

SHELLY WANG

MD, MPH, FRCSC, FAANS, FACS

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Accreditations: Royal College of Physicians and Surgeons of Canada board certified
American Board of Pediatric Neurological Surgery (ABPNS) board certified
Fellow of the American Association of Neurologic Surgeons (FAANS)
Fellow of the American College of Surgeons (FACS)

EMPLOYMENT

2024 – current **Physician Consultant**
Perfecting Peds LLC
Haddon Heights, NJ, USA (remote)

2023 – 2024 **Director of Surgical Neuromodulation**
Brain Institute, Nicklaus Children’s Hospital
Miami, Florida, USA

2019 – 2024 **Pediatric Neurosurgeon**
Department of Neurosurgery, Nicklaus Children’s Hospital
Affiliate Faculty, Clinical Neurological Surgery and Pediatrics
University of Miami (UM) Miller School of Medicine
Clinical Associate Professor, Neurological Surgery, Florida International University (FIU)
Miami, Florida, USA

EDUCATION

2018 – 2019 **Pediatric Neurosurgery Fellow**
Department of Neurosurgery, Nicklaus Children’s Hospital, and the University of Miami
Miami, Florida, USA

2012 – 2018 **Neurosurgery Resident**
Department of Neurosurgery, University of Toronto, Toronto, Ontario, Canada

2016 **Masters of Public Health (MPH)**
Department of Biostatistics and Epidemiology, Harvard T. H. Chan School of Public Health
Boston, Massachusetts, USA

2012 **Doctor of Medicine (MD)**
Faculty of Medicine, University of Toronto
Toronto, Ontario, Canada

2008 **Bachelor of Science (BSc), Honors**
Faculty of Science, University of Western Ontario
London, Ontario, Canada

PROFESSIONAL MEMBERSHIPS

2022 – present	American Board of Pediatric Neurological Surgery (ABPNS) - RCPSC dual Recognition of Focused Practice (RFP)
2021 – present	Fellow of the American College of Surgeons (FACS)
2019 – present	Fellow of the American Association of Neurologic Surgeons (FAANS)
2018 – present	Royal College of Physicians and Surgeons of Canada
2013 – 2018	Medical Council of Canada (MCC)
2012 – 2018	Canadian Neurologic Sciences Federation (CNSF)
2012 – 2018	College of Physicians and Surgeons of Ontario (CPSO)
2008 – 2018	Ontario Medical Association (OMA)
2008 – 2018	Canadian Medical Association (CMA)

EXAMINATIONS COMPLETED

2022	American Board of Pediatric Neurosurgeons (ABPNS) Oral Board Exam	virtual
2019	American Board of Pediatric Neurosurgeons (ABPNS) Written Exam	Miami, FL
2018	Royal College Neurosurgery Licensing Exam	Ottawa, ON
2016	USMLE Step 3	Boston, MA
2015	USMLE Step 2 CS	Philadelphia, PA
2015	USMLE Step 2 CK	Boston, MA
2015	USMLE Step 1	Toronto, ON
2014	Surgical Foundations Principles of Surgery (POS)	Toronto, ON
2013	Medical Council of Canada Qualifying Exam (MCCQE) Part 2	Toronto, ON
2012	Medical Council of Canada Qualifying Exam (MCCQE) Part 1	Toronto, ON

TEXTBOOK CHAPTERS

Wang S, Hauptman J, Niazi TN. Eloquent Cortex Surgery for Epilepsy. In: Engel J and Moshe SL (Eds). Epilepsy: a Comprehensive Textbook, 3rd edition. Philadelphia: Wolters Kluwer, 2023.

Bryant JP, **Wang S**, Niazi TN. Carotid body tumor microenvironment. In: Birbrair A (Ed). Tumor Microenvironment – Novel Concepts. Spring Nature Series Advances in Experimental Medicine and Biology. Philadelphia: Wolters Kluwer, 2021.

Wang S, Ibrahim GM. Chapter 18: Structural lesions of the central nervous system. In: Cushing SL, Morlet T, O'Reilly RC (Eds). Manual of Pediatric Balance Disorders, 2nd edition. San Diego: Plural Publishing Inc, 2020.

Muir R, **Wang S**, Warf BC. Pediatric hydrocephalus in limited-resource countries. In: Cinalli G, Maixner WJ, Ozek MM, and Sainte-Rose C (Eds). Pediatric Hydrocephalus, 2nd edition. Berlin: Springer Publishing Company, 2018.

Wang S, Singh J, Fehlings MG. Chapter 303: Medical management of spinal cord injury. In: Winn HR (Ed). Youmans and Winn Neurological Surgery, 7th edition. Amsterdam: Elsevier, 2016.

Wang S, Wilson J, Fehlings MG. Chapter 56: Acute management of spinal cord injury. In: Vaccaro A, Su B, Chiba K, Dvorak M, Mayer HM, Rajasekaran S, Vialle L, Wang Y, and Youssef MG (Eds). The Spine. New Delhi: Jaypee Brothers Medical Publishers, 2016.

Mohammed S, **Wang S**, Ali J. Chapter 19: Spine and spinal cord injury. In: Ali J (Ed). The Surgical Critical Care Handbook: Guidelines for Care of the Surgical Patient in the ICU. Singapore: World Scientific Publishing Company, 2016.

Wang S, Hawryluk G, Fehlings MG. Chapter 36: Neuroprotective trials in spinal cord injury. In: Fehlings MG, Vaccaro A, Boakye M, Rossignol S, Burns A, and DiTunno J (Eds). Essentials of Spinal Cord Injury: Basic Research to Clinical Practice. New York: Thieme Medical Publishers, 2012.

