEG Workshop
American Clinical Neurophysiology Society (ACNS) Meeting, Las Vegas
Course Director: Shavonne Massey
- 2018 Neurocritical Care Workshop
Looking Ahead in Neurocritical Care: Improving Prognostication and Outcomes; Canadian Critical Care Forum 2018, Toronto, Ontario
Course Directors: Jeff Singh, Vickie Mccredie
- 2018 Clinical Observership
Neurological Intensive Care Unit, Columbia University Medical Center, New York-Presbyterian Hospital, New York
Mentor: Dr. Jan Claassen
- 2018 ICU EEG Course
31st International Congress of Clinical Neurophysiology, Washington DC
Course Directors: Lawrence J. Hirsch, Eugen Trinkka
- 2018 Neurophysiological Intra-Operative Monitoring Course
31st International Congress of Clinical Neurophysiology, Washington DC
Course Directors: Jay Shils, Jamie Lopez, Andrea Szelenyi
- 2016 Clinical Observership
International Observership, Boston Children’s Hospital, International Society for Heart & Lung Transplantation (ISHLT)
Mentor: Dr. Jeffrey Burns
- 2015 Extra-Corporeal Life Support (ECLS) Workshop
Extracorporeal Life Support Organization (ELSO) – Extracorporeal

- Membrane Oxygenation (ECMO), Hyderabad, India
Workshop Director: Dr. Suneel Pooboni
- 2012 Evidence-Based Medicine Course - How to Practice Evidence-Based Child Health
Indian Council of Medical Research (ICMR) - Advanced Center for Evidence-Based Child Health, Chandigarh, India
- 2012 Pediatric Acute Care Nephrology Workshop
Fifth Annual Training Course, All India Institute of Medical Sciences (AIIMS), New Delhi, India
Course Director: Arvind Bagga
- 2011 Critical Care Ultrasound Course and Workshop Pediatric & Neonatal Critical Care Ultrasound - WINFOCUS Basic Provider Certification
7th World Congress on Ultrasound in Emergency & Critical Care, New Delhi, India
- 2010 Pediatric Advanced Life Support
Certified as pediatric advanced life support (PALS) Provider & Instructor

Online Certificate Courses

- 2019 Machine Learning – 12-Week Online Certificate Course (Coursera)
Stanford University, California, United States of America
Program Director: Andrew Ng
- 2016 Pediatric Nutrition (PGPN) - Post Graduate Program – 24-Week Online Program
Boston University School of Medicine, Boston, United States of America
Program Director: Carine M Lenders

I. LEADERSHIP & INNOVATION

Quality & Safety Initiatives

- 2019 **Co-Lead**, Nurses & Trainees (Fellows/Residents) Communication Task Force
Department of Critical Care Medicine, The Hospital for Sick Children, Toronto, Ontario
- 2018-2019 **Fellow Lead**, Sedation, Analgesia & Delirium Working Group
Department of Critical Care Medicine, The Hospital for Sick Children, Toronto, Ontario
- 2017-2018 **Fellow Lead**, Quantitative EEG for Seizure Identification in the ICU
Department of Critical Care Medicine, The Hospital for Sick Children, Toronto, Ontario

2016-2018	Fellow Lead , Improving the Educational Value of Radiology/EEG Rounds Department of Critical Care Medicine, The Hospital for Sick Children, Toronto, Ontario
2015	Fellow Lead , Procedural Sedation & Analgesia Division of Pediatric Emergency & Critical Care, Post Graduate Institute of Medical Education & Research (PGIMER), Chandigarh, India
2015	Fellow Lead , Reducing Delays in ICU Transfer Division of Pediatric Emergency & Critical Care, Post Graduate Institute of Medical Education & Research (PGIMER), Chandigarh, India
2014-2015	Fellow Lead , Antimicrobial Stewardship and Prevention of HAIs Division of Pediatric Emergency & Critical Care, Post Graduate Institute of Medical Education & Research (PGIMER), Chandigarh, India

Volunteer Experience

2020	MD Admissions Interviewer & Application Rater Western University, Class of 2024
2018-2019	MD Admissions Interviewer & Application Rater University of Toronto – Class of 2022 and 2023
2013-2014	(92.7 Big FM) Radio Broadcasts - Improve Awareness: Dengue and Malaria Chandigarh, India
2008-2016	Blood Donor and Organizer - Blood Donation Camps Chandigarh, India
2008	Visited 12 remote villages in the Indian province of Tamil Nadu to impart health education sessions on the importance of breastfeeding to mothers as part of World Breastfeeding awareness week
2004	Tsunami Relief Work – Medical Transport Team Cuddalore, Tamil Nadu

Language Proficiency

English	Fluent (speaking, reading & writing) <i>IELTS Band Score 9 – Native Speaker Equivalency</i>
French	Intermediate (reading) Basic (speaking, writing)
Tamil	Fluent (speaking, reading and writing) <i>Native Language</i>
Hindi	Fluent (speaking, reading and writing)

Punjabi Intermediate (speaking)
 Basic (reading, writing)

Professional Networks

LinkedIn <https://www.linkedin.com/in/saptharishi-lalgudi-ganesan-b1730a60/>

Google Scholar <https://scholar.google.ca/citations?user=iuxSVQwAAAAJ&hl=en>

ResearchGate https://www.researchgate.net/profile/Saptharishi_Lalgudi_Ganesan