

CURRICULUM VITAE

Slade J. Klawikowski PhD

**Assistant Professor
Department of Radiation Oncology**

OFFICE ADDRESS:

Froedtert Specialty Clinics
9200 W Wisconsin Ave
Milwaukee, WI 53226

EDUCATION:

1996 BS in Physics and Mathematics, University of Wisconsin-Stevens Point, Stevens Point, WI
2003 PhD in Physics, University of Wisconsin-Madison, Madison, WI

POSTGRADUATE TRAINING AND FELLOWSHIP APPOINTMENTS:

06/2011 - 07/2014 Postdoctoral Fellowship, Department of Radiation Physics-Patient Care, The University of Texas MD Anderson Cancer Center, Houston, TX
2014 - 07/2017 Medical Physics Residency, Medical College of Wisconsin, Milwaukee, WI

FACULTY APPOINTMENTS:

07/01/2022 - Present Assistant Professor, Department of Radiation Oncology, Medical College of Wisconsin, Milwaukee, WI

HOSPITAL STAFF PRIVILEGES:

07/2017 - Present Medical Physicist, Radiation Oncology, Froedtert West Bend Hospital, 3200 Pleasant Valley Road, West Bend, WI 53095
07/2017 - Present Medical Physicist, Radiation Oncology, Milwaukee VA Medical Center, 5000 W National Ave, Milwaukee, WI 53295
07/2017 - Present Medical Physicist, Radiation Oncology, Froedtert Menomonee Falls Hospital, W180N8085 Town Hall Road, Menomonee Falls, WI 53051
07/2017 - Present Medical Physicist, Radiation Oncology, Froedtert Hospital, 9200 W Wisconsin Ave, Milwaukee, WI 53226

SPECIALTY BOARDS AND CERTIFICATION:

<u>Board Certified</u>	<u>Issue Date</u>	<u>Expiration</u>
Therapeutic Medical Physics	04/05/2022	None

AWARDS AND HONORS:

07/01/2021 - 06/30/2022 Award of Excellence Medical Physics Certificate Program Lecturer , Radiation Oncology Department
07/01/2023 - 06/30/2024 Award of Excellence Medical Physics Certificate Program Lecturer, Radiation Oncology Department

MEMBERSHIPS IN HONORARY AND PROFESSIONAL SOCIETIES:

2012 - Present American Association of Physicists in Medicine (AAPM) (Member)

LOCAL/REGIONAL APPOINTED LEADERSHIP AND COMMITTEE POSITIONS:

2016 - 2017 Member, Medical Physics Residency Educational Committee, Medical College of Wisconsin

2019 - Present Committee Member, Standardization Subcommittee, FH/MCW Radiation Oncology
01/01/2023 - Present Radiation Oncology Representative, Continuing Professional Development, Medical
College of Wisconsin

RESEARCH GRANTS/AWARDS/CONTRACTS/PROJECTS:

Pending

Peer Review

Title: Identifying early markers of radiation therapy-induced cardiotoxicity in lung cancer and studying effects of radiation dose distribution on regional cardiac function using an optimized short MRI scan (eBridge: FP00015389)

PI: El-Sayed Ibrahim

INVITED LECTURES/WORKSHOPS/PRESENTATIONS:

National

Klawikowski SJ, Yang J, Grant R, Ibbott G, Optimizing Gamma Knife Quality Control: Output Factor and 3D Gamma Analysis Using PRESAGE Dosimeters (Poster Presentation), American Radium Society Annual Meeting, Phoenix, AZ, 04/2013

Klawikowski S, Tai A, Ates O, Ahunbay E, Li XA, A fast 4D IMRT/VMAT planning method based on segment aperture morphing (Oral Presentation), American Association of Physicists in Medicine Annual Meeting, Charlotte, NC, 08/2015

Klawikowski S, Christian J, Schott D, Zhang M, Li, XA, Development of a Radiomics-based Pancreatic Cancer Radiation Therapy Response Prediction Model (Pilot Study) (Oral Presentation), American Association of Physicists in Medicine Annual Meeting, Anaheim, CA, 08/2016