PEER REVIEWED PUBLICATIONS

Vazquez S, Berke C, Lu VM, Wu E, Silva M, Das A, Soldozy S, Dominguez J, **Wang S**. Pediatric patients with intracranial arteriovenous malformations: trends in emergency room presentation. World Neurosurgery. 2024 Aug; 297-304.

Lu VM, **Wang S**, Ragheb J. Impact of previous surgery on the success of magnetic resonance-guided laser interstitial thermal therapy (MRgLITT) to treat pediatric epilepsy: an institutional experience. World Neurosurgery. 2024 June; 707-12.

Lu VM, Ragheb J, **Wang S**. The osteoplastic flap for pediatric temporal lobe epilepsy treatment: step-by-step guide and technical nuances. Childs Nerv Syst. 2024 Apr;40(4):1245-1249.

Levy AS, Bystrom LL, Brown EC, Fajardo M, **Wang S**. Responsive neurostimulation for treatment of pediatric refractory epilepsy: a pooled analysis of literature. Clinical Neurol and Neurosurg. 2023 Nov; 234; 10812.

Yossofzai O, Stone S, Madsen J, **Wang S**, Ragheb J, Mohamed I, Bollo J, Clarke D, Perry MS, Weil AG, Raskin J, Pindrik J, Ahmed R, Lam SK, Fallah A, Maniquis C, Andrade A, Ibrahim GM, Drake J, Rutka J, Tailor J, Mitsakakis N, Widjaja E. Machine learning models for predicting seizure outcome after MR-guided laser interstitial thermal therapy in children. J Neurosurg Pediatr. 2023 Oct; 32(6); 739-749.

Bystrom LL, Levy AS, Brown EC, Fajardo M, **Wang S**. Thalamic responsive neurostimulation for the treatment of refractory epilepsy: an individual patient data meta-analysis. J Neurosurg Pediatr. 2023 Jun; 32(3) ; 366-375.

Clarke JE, Reyes JM, Luther E, Govindarajan V, Leuchter J, Niazi T, Ragheb J, **Wang S**. Chiari I malformation management in patients with heritable connective tissue disorders. World Neurosurg X. 2023 Mar;18;100173.

Lu VM, **Wang S**, Ragheb J. The natural history of postoperative hydrocephalus after pediatric hemispherectomy for medically refractory epilepsy: an institutional experience. J Neurosurg Pediatr. 2023 Mar; 1-16.

Yossofzai O, Stone S, Madsen J, Moineddin R, **Wang S**, Ragheb J, Mohamed I, Bollo R, Clarke D, Perry S, Weil AG, Raskin J, Pindrik J, Ahmed R, Lam S, Fallah A, Maniquis C, Andrade A, Ibrahim GM, Drake J, Rutka J, Tailor J, Mitsakakis N, Puka K, Widjaja E. Seizure outcome of pediatric MR-guided laser interstitial thermal therapy versus open surgery: a matched non-inferiority cohort study. Epilepsia. 2023 Jan; 64(1); 114-126.

Lu VM, **Wang S**, Niazi TN, Ragheb J. Impact of intraventricular hemorrhage symmetry on endoscopic third ventriculostomy choroid plexus cauterization for posthemorrhagic hydrocephalus: An institutional experience of 50 cases. J Neurosurg Pediatr. 2022 Dec; 31(3): 245-251.

Lu VM, Brown EC, Ragheb J, **Wang S**. Repeat surgery for pediatric epilepsy: a systematic review and meta-analysis of resection and disconnection approaches. J Neurosurg Pediatr. 2022 Dec;30(6);616-623.

Hernandez N, **Wang S**, Ragheb J. The role of the pediatric neurosurgeon in the management of hydrocephalus internationally. *J Global Neurosurg.* 2022 Sept;2(1).

Silva MA, Mirchia K, Chamyan G, Maher O, **Wang S**, Niazi TN. Disseminated diffuse midline glioma associated with poorly differentiated orbital lesion and metastases in an 8-year-old girl: case report and literature review. *Childs Nerv Syst.* 2022 Oct; 38(10):2005-2010.

Yossofzai O, Fallah A, Maniquis C, **Wang S**, Ragheb J, Weil A, Brunette-Clement T, Andrade A, Ibrahim G, Mitsakakis N, Widjaja E. Development and validation of machine learning models for prediction of seizure outcome after pediatric epilepsy surgery. *Epilepsia.* 2022 Aug; 63(8):1956-1969.

Lu VM, Hernandez N, **Wang S**. National characteristics, etiology, and inpatient outcomes of pediatric traumatic brain injury: a KID study. *Childs Nerv Syst.* 2022 Aug;38(8):1541-1547.

Hernandez N, Lu VM, Altman N, Niazi TN, Ragheb J, **Wang S**. Incidence, follow-up, and postnatal clinical progress of children with central nervous system anomalies on fetal MRI. *J Neurosurg Pediatr.* 2022 Jun 10;1-9.

Clarke JE, Luther E, Oppenhuizen B, Leuchter JD, Ragheb J, Niazi TN, **Wang S**. Intracranial aneurysms in the infant population: an institutional case series and individual participant data meta-analysis. *J Neurosurg Pediatr.* 2022 Apr 15;1-11.

Tierney TS, Alavian KN, Altman N, Bhatia S, Duchowny M, Hyslop A, Jayakar P, Resnick T, **Wang S**, Miller I, Ragheb J. Initial experience with magnetic resonance-guided focused ultrasound stereotactic surgery for central brain lesions in young adults. *J Neurosurg.* 2022 Jan 14; 1-8.

