

## Curriculum Vitae

Chaitanya Kalavagunta, Ph.D. DABR  
Assistant Professor, Department of Radiation Oncology,  
University of Maryland School of Medicine

**Date** Nov 8, 2023

### **Contact Information**

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Foreign Languages: Hindi (Fluent), Telugu (working knowledge)

### **Education**

2008-2014 Ph.D., Biophysical Sciences and Medical Physics, University of Minnesota, Minneapolis, Minnesota, Thesis Advisor- Greg Metzger, "*Development of multiparametric MRI models for prostate cancer detection based on improved correlative pathology*"

2006-2008 M.S., Medical Physics, University of Oklahoma Health Sciences Center, Oklahoma City, Oklahoma.

2003-2005 M.S., Physics, University of Kansas, Lawrence, Kansas.

2000-2002 M.S., Physics, Sri Sathya Sai Institute of Higher Learning, India.

1997-2000 B.S., Physics (Honors), Sri Sathya Sai Institute of Higher Learning, India.

### **Post Graduate Education and Training**

2014-2016 Residency, Therapeutic Medical Physics, University of Maryland Medical Center, Baltimore, Maryland.

### **Certifications**

2019 American Board of Radiology, Certificate in Therapeutic Medical Physics  
2016 American Association of Physicists in Medicine, Certificate in Application of Risk Analysis Methods to Radiotherapy Quality Management  
2014 American Association of Physicists in Medicine  
Certificate in Magnetic Resonance guided Radiation Therapy

### **Employment History**

#### **Academic Appointments**

2016-present Assistant Professor, Radiation Oncology, University of Maryland School of Medicine

**Other Employment**

- 2009-2014 Graduate Research Assistant, Center of Magnetic Resonance Research, University of Minnesota
- 2006-2008 Graduate Clinical Assistant, Radiological Sciences, University of Oklahoma Health Sciences Center
- 2003-2005 Graduate Research Assistant, Physics and Astronomy, University of Kansas

**Professional Society Membership**

- 2006-present Member, American Association of Physicists in Medicine
- 2009-2019 Member, International Society of Magnetic Resonance in Medicine
- 2012-2017 Member, Radiological Society of North America
- 2014-2016 Member, American College of Radiology
- 2014-2016 Member, American Roentgen Ray Society
- 2014-2016 Member, American Society for Radiation Oncology
- 2015-2016 Member, Leksell Gamma Knife Society
- 2015-2016 Member, American Brachytherapy Society

**Honors and Awards**

- 2015 Oral Presentation Award, AAPM Mid-Atlantic Chapter Meeting Young Investigators Symposium, certificate and cash prize among 10 postdoctoral researchers, residents, and graduate students.
- 2013 Doctoral Dissertation Fellowship, University of Minnesota, awarded to the University's most accomplished Ph.D. candidates, offering a dedicated period for finalizing and writing an exceptional research project. Grant features a \$25,000 stipend, academic year tuition coverage for up to 14 credits per semester at the general graduate rate, subsidized health insurance via the Graduate Assistant Health Plan for one calendar year, and a \$1,000 conference grant. (*Sole recipient in the program's history to date, highlighting exceptional distinction and achievement.*)
- 2013 Oral Presentation Award, AAPM North-Central Chapter Meeting Young Investigators Symposium, awarded certificate and cash prize in a pool of 6 postdoctoral researchers, residents and graduate students.
- 2013 Poster Presentation Award, Donald Gleason Conference on Prostate & Urologic Cancers, distinguished awardee in a competitive poster competition among 8 talented students, commended for exceptional research presentation and significant field contribution.
- 2012 Travel Grant, ISMRM 20th Annual Meeting & Exhibition Educational Trainee Stipend, selected out of 500+ applications to receive a monetary award and waived registration to the annual meeting
- 2012 Travel Grant, University of Minnesota Otto Schmitt Biomimetic Foundation, 1 out of 8 students awarded \$2,000 to attend the ISMRM conference in Melbourne, Australia.

## **Clinical Activities**

### **Clinical Expertise**

- Board certified medical physicist with specialization in radiation oncology physics.
- Clinical expertise focused on Lymphoma/Leukemia/Myeloma and CNS cancers.
- Research emphasis on radiotherapy machine quality assurance.