Klawikowski S, Christian J, Schott D, Li XA, Quantitative Imaging Biomarker Reproducibility Testing in Pancreatic Cancer CT Texture Analysis Study (Oral Presentation), American Association of Physicists in Medicine Annual Meeting, Denver, CO, 08/2017

Imaging SNAP Oral: Diagnostic and Interventional Imaging: Imaging of Phantoms, Materials, and Anatomy & Physiology, AAPM 2024 Session Co-Moderator, Los Angeles, CA, 07/22/2024

Regional

Christensen EN, Hunter L, Stingo F, Klawikowski SJ, Court LE, Determination of CT texture variability among several CT scanners (Oral Presentation), American Association of Physicists in Medicine Annual Meeting, Indianapolis, IN, 08/2013

Klawikowski SJ, Yang J, Adamovics J, Ibbott GS, Gamma Knife Perfexion Output Factor Measurements Using PRESAGE 3D Optical Dosimeters (Poster Presentation), American Association of Physicists in Medicine Annual Meeting, Indianapolis, IN, 08/2013

MCW TEACHING ACTIVITIES:

Resident and Fellow Education

2017 - Present Lecturer, Medical Physics Certificate Program Physics Course. Responsible for teaching 10 lectures within the 2-year Physics course rotation to both medical residents and physics postdoctoral fellows.

2017 - Present Medical Physics Resident Program Special Procedures Rotation Instructor: TSI and TBI

2018 - Present Preceptor, Medical Physics Certificate Program Treatment Planning labs. Responsible for preparing and teaching a hands-on 5 day course on treatment planning.

EXTRAMURAL TEACHING:

Medical Student Education

2017 - Present Froedtert Hospital, Preceptor, Treatment Planning Course for RTT Internship. Responsible for preparing and teaching a hands-on 5 day course on treatment planning.

- 2017 - Present Froedtert Hospital, Primary physicist, RTT Student Internship Program. Responsible for teaching 12 lectures annually and overseeing physics component of RTT training during internship year.
- 2017 - Present Froedtert Hospital, Preceptor, RTT Internship OSL lab. Responsible for creating and teaching functionality of OSL in treatment delivery.
- 09/10/2024 - Present UW La Crosse, Teaching RT 431 Physics Course virtually to 10, off-campus, UW La Crosse Radiation Therapy students. students

MCW STUDENTS, FACULTY, RESIDENTS AND CLINICAL/RESEARCH FELLOWS MENTORED:

Undergraduate Students

- 01/01/2017 - 06/30/2017 James Christian, Research Mentorship, Medical College of Wisconsin, Co-author of AAPM Abstract

Residents

- 07/01/2018 - 12/31/2018 Sara Lim, PhD, Preceptor, TBI/TSI Special Procedures rotation, Medical College of Wisconsin
- 07/01/2019 - 12/31/2019 Diane Schott, PhD, Preceptor, TBI/TSI Special Procedures Rotation, Medical College of Wisconsin
- 07/01/2021 - 12/31/2021 Haidy Nasief, PhD, Preceptor, TBI/TSI Special Procedures Rotation, Medical College of Wisconsin
- 01/01/2022 - 06/30/2022 Ying Zhang, PhD, Preceptor, TBI/TSI Special Procedures Rotation, Medical College of Wisconsin