Lu VM, Clarke J, Luther E, Leuchter J, **Wang S**, Niazi TN. The utility of congenital cardiac status to predict endoscopic third ventriculostomy and ventriculoperitoneal shunt failure in hydrocephalus infants. *J Neurosurg Pediatr.* 2022 Apr 15; 1-11

Gaztanaga W, Luther E, McCarthy D, Chamyan G, **Wang S**, Ragheb J. Giant, symptomatic mixed vascular malformation containing a cavernoma, developmental venous anomaly and capillary telangiectasia in a 19-month-old infant. *Childs Nerv Syst.* 2022 May; 38(5):1005-1009.

Siegel L, Yan H, Warsi N, Wong S, Sureh H, Weil AG, Ragheb J, **Wang S**, Rozzelle C, Albert GA, Raskin J, Abel T, Hauptman J, Schrader DV, Bollo R, Smyth MD, Lew SM, Lopresti M, Kizek DJ, Weiner HL, Fallah A, Widjaja E, Ibrahim, GM. Connectomic profiling and Vagus nerve stimulation Outcomes Study (CONNECTiVOS): a prospective observational protocol to identify biomarkers of seizure response in children and youth. *BMJ Open.* 2022 Apr 8; 12(4):e055886.

Silva M, Chang H, Wen J, Hernandez N, Shah AH, **Wang S**, Niazi TN, Ragheb J. Surgical Management of Quadrigeminal cistern arachnoid cysts: cases series and literature review. *J Neurosurg Pediatr.* 2022 Apr; 29(4): 1-8.

Wang S, Sun MZ, Abecassis IJ, Weil AG, Ibrahim GM, Fallah A, Ene C, Leary SES, Cole BL, Lockwood CM, Olson JM, Geyer JR, Ellenbogen RG, Ojemann JG, Wang AC. Predictors of mortality and tumor recurrence in desmoplastic infantile ganglioglioma and astrocytoma-and individual participant data meta-analysis (IPDMA). *J Neurooncol.* 2021 Nov;155(2):155-163

Lu VM, **Wang S**, Daniels DJ, Spinner RJ, Levi AD, Niazi TN. The clinical course and role of surgery in pediatric malignant peripheral nerve sheath tumors: a database study. *J Neurosurg Pediatr.* 2021 Oct;29(1):92-99

Oppenhuizen B, Ragheb J, Leuchter JD, Clarke JE, Pelaez L, **Wang S**. Pediatric intracranial neurenteric cyst of the oculomotor nerve: a case-based review. *Childs Nerv Syst.* 2021 Dec;37(12):3681-3693

Hyslop A, **Wang S**, Bryant JP, Bhatia S, Sandoval-Garcia C, Karkare K, Ragheb J. Stereo-electroencephalography (SEEG) in pediatric epilepsy: utility in children with and without prior epilepsy surgery failure. *Epilepsy Res.* 2021 Nov;177:106765

Nagahama Y, Zervos TM, Murata KK, Holman L, Karsonovich T, Parker JJ, Chen JS, Phillips HW, Fajardo M, Nariai H, Hussain SA, Porter BE, Grant GA, Ragheb J, **Wang S**, O'Neill BR, Alexander AL, Bollo RJ, Fallah A. Real-world preliminary experience with responsive neurostimulation in pediatric epilepsy: a multicenter retrospective observational study. *Neurosurgery.* 2021 Nov;89(6): 997-1004.

Jain S, **Wang S**, Sandoval-Garcia C, Ibrahim GM, Robinson WL, Ragheb J. Autologous calvarial bone remodeling technique for small to medium-sized cranial defects in young children: the “switch-cranioplasty” technique. *Pediatr Neurosurg.* 2021 Apr; 56(3): 248-253.

Ye V, Shah A, Sur S, Achua J, Ibrahim GM, **Wang S**, Morrison G, Bhatia S, Ragheb J. Long-term outcomes after surgery for catastrophic epilepsy in infants: institutional experience and review of the literature. *J Neurosurg Pediatr* 2020 Apr; 24(1):1-8

Weil AG, Fallah A, **Wang S**, Ibrahim GM, Elkaim L, Jayakar P, Miller I, Bhatia S, Niazi N, Ragheb J. Functional hemispherectomy: can preoperative imaging predict outcome? *J Neurosurg Pediatr.* 2020 Feb;25(1):1-8

Wang S, Rotenberg A, Bolton J. Patterns of anti-seizure medication (ASM) use in pediatric patients with surgically managed epilepsy: a retrospective review of data from Boston Children's Hospital. *Epilepsy Res* 2020 Feb;160:106257.

Wang S, Weil AG, Ibrahim GM, Fallah A, Korman B, Bhatia S, Ragheb J, Duchowny M. Surgical management of pediatric patients with encephalopathy related to electrical status epilepticus during sleep (ESES). *Epileptic Disord.* 2020 Feb;22(1):39-54.

Mithani K, Mikhail M, Morgan BR, Wong S, Weil AG, Deschenes S, **Wang S**, Bernal B, Guillen MR, Ochi A, Otsubo H, Yau I, Lo W, Pang E, Holowka, Snead OC, Donner E, Rutka JT, Go C, Widjaja E, Ibrahim GM. Connectomic profiling identifies responders to vagus nerve stimulation. *Ann Neurol.* 2019 Nov;86(5):743-53

Hubbard ZS, Shah AH, Ragheb M, **Wang S**, Jernigan S, Ragheb R. Economic benefit of neurosurgical intervention for infant hydrocephalus in Haiti. *J Neurosurg Pediatr.* 2019 Jul; 5:1-9

Wang S, Ahuja A, Das S. Arachnoiditis ossificans: a rare etiology of oil-based spinal myelography and review of literature. *World Neurosurg.* 2019 Jun;126:189-93

Wang AC, Jones DTW, Abecassis IJ, Cole BL, Leary SES, Lockwood CM, Chavez L, Capper D, Korshunov A, Fallah A, **Wang S**, Ene C, Olson JM, Geyer JR, Holland EC, Lee A, Ellenbogen RG, Ojemann JG. Desmoplastic infantile ganglioglioma / astrocytoma (DIG/DIA) are distinct entities with frequent BRAF^{V600} mutations. *Mol Cancer Res.* 2018 Oct; 16(10):1491-8

Voisin MR, Witiw CD, Deorajh R, Guha D, Oremakinde A, **Wang S**, Yang XD. Multilevel spondylolysis repair using the 'smiley face' technique with 3D intraoperative spinal navigation. *World Neurosurg.* 2018 Jan; 109:e609-614.

