



LUKMANDA EVAN LUBIS

CURRICULUM VITAE

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Education

Period	Institution	Title awarded
2018-2021	Universitas Indonesia	Doctor, Dr. (Ph.D.)
2012-2014	Universitas Indonesia	Magister Sains, M.Si. (M.Sc.)
2007-2012	Universitas Indonesia	Sarjana Sains, S.Si. (B.Sc.)

Professional information

Period	Institution	Position
May 2021-present	Universitas Indonesia Hospital	Medical Physicist (consultant)
June 2018-present	Center for Medical Physics and Biophysics UI	Education and Training Manager
October 2018-present	FMIPA Universitas Indonesia	Lecturer
June 2015-present	Center for Medical Physics and Biophysics UI	Compliance Test Expert
July 2013-June 2015	Center for Medical Physics and Biophysics UI	Compliance Tester Personnel

Organizational affiliations and memberships history

Period	Organization/Society	Role
2022-present	South-East Asian Federation of Organization for Medical Physics (SEAFOMP)	Awards and honors committee member
2022-present	European Federation of Organization for Medical Physics (EFOMP)	Individual associate member
2022-present	Indonesian Society for Radiation Protection (<i>Perkumpulan Ahli Proteksi Radiasi Indonesia, APRI</i>)	Regular member
2019-present	Indonesian Association of Physicists in Medicine (<i>Aliansi Fisikawan Medik Indonesia, AFISMI</i>)	Secretary general / regular member
2015-2019	Indonesian Association of Physicists in Medicine (<i>Aliansi Fisikawan Medik Indonesia, AFISMI</i>)	Deputy secretary general / regular member
2015-present	American Association of Physicists in Medicine (AAPM)	International affiliate

Certifications

Year	Competency	Issued by
2017	Associate Medical Physicist	AFISMI, AIPFMI, UI
2018	Medical Physicist Registration	Indonesian Ministry of Health
2017	Medical X-ray Compliance Test Expert	Indonesian Nuclear Energy Regulatory Agency

Scientific activities

As participant/presenter

- 8th South East Asian Congress of Medical Physics (8th SEACOMP), Bandung, Indonesia, 10-13 December 2010
- 9th South East Asian Congress of Medical Physics (9th SEACOMP), Manila dan Bohol, Filipina, 16-19 November 2011
- IAEA Workshop on Advanced Technology on Radiotherapy, MRCCC Siloam Hospitals Jakarta, Indonesia, 24-28 February 2012
- 2012 College on Medical Physics, The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italia, 10-28 September 2012
- 12th Asia-Oceania Congress of Medical Physics and 10th South East Asian Congress of Medical Physics (12th AOCMP and 10th SEACOMP), Chiang Mai, Thailand, 11-14 December 2012
- 4th Khon Kaen MRI School on Magnetic Resonance Imaging and Spectroscopy, Khon Kaen, Thailand, 13-16 August 2013
- Lokakarya Dosimetri dalam Radiologi Diagnostik, Depok, 13-15 Mei 2014
- International Workshop on Modern Clinical Radiotherapy 2014, Jakarta, 27-30 August 2014
- IAEA-BATAN-ICTP-UI Regional Workshop on Image Processing for Medical Physicists, Jakarta, 8 – 12 September 2014
- 14th Asia-Oceania Congress of Medical Physics and 12th South East Asian Congress of Medical Physics (14th AOCMP and 12th SEACOMP), Ho Chi Minh, Vietnam, 23-25 October 2014
- 2015 IUPESM World Congress on Medical Physics and Biomedical Engineering, Toronto, Canada, 7-12 June 2015
- 13th South East Asian Congress of Medical Physics (13th SEACOMP), Yogyakarta, Indonesia, 10-12 December 2015
- ACOMP Workshop on Interventional Radiology: Safety, Optimization, Dosimetry, and Quality Control, Kuala Lumpur, Malaysia, 5-6 August 2016
- IAEA RAS-6081 Workshop, Amman, Jordan, 15-19 October 2017
- EUTEMPE-NET module MPE-06: the development of advanced QA protocols and testing radiological devices, Leuven, Belgium, 13-17 November 2017
- 2018 IUPESM World Congress on Medical Physics and Biomedical Engineering, Prague, Czech Republic, 3-8 June 2018
- 18th Asia-Oceania Congress of Medical Physics and 16th South East Asian Congress of Medical Physics (18th AOCMP and 16th SEACOMP), Kuala Lumpur, Malaysia, 11-14 November 2018
- 17th South East Asian Congress of Medical Physics and 3rd Pertemuan Ilmiah Tahunan Fisika Medis dan Biofisika (PIT-FMB), Denpasar, Indonesia, 08-10 August 2019
- European Congress of Radiology 2020, online, 15-19 July 2020
- International Conference and School on Physics in Medicine and Biosystem (ICSPMB), online, 06-08 November 2020
- Radiological Society of North America (RSNA) 106th Scientific Assembly and Annual Meeting 2020, online, 29 November – 05 December 2020