BIBLIOGRAPHY

Refereed Journal Publications/Original Papers

1. Beeken RB, Haase AT, Hoerman BH, and **Klawikowski SJ**. The Effect of Non-Stoichiometry in Ag₃SBr, Solid State Ionics, 509: 113-115, 1998.
2. Beeken RB, Haase AT, Hoerman BH, **Klawikowski SJ**. The effect of non-stoichiometry in Ag₃SBr Solid State Ionics. 1 December 1998;113-115:509-513.
3. Walch B, Thumm U, Stockli M, Cocke CL, **Klawikowski S**. Angular Distributions of Projectiles Following Electron Capture from C60 by 2.5-keV Ar⁸⁺, Physical Review A, 58: 1261-1266, 1998.
4. Keating BG, O'Dell CW, de Oliveira-Costa A, **Klawikowski S**, Stebor N, Piccirillo L, Tegmark M, Timbie PT. A limit on the large angular scale polarization of the cosmic microwave background, Astrophysical Journal, Letters, v 560, n 1, pt.2, p L1-4, 10 October, 2001.
5. Piccirillo L, dall'Oglio G, Farese P, Gundersen J, Keating B, **Klawikowski S**, Knox L, Levy A, Lubin P, O'dell C, Timbie P, Ruhl J. COMPASS: A 2.6 m telescope for CMBR polarization studies, AIP Conference Proceedings, Volume 616, pp. 183-186, 2002.
6. Farese PC, Dall'Oglio G, Gundersen JO, Keating BG, **Klawikowski S**, Knox L, Levy A, Lubin PM, O'Dell CW, Peel A, Piccirillo L, Ruhl J, Timbie PT. COMPASS: an instrument for measuring the polarization of the CMB on intermediate angular scales, New Astronomy Reviews, Volume 47, Issue 11-12, p. 1033-1046, December, 2003.
7. Farese PC, Dall'Oglio G, Gundersen JO, Keating BG, **Klawikowski S**, Knox L, Levy A, Lubin PM, O'Dell CW, Peel A, Piccirillo L, Ruhl J, Timbie PT. COMPASS: An upper limit on cosmic microwave background polarization at an angular scale of 20', Astrophysical Journal, v 610, n 2, pt.1, p 625-34, August, 2004.
8. **Klawikowski SJ**, Zeringue C, Wootton LS, Ibbott GS, Beddar SA. Preliminary evaluation of the dosimetric accuracy of the in vivo plastic scintillation detector OARtrac system for prostate cancer treatments. Phys Med Biol. 2014 May 7;59(9):N27-36. PMID: PMC4083835
9. Christensen E, Hunter L, Stingo F, **Klawikowski S**, Court L. TU?C?103?08: Determination of CT Texture Variability Among Several CT Scanners Medical Physics. June 2013;40(6):438.
10. **Klawikowski SJ**, Yang JN, Adamovics J, Ibbott GS. PRESAGE 3D dosimetry accurately measures Gamma Knife output factors. Phys Med Biol. 2014 Dec 7;59(23):N211-20. PMID: PMC4285621
11. Schmid R, Tai A, **Klawikowski S**, Straza M, Ramahi K, LI X A, Robbins J. The Dosimetric Impact of Inter-fractional Organ-at-Risk Movement During Liver Stereotactic Body Radiation Therapy. Int J Radiat

