

SUDEEPTHA LIYANAGE

Liyanaage Ravindu Sudeeptha Liyanage

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PROFESSIONAL PROFILE

Fulbright Scholar and **PhD Candidate** in **Medical Physics** at the **Jacobs School of Medicine and Biomedical Sciences, State University of New York (SUNY) at Buffalo, USA**, specializing in Medical Imaging Physics through the Department of Radiology. **Graduate Research Assistant** with the **SUNY Research Foundation**, attached to the **Department of Neurosurgery, Canon Stroke and Vascular Research Center**, researching **high-speed angiography of cerebral vasculature and neurovascular interventions at up to 1,000 frames per second**. Completed an MS in Medical Physics, specializing in Nuclear Medicine Physics, with research focused on Monte Carlo-based precision dosimetry using PET/CT imaging at SUNY Buffalo. Also a **Lecturer** in the **Department of Radiography/Radiotherapy**, Faculty of Allied Health Sciences, University of Peradeniya, Sri Lanka, with interests in medical imaging, radiological sciences, interdisciplinary research, and innovation in medical imaging technology.

EDUCATION

University at Buffalo | The State University of New York

Buffalo, New York 14203, USA

- **Doctor of Philosophy (PhD) in Medical Physics** (August 2026 - Present)
CAMPEP Accredited (Commission on Accreditation of Medical Physics Educational Programs)
Department of Radiology, Jacobs School of Medicine and Biomedical Sciences (2024/2026)
- **Master of Science (MS) in Medical Physics** (Conferral Date: 1st June 2026)
CAMPEP Accredited (Commission on Accreditation of Medical Physics Educational Programs)
GPA: 3.92/4.00
Department of Radiology, Jacobs School of Medicine and Biomedical Sciences (2024/2026)

University of Peradeniya

Peradeniya, 20400, Sri Lanka

- **Bachelor of Science (BSc) Honours in Radiography - First Class** (Effective Date: 30th September 2021)
GPA: 3.79/4.00
Department of Radiography/ Radiotherapy, Faculty of Allied Health Sciences (2017/2021)

Kansas State University

Mid-Campus Dr. North, Manhattan, Kansas 66506, USA

- **English for Graduate Studies Pre-Academic Program** (Effective Date: 10th August 2024)
Fulbright Pre-Academic Program sponsored by the US Department of State's Bureau of Educational and Cultural Affairs
English Language Program, KSU (July 2024/August 2024)

University of Peradeniya

Peradeniya, 20400, Sri Lanka

- **Certificate in Teaching in Higher Education** (Effective Date: 10th April 2024)
Induction Program for Academic Staff
Staff Development Center, University of Peradeniya (February 2024/ April 2024)

Buddhist and Pali University of Sri Lanka

No.214, Baudhaloka Mawatha, Colombo 07, 00700, Sri Lanka

- **Diploma in Buddhism** (Effective Date: 01st October 2017)
Postgraduate and External Examination Branch (2015/2017)

University of Peradeniya

Peradeniya, 20400, Sri Lanka

- **Extensive Course in English for Professionals** (Advanced Level)
Department of English, Faculty of Arts (2016/2017)

The State University of New York at Fredonia

- **“Human Anatomy and Physiology”** an online total 24 hours course authorized by The State University of New York at Fredonia and offered through Extended Learning (2024)

Korea Advanced Institute of Science and Technology (KAIST)

- **“Electrodynamics: In-depth Solutions for Maxwell’s Equations”** an online non-credit course authorized by The Korea Advanced Institute of Science and Technology (KAIST) and offered through Coursera (2024)

University of Michigan

- **“Anatomy: Musculoskeletal and Integumentary Systems”** an online non-credit course authorized by the University of Michigan and offered through Coursera (2020)

University of Sydney

- **“Life, Health and Radiation”** an online non-credit course authorized by The University of Sydney and offered through Coursera (2020)

Collaborative Institutional Training Initiative (CITI)

- **“Responsible Conduct of Research - Biomedical Responsible Conduct of Research Course”** offered by the Collaborative Institutional Training Initiative (CITI) under the requirements set by the University at Buffalo, The State University of New York (2024)

University at Buffalo, The State University of New York

- **“Introduction to Center for Computational Research (CCR)”** offered by the University at Buffalo, The State University of New York (2024)

