

DAVIS DENMARK MUGUTSO

PROFESSIONAL SUMMARY

Neuroanatomy & Neurophysiology Instructor, Laboure College, MA.
since 2018 (online)

Healthcare Leader: Neurosurgery and Neurophysiologic Monitoring.
Healthcare leadership, Quality Assurance, Healthcare Investment,
Healthcare Business Founder

Biomedical Research Scientist :Published with Journal of
Neurosurgery (Spine), Acta Neurochirurgica, Book Chapter
contribution.

Mining Engineer: extensive experience with base metals mining,
mining investment, mining process engineering.

Doctoral Candidate. Doctor of Health Science (D. HSc) (2025)
concentration in clinical leadership, The George Washington
University.

ACCOMPLISHMENTS

PUBLICATIONS

- **Mugutso, D.**, Warnecke, C., Tessler, L. E., Pace, C. J., & Avshalumov, M. V. (2024). Optimization of direct cortical stimulation using tibial versus median nerve sensory mapping during midline brain tumor resection: illustrative case. *Journal of Neurosurgery: Case Lessons*
- **Mugutso, D.**, Warnecke, C., Bolognese, P., & Avshalumov, M. V. (2021). Electromyographic assessment of condylar screw placement during occipitocervical fusion. *Journal of neurosurgery. Spine*, 1-10.
- **Mugutso, D.**, Avshalumov, M., Intraoperative Neurophysiologic Monitoring during Microvascular Decompression for Trigeminal Neuralgia, book chapter 38 in Jeffrey Brown's *Functional Neurosurgery, the Essentials*.
- Tam, S., Bolognese, P. A., Kula, R. W., Brodbelt, A., Foroughi, M., Avshalumov, M., **Mugutso, D.**, & Ruhoy, I. (2021). Safety analysis and complications of condylar screws in a single-surgeon series of 250 occipitocervical fusions. *Acta neurochirurgica*, 10.1007/s00701-021-05039-z. Advance online publication.



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[Bold Profile](#)

LINKS

- <https://www.linkedin.com/in/davis-denmark-mugutso-ms-cnim-8b18077>

SKILLS

- **Online and in person Didactic Instruction:** Gross Anatomy & Neuroanatomy and Neurophysiology
- **On-site Clinical Instruction:** Intraoperative Neurophysiology
- **Coaching** and Mentoring
- **Clinical Research** & Publication
- **Anatomy lab**
- **3D4 Medical** Anatomy Instruction Technology
- Quality Assurance

WORK AND COLLEGE AWARDS, ACHIEVEMENTS

- **Improved quality of surgical outcomes by 50%**
- **Top Clinician** (2009). Neuromatrix. Atlanta. GA, USA
- **Best Clinical Instructor** (2009). Neuromatrix. Atlanta. GA, USA
- **Top Clinician** (2006), Neuromatrix. Atlanta. GA, USA
- **Valedictorian**, University of Zimbabwe, Zimbabwe, 1995
- Arthur Bensusan Memorial Fund **award**, University of Zimbabwe, Zimbabwe, 1995
- **Editor:** *Waddilove Review*, 1990

WORK HISTORY

Senior Intra-operative Neurophysiologist, 09/2011 - Current **Neurological Surgery P.C**

- Intra-operative neurophysiologic monitoring (IOM) in various Long Island hospitals, average 200 procedures per year
- Design of IOM protocols and procedure manuals for practice.
- Quality control, presiding over and setting policies for quality assurance programs.
- Gathered and evaluated quality assurance data to identify issues and improve process efficiency. Reduced false-negatives by 50%
- Trained and mentored new staff to achieve efficiency and maintain daily operational consistency.

Instructor, NeuroAnatomy & Neurophysiology, 09/2018 - Current **Laboure College**

- Evaluated and revised lesson plans and course content to facilitate and moderate classroom discussions and student centered learning.
- Developed semester outlines and instructional plans for each class session to comply with stated course objectives.
- Collaborated with program director to create dynamic, ongoing curriculum development and instruction improvement program.
- Created syllabus and instructional plans for each class session in accord with stated course objectives.
- 100% pass rate for all students

Team Leader and Clinical Instructor, 12/2008 - 08/2011 **Neuromatrix, LLC**

- Trained 24 interns in didactic and practical aspects of intraoperative neurophysiology.
- Coached for student neurophysiologists for certification in IOM
- Performed supervisory duties for teams of neurophysiologists

Staff Neurophysiologist II, 06/2006 - 12/2008**Neuromatrix, LLC**

- Intraoperative neurophysiologic monitoring of complex brain, spine, and peripheral nerve surgical procedures.
- Determined cause of unexpected test results and other issues by identifying and resolving technical and equipment problems.
- Trained and mentored 12 new staff to achieve efficiency and maintain daily operational consistency.
- Presented research findings to scientific audience and general public.
- Gathered and evaluated quality assurance data to identify issues and improve process efficiency.
- Resolved conflicts and negotiated mutually beneficial agreements between parties.
- Managed quality assurance program, including on-site evaluations, internal audits and customer surveys.

Staff Neurophysiologist I, 06/2004 - 06/2006**Neuromatrix, LLC**

- Intraoperative neurophysiologic monitoring of brain, spine, and peripheral nerve surgical procedures.
- Trained new neurophysiologists in proper techniques, care standards, operational procedures, and safety protocols to optimize performance and safety.
- Maintained highest levels of patient and surgeon satisfaction, generating referrals to maintain productivity levels and reducing number of hospital stays in rehabilitation units from 2 days to one day for cervical surgeries.
- Educated patients, families and caregivers on intraoperative neurophysiologic monitoring protocols, expectations, and needs prior to surgery

Technical Specialist, 01/2004 - 06/2004**Autotrader.com**

- Web-based technical support.
- Completed troubleshooting and diagnostics on company resources, taking in more than 500 inbound calls per day.