Merali Z, Witiw C, **Wang S**, Phan N, Yang XD. Spontaneous intracranial hypotension resulting in coma: case report and review of the literature. *Interdiscip Neurosurg.* 2017 Sep; 11:51-56.

Elkarim G, Alotaibi NM, Samuel N, **Wang S**, Ibrahim GM, Fallah A, Weil AG, Kulkarni AV. Social media networking in pediatric hydrocephalus: a point-prevalence analysis of utilization. *J Neurosurg Pediatr.* 2017 Aug; 20(2):119-24.

Wang S, Stone S, Weil AG, Fallah A, Warf BC, Ragheb J, Bhatia S, Kulkarni AV. Comparative effectiveness of flexible versus rigid neuroendoscopy for endoscopic third ventriculostomy and choroid plexus cauterization: a propensity score-matched cohort and survival analysis. *J Neurosurg Pediatr.* 2017 May; 19(5):585-91.

Muir R, **Wang S**, Warf BC. Global surgery for pediatric hydrocephalus in the developing world: a review of the history, challenges, and future directions. *Neurosurg Focus.* 2016 Nov; 41(5): E11.

Weil AG, Westwick H, **Wang S**, Alotaibi N, Elkaim L, Ibrahim GM, Wang AC, Ariani RT, Crevier L, Myers B, Fallah A. Efficacy and safety of endoscopic third ventriculostomy and choroid plexus cauterization for hydrocephalus: a systematic review and meta-analysis. *Childs Nerv Syst.* 2016 Nov; 32(11):2119-31.

Tsitouras V, **Wang S**, Dirks P, Drake J, Bouffet E, Hawkins C, Laughlin S, Rutka JT. Management and outcome of chordomas in the pediatric population: The Hospital for Sick Children experience and review of literature. *J Clin Neurosci.* 2016 Dec; 34:169-76.

Fallah A, Weil AG, **Wang S**, Lewis E, Baca CB, Mathern GW. Cost utility analysis of competing treatment strategies for drug-resistant epilepsy in children with Tuberous Sclerosis Complex. *Epilepsy Behav.* 2016 Oct; 63:79-88.

Wang A, Abecassis IJ, **Wang S**, Jones DT, Cole BL, Leary SE, Lockwood CM, Ene C, Fallah A, Olson JM, Ellenbogen RG, Holland EC, Ojemann J. Primitive desmoplastic neuroepithelial tumor of the skull base. *J Neurol Surg B Skull Base.* 2017; 78(S01)Lt S1-S156.

Wang S, Drake J, Kulkarni A. Management and outcome of spontaneous subaponeurotic fluid collections in infants: The Hospital for Sick Children experience and review of literature. *J Neurosurg Pediatr.* 2016 Oct; 18(4):442-7.

Fatehi M, Ahuja C, **Wang S**, Ginsberg H. Uremic tumoral calcinosis in the cervical spine: case report. *J Neurosurg Spine.* 2016 Jul; 25(1):26-30.

Wang S, Fallah A. Evaluating the epilepsy and oncologic outcomes of pediatric brain tumors causing seizures. *Transl Pediatr.* 2016 Jan; 5(1):9-11.

Wang S, Fallah A. Optimal management of seizures associated with tuberous sclerosis complex: current and emerging options. *Neuropsychiatr Dis Treat.* 2014 Oct; 10(1):2021-30.

Hawryluk G, Spano S, Chew D, **Wang S**, Erwin M, Chamankah M, Forgiione N, Fehlings MG. An examination of the mechanisms by which neural precursors augment recovery following spinal cord injury: a key role for remyelination. *Cell Transplant.* 2014 Mar; 23(3):365-80.

Hawryluk G, Mothe A, Wang J, **Wang S**, Tator C, Fehlings MG. An in vivo characterization of trophic factor production following neural precursor cell or bone marrow stromal cell transplantation for spinal cord injury. *Stem Cells Dev.* 2012 Aug; 21(12):2222-38.

Wang S, Hawryluk G, Spano S, Fehlings MG. Pharmacologic protocols for spinal cord injured athletes. *Seminars in Spine Surgery.* 2010; 22(4):181-192.

SELECT POSTER AND ORAL PRESENTATIONS

Wang S. How soon can you do surgery and what surgery do you do for medically refractory epilepsy? In: Florida Pediatric Neuroscience Network Conference, 2023 Feb 5; Orlando, FL, USA.

Wang S, Fajardo M, Hernandez N, Duchowny M, Ragheb J. Yield and predictive variables of positive insular sampling in pediatric epilepsy cases. In: 50th AANS/CNS Peds Section Meeting, 2021 Dec 12; Salt Lake City, UT, USA.

Hernandez N, Lu VM, **Wang S**. Characteristics, etiology and clinical inpatient outcomes of pediatric traumatic brain injury. In: 50th AANS/CNS Peds Section Meeting, 2021 Dec 12; Salt Lake City, UT, USA

Hernandez N, Niazi T, Ragheb J, **Wang S**. Incidence, follow-up and postnatal outcome of children with central nervous system abnormalities on fetal MRI In: 50th AANS/CNS Peds Section Meeting, 2021 Dec 12; Salt Lake City, UT, USA.