PROFESSIONAL EXPERIENCE/ REGISTRATION

- Lecturer at the Department of Radiography/ Radiotherapy, Faculty of Allied Health Sciences, University of Peradeniya, Sri Lanka (June 2023 to date)
- Graduate Research Assistant at the SUNY Research Foundation attached to the Cannon Stroke and Vascular Research Center, Department of Neurosurgery, State University of New York at Buffalo, United States of America (August 2026 to date)
- Temporary Lecturer at the Department of Radiography/ Radiotherapy, Faculty of Allied Health Sciences, University of Peradeniya, Sri Lanka (November 2021 to June 2023)
- Visiting Demonstrator at the Postgraduate Institute of Science, University of Peradeniya, Sri Lanka (November 2021 to June 2023)

Contribution to the *M.Sc. in Medical Physics Curriculum*

Course Code	Course Title	Contribution to the Module
PH549	Laboratory Session (Introduction to Quality Assurance of Film Processing)	Practical/ Demonstration

- Diagnostic radiographer at Medical Imaging Center, University of Peradeniya from 01st January 2023 to 17th July 2024

- **Member of the American Association of Physicists in Medicine - AAPM** (Registration Number 463785) from 11th July 2022
- **Registered radiographer** (Professionals Supplementary to Medicine) with the **Sri Lanka Medical Council** (Registration Number 0979) from 11th July 2022
- **Registered radiographer** (Professionals Supplementary to Medicine) with the **Ceylon Medical College Council** from 23rd May 2022
- **Member** of the Society of Radiological Technologists, Sri Lanka (SRTSL)
- **Member** of the College of Radiographers, Sri Lanka (CoRSL)

RESEARCH EXPERIENCE

1. **High-Speed Angiography of Cerebral Vasculature and Neurovascular Interventions at up to 1,000 Frames per Second** (Ongoing PhD Research)
 - University at Buffalo, The State University of New York, USA
 - Supervisor: Prof. Stephen Rudin
 - Duration: August 2026 to date
2. **Monte Carlo-based Radiopharmaceutical Precision Dosimetry from PET/CT Images: Digital Twin Modeling and Cross-radionuclide Surrogate Estimation** (Master's Research)
 - University at Buffalo, The State University of New York, USA
 - Supervisor: Prof. Rutao, Yao
 - Duration: August 2024 to May 2026
3. **Occupational Radiation Exposure from C-Arm Fluoroscopy During Common Orthopedic Surgical Procedures** (Undergraduate Research)
 - Department of Radiography/ Radiotherapy, Faculty of Allied Health Sciences, University of Peradeniya, Sri Lanka
 - Supervisor: Prof. P. B. Hewavithana
 - Duration: October 2020 to September 2021
4. **The Use of Weight-bearing Imaging in the Evaluation of Ankle Injuries When Patients Are Able to Stand: A Systematic Review** (Ongoing)
 - Mr. L. R. S. Liyanage, Dr. Ishanka Weerasekara, Dr. B. S. Weerakoon
 - Department of Radiography/ Radiotherapy, Faculty of Allied Health Sciences, University of Peradeniya, Sri Lanka in collaboration with Holmesglen Institute, Faculty of Health Science, Youth and Community Studies, VIC, Australia
5. **Evaluation of the Patellofemoral Malalignment and Its Effect on the Development of Secondary Disorders of the Knee Joint Using Morphometric Analysis of Magnetic Resonance Imaging in Sri Lankan Population** (2023): Co-supervision
 - Mr. T. N. V. Gunasekara, Ms. S. N. C. W. M. U. H. Jayasinghe, Ms. L. M. I. S. Jayasiripura, Mr. L. R. S. Liyanage, Prof. P. B. Hewavithana
 - Department of Radiography/ Radiotherapy, Faculty of Allied Health Sciences, University of Peradeniya, Sri Lanka
6. **Determination of Age and Sex by Morphometric Measurements of Sella Turcica Using Computed Tomography in a Population of Sri Lanka** (2023): Co-supervision
 - Mr. M. Sarujan, Mr. R. Sathursan, Mr. P. R. S. C. Silva, Mr. L. R. S. Liyanage, Dr. M. A. J. C. Marasinghe
 - Department of Radiography/ Radiotherapy, Faculty of Allied Health Sciences, University of Peradeniya, Sri Lanka