- Oncol Biol Phys. 2017 Oct 99(2); E719-E720
12. **Klawikowski S**, Tai A, Ates O, Ahunbay E, Li XA. A Fast 4D IMRT/VMAT Planning Method Based on Segment Aperture Morphing. *Med Phys*. 2018 Apr;45(4):1594-1602. PMID: 29394460
 13. Schott, D, Gilat-Schmidt T, Hall W, Knechtges P, Noid G, **Klawikowski S**, Erickson B, LI X A. Delineating the GTV of the Day from Daily CTs Acquired During Radiation Therapy Delivery based on a Texture Analysis with Classifier Algorithms: A Proof-of-Concept Study. Submitted to PLOS One 10/2018.
 14. **Klawikowski S**, Tai A, Ates O, Ahunbay E, Li XA. A fast 4D IMRT/VMAT planning method based on segment aperture morphing. *Med Phys*. 2018 Apr;45(4):1594-1602.
 15. Borkenhagen JF, Bergom C, Rapp CT, **Klawikowski SJ**, Rein LE, Gore EM. Dosimetric Predictors of Cardiotoxicity in Thoracic Radiotherapy for Lung Cancer. *Clin Lung Cancer*. 2019 Nov;20(6):435-441.
 16. Chen X, Paulson ES, Ahunbay E, Sanli A, **Klawikowski S**, Li XA. Measurement validation of treatment planning for a MR-Linac. *J Appl Clin Med Phys*. 2019 Jul;20(7):28-38. PMID: PMC6612768
 17. Schmid RK, Tai A, **Klawikowski S**, Straza M, Ramahi K, Li XA, Robbins JR. The Dosimetric Impact of Interfractional Organ-at-Risk Movement During Liver Stereotactic Body Radiation Therapy. *Pract Radiat Oncol*. 2019 Nov;9(6):e549-e558.
 18. **Klawikowski S**, Yang J, Adamovics J, Ibbott G. SU?E?T?125: Gamma Knife Perfexion Output Factor Measurements Using PRESAGE 3D Optical Dosimeters *Medical Physics*. June 2013;40(6):232.
 19. B. Walch, U. Thumm, M. Stockli, S. Klawikowski, C.L. Cocke. Angular distributions of projectiles following electron capture from C60 by 2.5-keV Ar81 *Physical Review A*. .
 20. Schott D, Schmidt TG, Hall W, Knechtges P, Noid G, **Klawikowski S**, Erickson B, Li XA. Estimation of changing gross tumor volume from longitudinal CTs during radiation therapy delivery based on a texture analysis with classifier algorithms: a proof-of-concept study. *Quant Imaging Med Surg*. 2019 Jul;9(7):1189-1200. PMID: PMC6685807
 21. Keating BG, O'Dell CW, de Oliveira-Costa A, **Klawikowski S**, Stebor N, Piccirillo L, Tegmark M, Timbie PT.. A limit on the large angular scale polarization of the cosmic microwave background *Astrophysical Journal. Letters*, v 560, n 1, pt.2, p L1-4, 10 October, 2001..
 22. Piccirillo L, dall'Oglio G, Farese P, Gundersen J, Keating B, **Klawikowski S**, Knox L, Levy A, Lubin P, O'dell C, Timbie P, Ruhl J.. COMPASS: A 2.6 m telescope for CMBR polarization studies *AIP Conference Proceedings*. Volume 616, pp. 183-186, 2002..
 23. Farese PC, Dall'Oglio G, Gundersen JO, Keating BG, **Klawikowski S**, Knox L, Levy A, Lubin PM, O'Dell CW, Peel A, Piccirillo L, Ruhl J, Timbie PT.. COMPASS: an instrument for measuring the polarization of the CMB on intermediate angular scales *New Astronomy Reviews*. Volume 47, Issue 11-12, p. 1033-1046, December, 2003..
 24. Farese PC, Dall'Oglio G, Gundersen JO, Keating BG, **Klawikowski S**, Knox L, Levy A, Lubin PM, O'Dell CW, Peel A, Piccirillo L, Ruhl J, Timbie PT.. COMPASS: An upper limit on cosmic microwave background polarization at an angular scale of 20' *Astrophysical Journal*. v 610, n 2, pt.1, p 625-34, August, 2004..
 25. Aqeel M, Medhora M, Gore E, Borkenhagen J, **Klawikowski S**, Eastwood D, Banerjee A, Jacobs ER. Evaluation of Radiation-induced Pleural Effusions after Radiotherapy to Support Development of Animal Models of Radiation Pneumonitis. *Health Phys*. 2021 Oct 01;121(4):434-443. PMID: PMC8500166
 26. Ibrahim EH, Sosa A, Brown SA, An D, **Klawikowski S**, Baker J, Bergom C. Myocardial Contractility Pattern Characterization in Radiation-Induced Cardiotoxicity Using Magnetic Resonance Imaging: A Pilot Study with ContractiX. *Tomography*. 2022 Dec 22;9(1):36-49. PMID: PMC9844312
 27. Lenarczyk M, Alsheikh AJ, Cohen EP, Schae D, Kronenberg A, Geurts A, **Klawikowski S**, Mattson D, Baker JE. Correction: Lenarczyk et al. T Cells Contribute to Pathological Responses in the Non-Targeted Rat Heart following Irradiation of the Kidneys. *Toxics* 2022, *10*, 797. *Toxics*. 2023 Feb 16;11(2). PMID: PMC9959763

Abstracts

1. **Klawikowski SJ**, Yang J, Grant R, Ibbott G. Optimizing Gamma Knife Quality Control: Output Factor and 3D Gamma Analysis Using PRESAGE Dosimeters. Poster Presentation, American Radium Society Annual Meeting, April 2013; Phoenix, AZ.
2. Christensen EN, Hunter L, Stingo F, **Klawikowski SJ**, Court LE. Determination of CT texture variability among several CT scanners. Oral Presentation, American Association of Physicists in Medicine Annual Meeting, August 2013; Indianapolis, IN.