Hernandez N, Niazi T, Ragheb J, **Wang S**. Incidence and predictors of CSF diversion for children prenatally diagnosed with ventriculomegaly on fetal MRI. In: 50th AANS/CNS Peds Section Meeting, 2021 Dec 12; Salt Lake City, UT, USA.

Hernandez N, Silva MA, Chang H, Shah AH, **Wang S**, Ragheb J. Surgical management of quadrigeminal cistern arachnoid cyst: a 20-year institutional experience. In: 50th AANS/CNS Peds Section Meeting, 2021 Dec 12; Salt Lake City, UT, USA.

Clarke J, Reyes J, Luther E, Govindarajan V, Leuchter J, Niazi T, Ragheb J, **Wang S**. Heritable connective tissue disorders associated with complex comorbidities, increased craniocervical instability, and worse perioperative outcomes in Chiari I malformation patients. In: Bobby Jones CSF Colloquium, Congress of Neurological Surgeons, 2021 Oct 16-20; Austin, TX, USA.

Clarke J, Luther E, **Wang S**. Impact of congenital heart disease on pediatric intracranial aneurysm formation and postoperative outcome. In: Congress of Neurological Surgeons, 2021 Oct 16-20; Austin, TX, USA.

Wang S, Fajardo M, Tierney TS, Alavian KN, Altman N, Bhatia S, Duchowny M, Hyslop A, Jayakar P, Resnick T, Miller I, Ragheb J. Initial Experience with Magnetic Resonance-Guided Focused Ultrasound for Central Brain Lesions in Young Adults. In: AANS Meeting, 2021 Aug 15-21; Orlando FL, USA.

Clarke J, Reyes JM, Luther E, Leuchter JD, Niazi TN, **Wang S**. National analysis of demographics, comorbidities and perioperative course in Chiari I malformation patients with heritable connective tissue disorders. In: AANS Meeting, 2021 Aug 15-21; Orlando FL, USA.

Clarke J, **Wang S**. Effect of underlying connective tissue disorders on pediatric and adolescent Chiari I Malformation neurosurgical patients: a National Inpatient Sample analysis. In: 7th Pediatric Medical Student Research Forum at the University of Florida; 2021 April 27; virtual. (*First Place Winner*)

Clarke J, Luther E, Oppenhuizen B, Leuchter J, Ragheb J, **Wang S**. Presentation, management and outcome of intracranial aneurysms in the infant population: an individual participant data meta-analysis. In: Eastern-Atlantic Student Research Forum (ESRF), 2021 Feb 19-21; virtual. (*Winner of the Alving Award*)

Gonzalez MJ, Shahein M, Miller I, Lallas M, Fajardo M, Resnick T, Duchowny M, Morrison G, Bhatia S, **Wang S**, Ragheb J, Hyslop A. The evolution of epilepsy surgery over three decades: a comprehensive retrospective review of a quaternary pediatric epilepsy surgical program. In: American Clinical Neuropsychology Society Meeting, 2021 Feb 10-14; virtual.

Shahein M, Gonzalez MJ, Hyslop A, Bhatia S, Morrison G, Ragheb J, **Wang S**. Retrospective review of epilepsy surgery practice patterns over three decades. In: 49th AANS/CNS Pediatric Section Meeting, 2020 Dec 2-4; virtual.

Clarke J, Luther E, Oppenhuizen B, Leuchter J, Ragheb J, **Wang S**. Presentation, management and outcome of intracranial aneurysms in the infant population: an individual participant data meta-analysis. In: 49th AANS/CNS Pediatric Section Meeting, 2020 Dec 2-4; virtual.

Bryant JP, **Wang S**, Hyslop A, Bhatia S, Sandoval-Garcia C, Karkare K, Ragheb J. Stereo-electroencephalography (sEEG) in pediatric epilepsy: a 5-year single-center experience. In: 49th AANS/CNS Pediatric Section Meeting, 2020 Dec 2-4; virtual.

Wang S, Tierney T, Alavian KN, Altman N, Bhatia S, Duchowny M, Hyslop A, Jayakar J, Resnick T, Miller I, Ragheb J. Initial experience with focused ultrasound surgery for central brain lesions in children and young adults. In: 7th International Symposium of Focused Ultrasound. 2020 Nov 10; virtual.

Clarke J, Leuchter J, Trapani J, **Wang S**. Connective tissue-related Chiari I malformation in the adult and pediatric populations – an integrated analysis of demographics, presentation, management and comorbidities. In: Southeastern Medical Scientist Symposium (SEMSS), 2020 Nov 21-22, virtual

Oppenhuizen B, **Wang S**, Leuchter J, Clarke J, Pelaez L, Ragheb J. Neurenteric cyst of the oculomotor nerve: case report and review of the literature. In: Southeastern Medical Scientist Symposium (SEMSS), 2020 Nov 21-22, virtual

Clarke J, Leuchter J, Trapani J, **Wang S**. Connective tissue related Chiari I malformation in adult & pediatric populations: an integrated analysis of demographics, presentation, and management. In: Association of Physician Scientists Association (APSA) South Atlantic Regional Meeting, 2020 Oct 23; virtual. (*1st Place Winner for Clinical Research*)

Wang S. Minimally invasive techniques in epilepsy surgery. In: Florida Pediatric Neuroscience Network Conference, 2020 Jan 12; Orlando, FL, USA.