7. **Relationship of Renal Cortical Volume with Estimated Glomerular Filtration Rate, Age, and Body Mass Index Using Contrast-Enhanced Computed Tomography in a Population of Sri Lanka** (2024): Co-supervision
 - Mr. P. Shankeerthen, Ms. S. Sujitha, Mr. K. A. M. D. Somarathine, Mr. L. R. S. Liyanage, Dr. M. A. J. C. Marasinghe
 - Department of Radiography/ Radiotherapy, Faculty of Allied Health Sciences, University of Peradeniya, Sri Lanka
8. **Descriptive Analysis of Abdominal Aortic Morphology Using Contrast-enhanced Computed Tomography in a Population of Sri Lanka** (2025): Co-supervision
 - Ms. E. M. M. S. Thilakarathna, Ms. K. Thilakshana, Ms. M. Vaksala, Mr. L. R. S. Liyanage, Dr. M. A. J. C. Marasinghe
 - Department of Radiography/ Radiotherapy, Faculty of Allied Health Sciences, University of Peradeniya, Sri Lanka

RESEARCH PUBLICATIONS

Thesis/ Dissertation:

1. Liyanage, L. R. S. (2026). Monte Carlo-based radiopharmaceutical precision dosimetry from PET/CT images: Digital twin modeling and cross-radionuclide surrogate estimation [Master's thesis, University at Buffalo, The State University of New York]. ProQuest Dissertations & Theses Global. <https://www.proquest.com/pqdtlocal1007354/dissertations-theses/monte-carlo-based-radiopharmaceutical-precision/docview/3353105751>
2. Liyanage, L. R. S., Wickramaratne, H. T., Kalpana, U., & Hewavithana, P. B. (2021). Evaluation of the Occupational Radiation Exposure from C-arm Fluoroscopy during Common Orthopaedic Surgical Procedures: DAP-based Dose Simulation Method [Bachelor's thesis, University of Peradeniya].

Full Paper Publications:

1. Liyanage, S., et al. (2022). Evaluation of the Occupational Radiation Exposure from C-arm Fluoroscopy during Common Orthopaedic Surgical Procedures: DAP-based Dose Simulation Method. Ceylon Medical Journal, 67(4), 164–168. <http://doi.org/10.4038/cmj.v67i4.9745>
2. Liyanage, L. R. S., et al. (2023). Assessment of Radiation Protection Measures to Minimize Occupational Radiation Exposure from C-arm Fluoroscopy During Common Orthopaedic Surgical Procedures. Sri Lankan Journal of Health Sciences, 1(2), 9–15. <https://doi.org/10.4038/sljhs.v1i2.47>

Conference Presentations and Proceedings/ Abstracts:

1. Liyanage LRS. Digital twin approach to PET/CT image-driven Monte Carlo precision dosimetry in theranostics. Oral presentation at: Upstate New York Association of Physicists in Medicine (UNYAPM) Fall Meeting 2025; December 6, 2025.
2. Liyanage LRS. Monte Carlo-based personalized dosimetry platform for radiopharmaceutical theranostic agents. Poster presentation at: Graduate Student Research Day 2025, University at Buffalo, The State University of New York; September 25, 2025.

3. Liyanage, L. R. S. et al. (2022) ‘Evaluation of the occupational radiation exposure from C-arm fluoroscopy during common orthopaedic surgical procedures: DAP based dose simulation method’, in International Research Conference in Health Sciences 2022. Faculty of Allied Health Sciences, University of Sri Jayewardenepura, p. 103. Available at: <http://health.sjp.ac.lk/rchs/#>

HONORS AND AWARDS

- **Fulbright Masters Award 2023/2024:** Only principal awardee in STEM among 5 awardees from Sri Lanka receiving the Fulbright Scholarship offered through the US Department of State’s Bureau of Educational and Cultural Affairs to pursue an MS in Medical Physics program at The University at Buffalo, The State University of New York, USA
- **Young Investigators Award – Second Place,** Upstate New York Association of Physicists in Medicine (UNYAPM) Fall Meeting 2025, awarded for the oral research presentation “Digital Twin Approach to PET/CT Image-Driven Monte Carlo Precision Dosimetry in Theranostics,” presented on December 6, 2025
- **University Gold Medalist: Peradeniya University Gold Medal, Faculty of Allied Health Sciences for the Excellence in Scholastic and Extra-Mural Excellence at the General Convocation 2020**
- Selected for JENESYS 2020 program (Japan East Asia Network of Exchange for Students and Youths) as one of the eight students representing Sri Lanka
- Best International Model United Nations (IMUN) Intern at IMUN Internship (2021)
- Dean’s List of Academic Excellence - Faculty of Allied Health Sciences, University of Peradeniya
 - 2017: Year 1 Semester 2, 2018: Year 2 Semester 1, 2019: Year 3 Semester 1, 2020: Year 3 Semester 2, 2021: Year 4 Semester 1, 2021: Year 4 Semester 2
- 1st Place in the Quiz Competition on World Radiography Day 2018, Faculty of Allied Health Sciences, University of Peradeniya (2018)