3. **Klawikowski SJ**, Yang J, Adamovics J, Ibbott GS. Gamma Knife Perfection Output Factor Measurements Using PRESAGE 3D Optical Dosimeters. Poster Presentation, American Association of Physicists in Medicine Annual Meeting, August 2013; Indianapolis, IN.
4. Christensen EN, **Klawikowski SJ**, Allen, P, McAleer MF, Rhines LD, Yang J, Brown PD, Chang EL, Settle SH, Ghia AJ. Outcomes in stereotactic body radiotherapy for spinal tumors: an updated MD Anderson experience with patterns of failure analysis. Poster Presentation, 4th Quadrennial Meeting of the World Federation of Neuro-Oncology, November 2013; San Francisco, CA.
5. **Klawikowski S.**, Tai, A., Ates, O., Ahunbay, E., Li, X. A. A fast 4D IMRT/VMAT planning method based on segment aperture morphing. Oral Presentation, American Association of Physicists in Medicine Annual Meeting, August 2015; Charlotte, NC.
6. **Klawikowski S.**, Christian J., Schott D., Zhang M, Li, X. A. Development of a Radiomics-based Pancreatic Cancer Radiation Therapy Response Prediction Model (Pilot Study). Oral Presentation, American Association of Physicists in Medicine Annual Meeting, August 2016; Anaheim, CA.
7. Borkenhagen J, Rapp CT, **Klawikowski S**, Rein, L, Gore EM. Early cardiotoxicity in thoracic radiotherapy for lung and esophageal cancer Poster Presentation, American Society for Radiation Oncology Annual Meeting, September 2016; Boston, MA.
8. Rapp CT., Borkenhagen J, **Klawikowski S**, Rein, L, Gore EM. Risk factors predisposing to early radiation induced cardiotoxicity with definitive RT for lung and esophageal cancer Poster Presentation, American Society for Radiation Oncology Annual Meeting, September 2016; Boston, MA.
9. Schmidt, R, Tai, A, **Klawikowski, S**, Robbins, J. The impact of inter-fractional organ movement on organs-at-risk during liver stereotactic body radiation therapy Oral Presentation, Radiological Society of North America Annual Meeting, November 2016; Chicago, IL.
10. **Klawikowski, S**, Christian, J, Schott, D, Li, X. A., Quantitative Imaging Biomarker Reproducibility Testing in Pancreatic Cancer CT Texture Analysis Study. Oral Presentation, American Association of Physicists in Medicine Annual Meeting, August 2017; Denver, CO.
11. Borkenhagen J, Rapp C, **Klawikowski S**, Rain S, Gore E. Dosimetric predictors of Cardiotoxicity in Thoracic Radiotherapy for Lung Cancer. Poster presentation American Society of Radiation Oncology (ASTRO) Annual Meeting, October 2018; San Antonio, TX.
12. Chen XF, Paulson ES, Ahunbay E, **Klawikowski S**, Li XA. Measurement Validation of Beam Model for High Field MR Linac Treatment Planning. Oral presentation American Society of Radiation Oncology (ASTRO) Annual Meeting, October 2018; San Antonio, TX.
13. Nasief H, Hall W, Schott D, **Klawikowski S**, Erickson E, Zheng X, LI XA. Delta Radiomics of Daily CTs Acquired During Chemoradiation Therapy of Pancreatic Cancer. Snap Oral presentation American Association of Physicists in Medicine Annual Meeting, August 2018; Nashville, TN.
14. **Klawikowski S**, Mostafaei F, LI XA, Patient Heart Motion Assessed with CINE-MRI. E-poster presentation American Association of Physicists in Medicine Annual Meeting, August 2018; Nashville, TN.