Wang S, Weil AG, Ibrahim GM, Fallah A, Korman B, Duchowny M, Bhatia S, Ragheb J. Surgical management of pediatric patients with encephalopathy related to electrical status epilepticus during sleep (ESES) – an institutional case series. In: 47th AANS/CNS Pediatric Section Meeting, 2018 Dec 6-9; Nashville, Tennessee, USA.

Wang S, Jain S, Sandoval-Garcia C, Ibrahim GM, Ragheb J. Reverse autologous calvarial cranioplasty for occipital encephalocele repair: a case series and description of surgical technique. In: 47th AANS/CNS Pediatric Section Meeting, 2018 Dec 6-9; Nashville, Tennessee, USA. (*Top poster*)

Ahuja C, Alotaibi NM, **Wang S**, Davidson B, Mainprize T, Kulkarni AV, Spears J, Massicotte E. A randomized trial of a simple intervention to improve neurosurgery rotation experience for senior medical students. In: 53rd Canadian Neurological Sciences Federation (CNSF) Congress, 2018 Jun 24-27; Halifax, Nova Scotia, Canada.

Wang AC, Jones DTW, **Wang S**, Abecassis IJ, Cole B, Leary SES, Lockwood CM, Chavez L, Olson JM, Capper D, Ellenbogen RG, Holland EC, Ojemann JG. Desmoplastic infantile ganglioglioma / astrocytoma – a distinct entity with frequent *BRAF*^{V600} mutations. In: 85th AANS Annual Meeting, 2017 Apr 22-26; Los Angeles, California, USA. (*Winner of the American Brain Tumor Association Young Investigator Award*)

Wang AC, Jones DTW, **Wang S**, Abecassis IJ, Cole B, Leary SES, Lockwood CM, Chavez L, Capper D, Korshunov A, Fallah A, Ene C, Olson JM, Geyer RJ, Ellenbogen RG, Holland EC, Ojemann JG. Desmoplastic infantile ganglioglioma / astrocytoma of the skull base – a distinct entity with frequent *BRAF*^{V600} alterations and significantly poorer outcomes. In: 28th North American Skull Base Society Annual Meeting, 2017 Mar 3-5; New Orleans, Louisiana, USA. (*Poster of Distinction*)

Wang S, Stone S, Weil AG, Fallah A, Warf BC, Ragheb J, Bhatia S, Kulkarni AV. Investigating the comparative effectiveness of flexible vs. rigid neuroendoscopy for endoscopic third ventriculostomy and choroid plexus cauterization (ETV/CPC): a propensity score matched cohort and survival analysis. In: 45th AANS/CNS Pediatric Section Meeting, 2016 Dec 5-8; Orlando, Florida, USA.

Wang S, Fallah A, Weil AG, Lewis E, Baca CB, Mathern GW. Cost-utility analysis of treatment options for children with Tuberous Sclerosis Complex. In: 45th AANS/CNS Pediatric Section Meeting, 2016 Dec 5-8; Orlando, Florida, USA.

Wang S, Rotenberg A, Bolton J. Patterns of antiepileptic drug use in pediatric patients with surgically managed epilepsy: a retrospective review of data from Boston Children's Hospital. In: 45th AANS/CNS Pediatric Section Meeting, 2016 Dec 5-8; Orlando, Florida, USA.

Elkarim G, Alotaibi NM, Samuel N, **Wang S**, Ibrahim GM, Fallah A, Weil AG, Kulkarni AV. The use of social media in hydrocephalus: a cross-sectional analysis. In: 45th AANS/CNS Pediatric Section Meeting, 2016 Dec 5-8; Orlando, Florida, USA.

Wang AC, Jones DTW, **Wang S**, Abecassis IJ, Cole B, Leary SES, Lockwood CM, Chavez L, Olson JM, Capper J, Ellenbogen RG, Holland EC, Ojemann RG. Targeted oncogene sequencing in desmoplastic ganglioglioma / astrocytoma. In: 21st Society for Neuro-Oncology (SNO) Annual Scientific Meeting, 2016 Nov 17-20; Scottsdale, Arizona, USA. (*American Brain Tumor Association Young Investigator Award*)

Obaid S, Westwick H, Elkaim L, **Wang S**, Alotaibi NM, Ibrahim GM, Wang AC, Ariani RT, Crevier L, Myers B, Fallah A, Weil AG. Efficacy and safety of endoscopic third ventriculostomy and choroid plexus cauterization for hydrocephalus: a systematic review and meta-analysis. In: 55th Annual Congress of the Quebec Association of Neurosurgeons (ANCQ), 2016 Nov 11-13; Esterel, Quebec, Canada.

Elkaim L, Jabre R, Alotaibi NM, **Wang S**, Perreault S, Obaid S, Westwick H, Mercier C, Crevier L, Ibrahim GM, Fallah A, Wang AC, Weil AG. Natural history of moyamoya syndrome: a North American cohort study. In: 55th Annual Congress of the Quebec Association of Neurosurgeons (ANCQ), 2016 Nov 11-13; Esterel, Quebec, Canada.

Fallah A, Weil AG, **Wang S**, Lewis E, Baca CB, Mathern GW. Cost-utility analysis of competing treatment strategies for drug-resistant epilepsy in children with Tuberous Sclerosis Complex. In: 44th International Society of Pediatric Neurosurgery (IPSN) Annual Meeting, 2016 Oct 23-27; Kobe, Japan.

Weil AG, Westwick H, **Wang S**, Alotaibi N, Elkaim L, Ibrahim GM, Wang AC, Ariani RT, Crevier L, Myers B, Fallah A. Efficacy and safety of endoscopic third ventriculostomy and choroid plexus cauterization for hydrocephalus: a systematic review and meta-analysis. In: 44th International Society of Pediatric Neurosurgery (IPSN) Annual Meeting, 2016 Oct 23-27; Kobe, Japan.