As invited speaker

- Lokakarya Dosimetri dalam Radiologi Diagnostik, Depok, 13-15 Mei 2014
- 24th Annual Scientific Meeting of Indonesian Heart Association (ASMIHA), Jakarta, Indonesia, 10-12 April 2015

Scientific activities

- Pelatihan BAPETEN: Proteksi Radiasi pada Radiologi Intervensional, Jakarta, Indonesia, 21 – 23 September 2015
- Diklat Penyetaraan Fisikawan Medik Spesialis (KKNI Level 8), Depok, Indonesia, 25-29 Mei 2016
- Diklat Penyetaraan Fisikawan Medik Umum (KKNI Level 7) Gel.1, Depok, Indonesia, 29-31 July 2016
- Workshop QA/QC dan Perekaman Dosis Pasien Peralatan Radiagnostik Berbasis Sinar-X dan Intervensional, RSUPN dr. Cipto Mangunkusumo, Jakarta, Indonesia, 3-5 November 2016
- Pertemuan Ilmiah Tahunan Fisika Medis dan Biofisika (PIT-FMB) 2017, Depok, Indonesia, 10-13 August 2017
- Seminar Nasional dan Workshop Fisikawan Medik 2017, Makassar, 30 September 2017
- Seminar dan Workshop Fisika Medik Universitas Nasional, Jakarta, 06 Januari 2018
- Seminar dan Workshop Radiologi Diagnostik dan Intervensional, Jakarta, 12-13 May 2018
- Program Pengembangan Keprofesian Berkelanjutan Tenaga Kesehatan, Kementerian Kesehatan RI, Denpasar, Bali, 25-27 November 2018
- The 9th Indonesian Vascular Conference (Inavasc IX) in conjunction with 5th Indonesian Venous Forum, Tangerang, 06-09 December 2018
- UI/ISEP-AAPM/ACOMP Imaging Physics Course 2018 (IPC 2018), Depok, 04-07 October 2018
- Workshop E-Learning dan Keprofesian Fisikawan Medik, Depok, 02 November 2019
- Artificial Intelligence untuk Deteksi Pneumonia COVID-19, Depok (online), 29 April 2020
- Webinar Fisikawan Medik AFISMI DPW Jawa Barat (Seri 1), 20 Februari 2021
- Webinar Fisikawan Medik AFISMI DPW Jawa Barat (Seri 2), 27 Maret 2021

Scholarships and awards

- Beasiswa Unggulan Pascasarjana, Direktorat Jenderal Pendidikan Tinggi, Kementerian Pendidikan dan Kebudayaan, Republik Indonesia (2012-2014)
- ICTP Travel Award (September 2012)
- Best Oral Presentation, 14th Asia-Oceania Congress of Medical Physics and 12th South East Asian Congress of Medical Physics (14th AOCMP and 12th SEACOMP), Ho Chi Minh, Vietnam
- IAEA Fellowship, Vienna, Austria (October – November 2015)
- IOMP 2015 Travel Award (June 2015)
- Penghargaan Ilmiah Dosen/Peneliti Universitas Indonesia 2015
- ACOMP Travel Award (August 2016)
- EUTEMPE-RX Travel Award (November 2017)
- Best Poster Presentation, 17th South-East Asian Congress of Medical Physics, Denpasar, Indonesia
- SEAFOMP (South East Asian Federation of Organizations on Medical Physics) Young Leader Award 2020