POSITIONS AND MEMBERSHIPS

- Department Representative for the Internal Quality Assurance Cell - Faculty of Allied Health Sciences, University of Peradeniya (2023/2024)
- Department Representative for the Orientation Organizing Committee - Faculty of Allied Health Sciences, University of Peradeniya (2023/2024)
- President of the Society of Medical Radiation Sciences, University of Peradeniya (2018/2019)
- Official Campus Ambassador at International Model United Nations (IMUN) (2021)
- Student Representative of the Faculty of Allied Health Sciences for the University Arts Council, University of Peradeniya (2018/2019)
- Student Representative of the Faculty of Allied Health Sciences for the University Quality Assurance Circle, University of Peradeniya (2019)
- Student Ambassador of the Faculty of Allied Health Sciences for the University Career Guidance Unit, University of Peradeniya (2018/2021)
- Committee Member of the Society of Medical Radiation Sciences, University of Peradeniya (2017/2018)
- A Founder Member of the Robarosiya Society, University of Peradeniya
- A Founder Member of Vibhava Literature Society, University of Peradeniya

CONFERENCES AND WORKSHOPS (SELECTED/ PARTICIPATED)

- Fulbright Pre-academic Program at Kansas State University, Manhattan, Kansas sponsored by the US Department of State’s Bureau of Educational and Cultural Affairs (July/ August 2024)
- JENESYS (Japan East Asia Network of Exchange for Students and Youths) SAARC 2020 online program from March 11th to March 16th, 2022 conducted by the Japan International Cooperation Center

- JENESYS (Japan East Asia Network of Exchange for Students and Youths) SAARC 2020 online pre-exchange webinar on “Health Care” (10th April 2021)
- First international workshop (Online Webinar) for celebrating World Radiography Students Day by The World Radiography Educational Trust Foundation WRETf (19th November 2020)
- First National Workshop on Radiological Sciences organized by the Department of Nuclear Science of the Faculty of Science, University of Colombo (2nd March 2019)
- International Model United Nations (IMUN) Online Conference 60.0; participated as the delegate of the South African Republic to represent the committee of United Nations Women at the conference (from June 5th to 6th, 2021)
- Online webinar on “Basic Physics in Medical Imaging” organized by Government Medical Physicists’ Association (16th December 2021)
- International Workshop (Online Webinar) on “The Radiologic Technologist Accepting the Challenges of Today’s Cath Lab” by the International Society of Radiographers and Radiological Technologists ISRRT (2020)
- “X-PERTS-2019” One Day Workshop on Radiological Sciences organized by the Society of Medical Radiation Sciences, University of Peradeniya (2019)
- Workshop on “Counseling for a Successful Future” conducted by the Career Guidance Unit, University of Peradeniya
- Presented as the invited main moderator of the online webinar series organized by the “Agro Beatz”, Horticulture Society of Faculty of Agriculture, University of Jaffna (2021)
- Presented as a guest speaker at the new entrants’ orientation program of the Faculty of Allied Health Sciences, University of Peradeniya (2021, 2022, 2023, 2024, and 2025)
- Presented as the guest of honor at the World Radiography Day Celebration 2022 of the District General Hospital, Mannar (2022)
- Online webinar on “AI and Its Role in Radiology and Education” organized by Medical Imaging Institute, Guerbet Asia Pacific Ltd. (23rd March 2023)

REFEREES

1. **Prof. U. J. M. A. L. Jayasinghe**
(BSc, MS, PhD)
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Department of Radiography/ Radiotherapy
Faculty of Allied Health Sciences
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2. **Prof. P. B. Hewavithana**
(MBBS, MD) (Radiology)
Professor Emeritus
Department of Radiology
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3. **Prof. Stephen Rudin**
(BSc, MS, PhD, FAAPM, FSPiE, FACR, DABR, CHP, NYS Licensed Medical Physicist)
SUNY Distinguished Professor
Departments of Radiology, Neurosurgery, Mechanical and Aerospace Engineering, Electrical Engineering, and Biomedical Engineering; Director, Div. Radiation Physics; Director, UB Medical Physics Program; Co-Director, Canon Stroke and Vascular Research Center, Clinical Translational Research Center, State University of New York at Buffalo, USA
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