Fallah A, Weil AG, **Wang S**, Lewis E, Baca CB, Mathern GW. Cost-utility analysis of competing treatment strategies for drug-resistant epilepsy in children with Tuberous Sclerosis Complex. In: 62nd Western Neurosurgical Society Annual Meeting, 2016 Sep 10; Carlsbad, California, USA.

Wang S, Drake J, Kulkarni A. Defining and managing spontaneous sub-aponeurotic fluid collections in infants: a novel diagnosis and entity. In: 51st Canadian Neurological Sciences Federation (CNSF) Congress, 2016 Jun 21-24; Quebec City, Quebec, Canada.

Wang S, Stone S, Weil AG, Fallah A, Warf BC, Ragheb J, Bhatia S, Kulkarni AV. Investigating the comparative effectiveness of flexible vs. rigid neuroendoscopy for endoscopic third ventriculostomy and choroid plexus cauterization (ETV/CPC): a propensity score matched cohort and survival analysis. In: University of Toronto Department of Neurosurgery Keith Lectureship, 2016 June 6; Toronto, Ontario, Canada.

Wang S. The use of propensity score multivariate analysis for multi-center data in pediatric neurosurgery. In: 3rd Harvard T.H. Chan School of Public Health Quantitative Methods Research Symposium, 2016 May 2-4; Boston, Massachusetts, USA.

Wang S. Patterns of pediatric head injury and risk factors: detailed analysis using Haddon's Matrix. In: Harvard T.H. Chan School of Public Health Research Day, 2015 Dec 16; Boston, Massachusetts, USA.

Hawryluk G, Spano S, Chew D, **Wang S**, Fehlings MG. Neural Precursor Cells express trophins following transplantation but remyelination is the key mechanism by which they augment functional recovery following rodent spinal cord injury. In: 9th National Neurotrauma Symposium, 2011 Jul 10-13; Fort Lauderdale, Florida, USA.

NEUROSURGERY LEADERSHIP POSITIONS

2021 – present	Pediatric Section Executive Committee, American Academy of Neurological Surgeons <i>Co-chair, Communications Committee</i>
2020 – 2024	A Feasibility and Safety Study of Benign Centrally-Located Intracranial Tumors in Pediatric and Young Adults Subjects treated with Magnetic Resonance guided Focused Ultrasound <i>Sub-PI, Nicklaus Children's Hospital, Miami, FL</i>
2020 – 2024	Hydrocephalus Clinical Research Network (HCRNq) Registry <i>Site sub-PI, Nicklaus Children's Hospital, Miami, FL</i>
2020 – 2024	Predicting Seizure Responsiveness to Neuromodulation Using Connectomic Profiling Study (Vagus Nerve Stimulation Study) <i>Site PI, Nicklaus Children's Hospital, Miami, FL</i>

2020 – 2022	Miami Pediatric Neurosurgery Zoomposium Series <i>Co-director, Nicklaus Children’s Hospital, Miami, FL</i>
2020 – 2022	Retrospective Responsive Neurostimulation (RNS) Registry <i>Site PI, Nicklaus Children’s Hospital, Miami, FL</i>
2020 – 2002	Development and Validation of Machine Learning Models for Prediction of Seizure Outcome After Pediatric Epilepsy Surgery Registry <i>Site PI, Nicklaus Children’s Hospital, Miami, FL</i>
2020 – 2022	MRI-guided Laser Interstitial Thermal Therapy (MRgLITT) Registry <i>Site PI, Nicklaus Children’s Hospital, Miami, FL</i>

INVITED TALKS

2024	Workup and Surgical Decision-Making in Pediatric Epilepsy <i>Department of Neurosurgery, University of Miami</i>	virtual
2023	Neuromodulation for Epilepsy in the Pediatric Population <i>Department of Neurosurgery, University of Miami</i>	virtual
2022	Comprehensive Management of Epilepsy at Nicklaus Children’s Hospital <i>Practical Community Pediatrics Continuing Medical Education (CME) Series</i>	virtual
2022	Virtual Planning in Open Cranial Vault Remodeling in Pediatric Craniofacial Surgery <i>AANS/CNS Fellowship Lecture Series</i>	virtual
2021	UMMSM Physician Scientist Symposium (keynote speaker) <i>University of Miami Miller School of Medicine Physician Scientist Organization</i>	virtual
2021	New and Novel Surgical Approaches to Treat Epilepsy at Nicklaus Children’s <i>Nicklaus Children’s Hospital Brain Institute Zoom Webinar</i>	virtual
2021	If Medication Doesn’t Work, What are the Alternatives? <i>Epilepsy Florida Webinar Series</i>	virtual
2021	Focused Ultrasound Ablation for Epilepsy (keynote speaker) <i>INC Brazilian Symposium for Epilepsy Surgery</i>	virtual
2021	Understanding Insular Epilepsy: the Nicklaus Children’s Hospital Experience <i>Department of Neurosurgery, University of Miami</i>	virtual
2021	Evaluation of Mild TBI and Common Cranial Neurosurgical Concerns <i>Practical Community Pediatrics Continuing Medical Education (CME) Series</i>	virtual
2021	Updates on the Management of Epilepsy <i>Practical Community Pediatrics Continuing Medical Education (CME) Series</i>	virtual
2021	Genetics of Common Pediatric Neurosurgical Conditions <i>Department of Neurosurgery, University of Miami</i>	virtual
2020	Management of Acute Severe Pediatric Traumatic Brain Injuries –	virtual