Research grants/projects

Period	Funder	Grant name/scheme	Role
2015	Universitas Indonesia	Hibah Riset Awal	Principle investigator
2015-2018	International Atomic Energy Agency	CRP E24020	Co-Principle investigator
2018	Universitas Indonesia	PITTA Grant	Principle investigator
2021-2025	International Atomic Energy Agency	CRP E24024	Principle investigator

Authored/co-authored books and recommendations

Year	Title	Published by
2018	Dosimetri dalam Radiologi Diagnostik	KBI Fisika Medis dan Biofisika, Fisika UI

Authored/co-authored books and recommendations

2020	Rekomendasi AFISMI No. 1: Penggunaan Radiasi Pengion dalam Diagnosis dan Penanganan COVID-19	Aliansi Fisikawan Medik Indonesia
2020	Standar Profesi Fisikawan Medik	Sekretariat Konsil Tenaga Kesehatan Indonesia, Kementerian Kesehatan RI
2021	Medical Physics During the COVID-19 Pandemic (chapter 16)	CRC Press

Scientific publications (sorted from more recent to older)

- 1 Lubis LE, Basith RA, Hariyati I, et al. Novel phantom for performance evaluation of contrast-enhanced 3D rotational angiography. *Phys Medica*. 2021;90:91-98. doi:10.1016/J.EJMP.2021.09.002
- 2 Lubis LE, Cokrokusumo HB, Basith RA, Lestariningsih I, Prajitno P, Soejoko DS. Noise reduction of three-dimensional rotational angiography (3DRA) images using residual encoder-decoder convolutional neural network (RED-CNN). In: AIP Conference Proceedings. Vol 2346. AIP Publishing LLC AIP Publishing ; 2021:040007. doi:10.1063/5.0048077
- 3 Delis H, Homolka P, Chapple CL, et al. Developing and implementing a multi-modality imaging optimization study in paediatric radiology: Experience and recommendations from an IAEA coordinated research project. *Phys Medica*. 2021;82:255-265. doi:10.1016/j.ejmp.2021.02.009
- 4 Lubis LE, Soejoko DS. Optimisasi dosis dan kualitas citra pada radiologi diagnostik : langkah-langkah , tips , dan panduan praktis. *J Med Phys Biop*. 2020;7(1):22-31. Accessed April 8, 2021. <http://jmpb.org/index.php/jmpb/article/view/333>
- 5 Ramadhan MM, Faza A, Lubis LE, et al. Fast and accurate detection of Covid-19-related pneumonia from chest X-ray images with novel deep learning model. Published online May 9, 2020. Accessed November 20, 2020. <http://arxiv.org/abs/2005.04562>
- 6 Lubis LE, Hariyati I, Ryangga D, Mu'minah IAS, Mart T, Soejoko DS. Construction and Evaluation of a Multipurpose Performance Check Phantom for Computed Tomography. *Atom Indones*. 2020;46(2):69. doi:10.17146/aij.2020.1004
- 7 Shilfa SN, Gani MRA, Mu'minah IAS, Ardiansyah F, Lubis LE, Soejoko DS. Pengukuran MTF (Modulation Transfer Function) berdasarkan LSF (Line Spread Function) dan PSF (Point Spread Function) pada pesawat PET/CT dan SPECT/CT. *J Med Phys Biophys*. 2019;6(1):16-25. Accessed October 10, 2019. <http://jmpb.org/index.php/jmpb/article/view/317>
- 8 Ardyanti EA, Gani MRA, Lubis LE, Soejoko DS. Pengaruh Antiscatter grid Terhadap Dosis dan Kualitas Citra pada Prosedur Radiologi Intervensional. *J Med Phys Biophys*. 2019;6(1):7-15. Accessed October 10, 2019. <http://jmpb.org/index.php/jmpb/article/view/312>
- 9 Lestariningsih I, Lubis LE, Nurlily, Soejoko DS. Effect of pitch on CT image quality based on SNR evaluation using in house phantom. *J Phys Conf Ser*. 2019;1248:012027. doi:10.1088/1742-6596/1248/1/012027
- 10 Rahman INF, Fajar MI, Aini N, et al. Using in-house quick-QC phantom to characterize computed and direct digital radiography: a preliminary study. *J Phys Conf Ser*. 2019;1248:012024. doi:10.1088/1742-6596/1248/1/012024
- 11 Apriliastri NN, Samiyah, Bawono S, et al. Optimization of simulated cranial, thorax, and abdominal examination in paediatric digital radiography. *J Phys Conf Ser*. 2019;1248:012023. doi:10.1088/1742-6596/1248/1/012023
- 12 Hariyati I, Hani ADF, Craig LA, Lestariningsih I, Lubis LE, Soejoko DS. Optimization of digital radiography system using in-house phantom: preliminary study. *J Phys Conf Ser*. 2019;1248:012021. doi:10.1088/1742-6596/1248/1/012021
- 13 Lubis LE, Jundi AF, Susilo A, Evianti A, Soejoko DS. Local dose survey on paediatric multi-detector CT: A preliminary result. In: IFMBE Proceedings. Vol 68. ; 2019. doi:10.1007/978-981-10-9023-3_105