### **Scope of Clinical Practice**

2016-present *University of Maryland Baltimore Washington Medical Center*

- ~13000 patients per year.
- Clinical role
- 99% FTE

2016-present *Central Maryland Radiation Oncology*

- ~13000 patients per year.
- Clinical role
- 1% FTE

### **Development of Clinical Programs**

2021-present *Development and Implementation of TotalQA™ for Enhanced Machine Quality Assurance, Incident Analysis and State Compliance*

- Led integration TotalQA™ into radiation oncology clinic, ensuring comprehensive quality assurance for linac, proton therapy, and CT scanners, optimizing accuracy and safety.
- Utilized TotalQA™ to track incidents, predict downtime, and present transparent evidence to state inspectors, enhancing efficiency, compliance, and clinical operations.

## **Clinical Activities**

### **Patient Safety and Compliance**

- 2023 *TotalQA™ Implementation and continuous improvement*
- Continuously supervise implementation across all six clinical sites while collaborating with stakeholders to identify successes and areas for improvement.
- 2022 *TotalQA™ Training and Adoption*
- Developed comprehensive training programs, expanded implementation to two clinical sites, customized the system, analyzed data for improvements, provided ongoing support, and facilitated continuous enhancements.
- 2021 *TotalQA™ System Testing and Integration*
- Thoroughly tested vendor system for functionality and interoperability, collaborated on validation, oversaw seamless integration, and expanded implementation to three more sites.
- 2020 *TotalQA™ Vendor Selection and Contract Negotiation*

- Led vendor selection, coordinated evaluation, facilitated negotiations, and finalized contracts to meet institutional needs.  
*TotalQA™ Project Management and System Implementation*
  - Led implementation across six clinical sites, established milestones and timelines, coordinated system configuration, and initiated a proof-of-concept trial at University of Maryland Baltimore Washington Medical Center.
- 2019 *DailyQA3™ System Database Consolidation*
- Centralized Daily QA3 system databases, devised data migration, validated data integrity, optimized structure, and improved workflow. Enhanced data management, integrated databases, and provided training for streamlined quality assurance.
- TotalQA™ - Research and Evaluation of Radiation Oncology QA Management Systems*
- Researched radiation oncology QA management systems, evaluated vendors, organized webinars, collaborated for testing, compared software capabilities, negotiated quotations, and offered recommendations for optimal solution selection.
- 2018 *UMDKB - Establishment of WordPress based Search Term Driven Online Knowledge Base*
- Developed UMDKB (UMD Knowledge Base), a WordPress-based resource repository, implementing search functionality, curating content, ensuring updates, promoting its use, and expanding through collaboration, user feedback, and conference promotion.
- 2017 *Failure Mode Effects Analysis based Validation of Weekly MLC QA Program*
- Performed FMEA for the weekly MLC QA program, identifying failure modes, causes, and effects, and presented recommendations to departmental leadership for implementation.
- Establishment of Physics Policies and Procedures database on SharePoint*
- Collected, organized, and categorized physics policies and procedures from departmental sources, implemented version control, and conducted audits for accuracy and accessibility.
- 2016 *Comparison of UMMC Physics QA tolerances vis-a-vis TG 142*
- Analyzed UMMC's physics QA tolerances against AAPM TG 142 recommendations, identified variations, collaborated for alignment, and presented recommendations to enhance radiation therapy practices.
- Redesign of HDR Annual Applicator QA and Acuity simulator QA Report*
- Created a uniform template for HDR Annual Applicator QA and Acuity simulator QA reports, enhancing consistency and clarity in content and structure.

*Variseed v9 Commissioning*

- Commissioned Variseed v9 brachytherapy planning system, verifying source data, validating algorithms, establishing QA procedures, and documenting activities for compliance.

*Linac commissioning beam data standardization*

- Conducted efficient linac commissioning beam scanning, introduced a streamlined process for a Truebeam™ linac commissioning, and enhanced SharePoint database for physics information and departmental consistency.

2015

*IROC head and neck phantom credentialing*

- Achieved successful completion of IROC Head and Neck Phantom Credentialing, showcasing expertise in setup and imaging per guidelines.

2014

*Varian Eclipse™ v11 upgrade Electron Monte Carlo commissioning*

- Performed Monte Carlo simulations for Eclipse electron dose calculations, validated commissioning results through QA tests, and maintained compliant documentation..

*Mobius3D™ v1.4.1 plan verification commissioning*

- Conducted treatment time comparisons between Mobius3D™ and Aria™ treatment planning systems, analyzing plans, collecting data, and presenting findings to the PI for departmental consideration.