Technical Support Specialist, 04/2001 - 12/2003**Nextel Communications**

- Monitored call queues, call volumes, and other performance metrics to detect and rectify weaknesses in response times and measures.
- Fielded average of 500 inbound phone calls daily to deliver effective support and remotely resolve service issues.

Mining Engineer, 01/1996 - 08/2000

Anglo-American Corporation

- Mine design and production management
- Supervising over 300 mine workers on a three-shift, 24-hour production schedule.
- Performed thorough risk assessments on long-term and short-term mine plans and designs.
- Supervised novice engineers and technicians and trained in proper use of explosives, mine design and mineshaft blueprint development.
- Worked directly with construction foreman to monitor construction of mine and installation of mining equipment.
- Consulted geologists and mechanical / electrical engineers on selection of mine transportation, drilling, and ore haulage equipment and necessary supplies including water and power supplies for below-surface exploration and build-out.
- Investigated mineral deposits and collaborated with geologists and metallurgical scientists.
- Organized safe, cost-effective completion methods of projects such as Self-directed work teams to exceed stakeholder and Anglo-American Corporation's expectations.
- As **team captain**, led a mine rescue team on over 6 rescue missions following underground mining accidents.

EDUCATION

Ph.D., Doctor of Health Science, Expected in 06/2025

George Washington University, The - Washington, DC

- Majored in Clinical Education and Leadership

Master of Science, Biology, 12/2009

University Of Saint Joseph - West Hartford, CT, USA

- Coursework in Microbiology, Neuroscience, Pathophysiology, Medical Bacteriology, Emerging Infectious Diseases, Epidemiology, Advanced Physiology, Pharmacology, Public Health, and Clinical Problem Solving.

Bachelor of Science, Bachelor of Science Honors (Mining) Engineering, 12/1995

University of Zimbabwe - Mt Pleasant, Harare, Zimbabwe

- Received Anglo American Corporation full scholarship for the four year Bachelor of Science Honors (Mining Engineering) degree program
- Thesis: *A comparison of grade interpolation techniques: geostatistics vs linear averages.*

- Graduated with 2.1 (Upper Second Division) per United Kingdom Degree system

No Degree, Pre-Medicine Coursework

Georgia Perimeter College - Decatur, GA, USA

- Coursework in Chemistry (with lab), English, humanities, Computer Studies, Statistics, Calculus, Biology (with lab), Psychology
- Dean's List (Spring, 2004)

No Degree, Annual Fall Symposium

American Society of Neurophysiologic Monitoring - Vancouver, British Columbia, Canada

- Continuing Medical Education in Intraoperative Neurophysiologic Monitoring

No Degree, Monitoring And Mapping For Brain And Spine Surgery

London Neuromonitoring & Mapping Conference - London, UK

- Continuing Medical Education in Intraoperative Neurophysiologic Monitoring

No Degree, Intraoperative Neurophysiology

American Society of Neurophysiologic Monitoring Co - Boston, MA

- Continuing Medical Education in Intraoperative Neurophysiologic Monitoring

No Degree, Intraoperative Neurophysiology

International Society of Intraoperative Neurophysi - Seoul, South Korea

- Continuing Medical Education in Intraoperative Neurophysiology

No Degree, Intraoperative Neurophysiology

International Society of Intraoperative Neurophysi - Chicago, IL

- Continuing Medical Education in Intraoperative Neurophysiology

No Degree, Intraoperative Neurophysiologic Monitoring

American Society of Neurophysiologic Monitoring - Chicago, Illinois

- Continuing Medical Education in Intraoperative Neurophysiology

No Degree, Intraoperative Neurophysiology

International Society of Intraoperative Neurophysi - Boston, MA

- Continuing Medical Education in Intraoperative Neurophysiologic Monitoring

CERTIFICATIONS

- Certification in Neurophysiologic Intraoperative Monitoring (CNIM)

- CPR, Advanced HIPPA, Sterile Procedure, Infection Control, Patient Safety

AFFILIATIONS

- Member, International Society of Intraoperative Neurophysiology (**ISIN**)
- Member, American Society of Neurophysiologic Monitoring (**ASNM**)
- Member, American Society of Electroneurodiagnostic Technologists, Inc (**ASET**)
- Membership Committee, **ASNM**
- Member, American Association of Neuromuscular & Electrodiagnostic Medicine (**AANEM**).

CHARITY / VOLUNTEER WORK

1. World Spine Outreach: February 8 -15, 2020

- Helped (pro bono) provide intraoperative neurophysiologic monitoring for pediatric patients undergoing spinal deformity correction surgeries (medical missions trip).

2. Forward in Faith International Ministries (3/2006 - 12/2021)

a. Regional Chairperson of the Board of Elders and Deacons (Northeast Region)

- Planning and managing organizational functions
- Identifying talents and gifts and placing leadership in appropriate roles
- Providing support and counseling for parishioners faced with distressing situations such as bereavement, illness, loss of employment, marital disharmony, domestic violence

b. National Finance Director (USA)

- Managing an annual budget of over \$1,500,000
- Allotment of funds for overseas missions
- Payroll for clergy and ancillary staff