Scientific publications (sorted from more recent to older)

- 14 Pawiro S. A. and Lubis LE and OAN and SDS. Overseeing the Growth of Medical Physics: Indonesia Case. In: Lhotska Lenka and Sukupova L and LI and IGS, ed. World Congress on Medical Physics and Biomedical Engineering 2018. Springer Singapore; 2019:859-863.
- 15 Pawiro SA, Lubis LE, Oktavianto AN, Soejoko DS. Overseeing the growth of medical physics: Indonesia case. In: IFMBE Proceedings. Vol 68. ; 2019. doi:10.1007/978-981-10-9035-6_159
- 16 Lubis LE, Bayuadi I, Bayhaqi YA, et al. Radiation Dose fFrom Dental Radiography in Indonesia: A Five-Year Survey. Radiat Prot Dosimetry. Published online 2018:ncy123. doi:10.1093/rpd/ncy123
- 17 Harfah H, Lubis LE, Wigati KT, Soejoko DS. Metode line profile: pendekatan terhadap evaluasi kuantitatif citra Computed Radiography thoraks pada pasien pediatrik. J Med Phys Biophys. 2018;5(1):155-172. Accessed April 19, 2018. <http://jmpb.org/index.php/jmpb/article/view/315>
- 18 Yuliani S, Lubis LE, Nurlely N, Soejoko DS. Kuantisasi dan analisis citra computed radiography pada pemeriksaan sinus paranasal pasien pediatrik dengan metode line profile. J Med Phys Biophys. 2018;5(1):139-154. Accessed April 19, 2018. <http://jmpb.org/index.php/jmpb/article/view/316>
- 19 Lubis LE, Craig LA, Bosmans H, Soejoko DS. Task-based phantom evaluation of cardiac catheterization imaging modes. Phys Medica. 2018;46:114-123. doi:10.1016/j.ejmp.2018.02.002
- 20 Sari NLK, Prajitno P, Lubis LE, Soejoko DS. Computer Aided Diagnosis (CAD) for mammography with Markov Random Field method with Simulated Annealing optimization. J Med Phys Biophys. 2017;4(1):85-94. Accessed April 19, 2018. <http://jmpb.org/index.php/jmpb/article/view/291>
- 21 Purwaningsih S, Lubis LE, Pawiro SA, Soejoko DS. Measurement of computed tomography dose profile with pitch variation using Gafchromic XR-QA2 and thermoluminescence dosimeter (TLD). J Phys Conf Ser. 2016;694(1):012046. doi:10.1088/1742-6596/694/1/012046
- 22 Mubarak S, Lubis LE, Pawiro SA. Parameter-based estimation of CT dose index and image quality using an in-house androidTM-based software. J Phys Conf Ser. 2016;694(1):012037. doi:10.1088/1742-6596/694/1/012037
- 23 Lubis LE, Badawy MK. Measuring radiation dose to patients undergoing fluoroscopically-guided interventions. J Phys Conf Ser. 2016;694(1):012049. doi:10.1088/1742-6596/694/1/012049
- 24 Round WH, Jafari S, Kron T, et al. Erratum to: Brief histories of medical physics in Asia-Oceania [Australas Phys Eng Sci Med DOI 10.1007/s13246-015-0342-9]. Australas Phys Eng Sci Med. 2015;38(3). doi:10.1007/s13246-015-0370-5