	Understanding of Supportive Medical and Surgical Care <i>Trauma Conference, Nicklaus Children's Hospital</i>	
2020	Evaluation of the Pediatric Cranium and Management of Abnormal Head Size, Shape and Lesions <i>Practical Community Pediatrics Continuing Medical Education (CME) Series</i>	Miami, FL
2020	Workup and Surgical Management and Workup of Pediatric Epilepsy <i>Department of Neurosurgery, University of Miami</i>	Miami, FL
2020	Management of Hydrocephalus in the Infantile and Pediatric Population <i>Department of Neurosurgery, University of Miami</i>	Miami, FL
2019	Evaluation of Neurofibromatosis <i>Department of Medicine, University of Miami</i>	Miami, FL
2019	Novel Advancements in Epilepsy Surgery <i>Department of Medicine, University of Alberta</i>	Edmonton, AB
2018	Quantitative Methods in Pediatric Neurosurgical Research <i>Department of Neurosurgery, University of California Davis</i>	Sacramento, CA

COURSES AND CERTIFICATIONS

2020	Kline Legacy Peripheral Nerve Course	New Orleans, LA
2018	Evidence-Based Spine Surgery Course	Toronto, ON
2016	William Lougheed Microsurgical Course	Toronto, ON
2016	Ozarks Neurosciences Education (ONE) Clinical Course	Springfield, MO
2015	Endoscopic Endonasal Skull Base Course	Toronto, ON
2015	Endoscopic Techniques Course	Toronto, ON
2014	Neurosurgery Microsurgery Course	Toronto, ON
2014	Neuro-endovascular Simulation Course	Toronto, ON
2014	Toronto Spine Course	Toronto, ON
2013	Traumatic Brain and Spinal Cord Injury Seminar	Toronto, ON
2013	Neurosurgery Brain Endoscopy Course	Buffalo, NY
2012	Toronto Neurosurgery Skills Course	Toronto, ON

NEUROSURGERY EDUCATIONAL ACTIVITIES

2022 – 2024	Miami epilepsy journal club <i>Miami Neuroscience Institute</i>	Miami, FL
2018 – 2024	Pediatric neurosurgery APP educational lectures (15 total) <i>Department of Neurosurgery, Nicklaus Children's Hospital</i>	Miami, FL
2018 – 2024	Pediatric neurosurgery journal clubs and talks (4 total) <i>Department of Neurosurgery, University of Miami</i>	Miami, FL
2018 – 2024	PICU management of neurosurgical patients lectureship (4 total)	Miami, FL

Department of Intensive Care, Nicklaus Children's Hospital

2019 – 2024	Dr. Sanjiv Bhatia memorial lectureship visiting professor presentations <i>Department of Neurosurgery, University of Miami</i>	Miami, FL
2012 – 2018	TWH academic presentations (5 total) <i>Department of Neurosurgery, Toronto Western Hospital</i>	Toronto, ON
2012 – 2018	TWH Krembil Neuroscience Center neurosciences presentations (15 total) <i>Departments of Neurology and Neurosurgery, Toronto Western Hospital</i>	Toronto, ON
2012 – 2018	Neurosurgery journal club attendances (6 total) <i>Department of Neurosurgery, University of Toronto</i>	Toronto, ON
2012 – 2018	SMH academic presentations (10 total) <i>Department of Neurosurgery, St. Michael's Hospital</i>	Toronto, ON
2012 – 2018	City-wide visiting professorship rounds presentations (3 total) <i>Department of Neurosurgery, University of Toronto</i>	Toronto, ON
2015 - 2018	HSC neurosciences academic presentation (3 total) <i>Departments of Neurology and Neurosurgery, The Hospital for Sick Children (HSC)</i>	Toronto, ON
2015 – 2016	Neurosurgery introduction course instructor <i>Department of Neurosurgery, University of Toronto</i>	Toronto, ON
2014 – 2015	Day of the Doctor neurosurgery mentor <i>Undergraduate Medical Education, University of Toronto</i>	Toronto, ON
2013	Brain and Behavior Seminar resident instructor <i>Undergraduate Medical Education, University of Toronto</i>	Toronto, ON

AWARDS

2018	Distinction in Patient Care Excellence Star, Toronto Western Hospital	
2008 – 2012	Dean's Honor List, University of Toronto	
2009	Medical Student Summer Research Fellowship, American Association of Neurological Surgeons (AANS)	
2005 – 2008	Western Scholar, University of Western Ontario	
2005 – 2008	Continuing Scholarship, University of Western Ontario	
2006 – 2008	Andrew and Sarah Hamilton Scholarship, University of Western Ontario	
2008	Faculty of Science and Biomedical Sciences Gold Medal, University of Western Ontario	
2008	Excellence in Leadership Gold Medal, University of Western Ontario	
2007	Student Leadership Award, University of Western Ontario	
2006	Undergraduate Student Research Award, Natural Sciences and Engineering Research Council (NSERC)	
2005	Dr. B. Mabel Dunham Academic Medal, Canadian Federation of University Women	
2005	Lieutenant Governors' Award, Province of Ontario	

ACADEMIC REVIEWER

2017 - present Peer reviewer for multiple journals, including *Nature Medicine*, *BMC Pediatrics*, *Epilepsy Disorders*, *Epilepsy Research*, *Canadian Journal of Neurological Sciences*, *Surgical Neurology International*

SKILLS AND ACADEMIC INTERESTS

Clinical – Functional neurosurgery, epilepsy, neuromodulation, neuroendoscopy, craniofacial, neurotrauma

Research – Basic sciences, multi-center collaborations, quality improvement, biostatistics, epidemiology, statistics software (Stata, R, SPSS, TreeAge), meta-analysis, systematic review, risk decision analysis, cost-utility analysis

Others – Global surgery, bioethics, public health, medical education

REFERENCES

References available upon request.