- 25 Lubis LE, Bayuadi I, Pawiro SA, Ng K-H, Bosmans H, Soejoko DS. Optimization of dose and image quality of paediatric cardiac catheterization procedure. Phys Medica. 2015;31(7):659-668. doi:10.1016/j.ejmp.2015.05.011
- 26 Lubis LE, Aida N, Pratiwi NG, Pawiro SA, Wigati KT, Soejoko DS. Occupational Dose Measurement in an Interventional Radiology Facility in Jakarta. In: Jaffray DA, ed. World Congress on Medical Physics and Biomedical Engineering, June 7-12, 2015, Toronto, Canada. Volume 51. Springer International Publishing; 2015:775-777. doi:10.1007/978-3-319-19387-8_191
- 27 Soejoko DS, Pawiro SA, Lubis LE. Medical Physics in Indonesia: Current Status and Plans. In: Jaffray DA, ed. World Congress on Medical Physics and Biomedical Engineering, June 7-12, 2015, Toronto, Canada. Volume 51. Springer International Publishing; 2015:1601-1603. doi:10.1007/978-3-319-19387-8_389
- 28 Round WH, Jafari S, Kron T, et al. Brief histories of medical physics in Asia-Oceania. Australas Phys Eng Sci Med. Published online April 18, 2015. doi:10.1007/s13246-015-0342-9
- 29 Lubis LE, Bayuadi I, Pawiro SA, Soejoko DS. Optimization of Paediatric Cardiac Catheterization Using Figure of Merit (FOM) as Parameter. In: 14th Asia-Oceania Congress of Medical Physics (AOCMP) and 12th South-East Asian Congress of Medical Physics (SEACOMP). ; 2014.
- 30 Lubis LE, Taruno WP, Soejoko DS. Effects of electric field AC frequency on contact dermatitis lesion regression: a preliminary study. In: Abstracts of the 2011 South East Asian Congress of Medical Physics (SEACOMP 2011). Vol 35. ; 2012:365-387. doi:10.1007/s13246-012-0154-0

Scientific publications (sorted from more recent to older)

- ³¹ Bayhaqi YA, Lubis LE, Susila IP, Soejoko DS. Volumetric reconstruction from CT images for treatment planning of external radiotherapy. In: Abstracts of the 2011 South East Asian Congress of Medical Physics (SEACOMP 2011). Vol 35. Springer Berlin Heidelberg; 2012:365-387. doi:10.1007/s13246-012-0154-0
- ³² Lubis LE, Soejoko DS. Comparison between Fermi-Eyges (Hogstrom Model) Algorithm Calculation and Measurement on Percentage Depth Dose of Electron Beam. In: 12th Asia-Oceania Congress of Medical Physics (AOCMP) and 10th South-East Asian Congress of Medical Physics (SEACOMP). ; 2012:245-248.
- ³³ Soejoko DS, Lubis LE. How to Enhance Development of Medical Physics in Indonesia. In: Engineering and Physical Sciences in Medicine Conference; 2012.