*Brass mesh bolus commissioning for clinical implementation*

- Conducted ion chamber measurements for various bolus thicknesses, presented optimal findings to the department head, performed quality assurance tests with IROC phantom, analyzed data, and collaborated with a multidisciplinary team for credentialing validation.

*Implementation of Leeds Phantom Imaging QA in Doselabpro™ software*

- Created a comprehensive set of instructions for utilizing Doselabpro's automatic image analysis capabilities to analyze the Leeds Phantom for Linac onboard Kilovoltage imaging QA, enabling efficient and ongoing evaluation of imaging performance.

*Clinical Practice Guidelines Site-wise prescription and Organ at Risk Dose Lookup Table*

- Compiled data into an Excel lookup table for user accessibility, presenting findings to the department head for consideration and action.

*Film and OSLD based quantitative assessment of thermoplastic mask bolus effect in Head & Neck IMRT*

- Identified beam obliquity, beam modulation, and thermoplastic mask thickness as contributors to mask bolus-associated skin dose, suggesting skin inclusion and minimal mask design for improved IMRT/VMAT treatment outcomes.

**Diversity, Equity and Inclusion**

- 2023-present *DEI Initiatives: Anonymous Feedback, Training Co-Moderation, Residency Research, Inclusive Practices*
- Collaborated with IT to establish an online anonymous feedback solution, co-moderated transformative Allyship training, led research on DEI content in residency programs, and devised DEI strategies for hiring and promotions.
- 2022 *DEI Engagement: Allyship Training, Webpage Creation, Training Program Co-Moderation, Speaker Series*
- Equipped with Allyship moderator training, established committee webpage, co-moderated transformative Allyship training, and facilitated keynote speaker selection for the Annual Speaker Series on racial equality in Radiation Oncology.
- 2021 *DEI Committee Engagement: Communication, Digital Signage, Survey, Training, Book Club, Speaker Series*
- Drafted comprehensive update email, initiated digital signage setup, facilitated DEI pulse survey, promoted unconscious bias training, engaged in DEI book club, assumed substitute chair role, and aided keynote speaker selection for the Annual DEI Speaker Series.
- 2020 *Department of Radiation Oncology DEI Committee Founding Member*
- Selected to represent medical physics on the radiation oncology DEI committee, contributing to mission statement development and drafting survey questions to assess cultural sensitivity and bias within the department.

**Mandatory Training**

- 2016-Present Annual Title IX (UMSOM)
- 2016-Present Annual Radiation Safety (UMSOM)
- 2017-Present Annual IT Security Awareness (UMSOM)
- 2020 Everyday Bias for Healthcare Professionals (UMSOM)
- 2018 Annual Training for Clinical Staff (UMMC)

**Professional Development**

- 2022 Allyship at Work Moderator Training

**Administrative Service****Local and National Service****Institutional Service**

- 2020-present Member, Lymphoma/Leukemia/Myeloma Clinical Practice Guidelines Review Committee
- 2020-2023 Member, Diversity and Inclusion Committee
- 2023-present Vice Chair, Diversity and Inclusion Committee
- 2020 Invited Faculty Reviewer, Varian Medical Systems AI Segmentation Usability Study
- 2017-present Member, Siemens CT Committee

- 2016-present Interviewer, Medical Physics Faculty Candidates  
 2016-present Interviewer and Application Reviewer, Medical Physics Residency Program Admission Committee  
 2015-2016 Member, Physics Quality Assurance (QA) Committee

### **National Service**

- 2022-present Invited Expert, *AAPM Medical Physics Practice Guideline 8b (Linear accelerator performance tests -TG364)*  
 2022 Guest Member, *AAPM Placement Service Subcommittee*  
 2014 Reviewer, *International Journal of Computer Assisted Radiology and Surgery* (1/yr)

### **Teaching Service**

#### **Undergraduate Student Teaching**

- 2008 Graduate Teaching Assistant, Physics and Astronomy, University of Minnesota,  
 60 undergraduates, 6-8 contact hours per week  
 2006 MCAT Physics Instructor and Proctor, The Princeton Review, Lawrence, Kansas  
 6 undergraduates, 15 contact hours/year.

#### **Undergraduate Student Mentorship**

- 2022-2023 Professional Development Guidance  
 1 undergraduate (Manasa Tatavarthy)  
 2 contact hours/year.  
 2011-2013 Research project  
 Center of Magnetic Resonance Research, University of Minnesota.  
 2 undergraduate (Jung Ho Nam, Ben Fossen)  
 Daily contact for 2 years.

#### **Resident and Faculty Teaching**

- 2018 ABR Physics Mock Oral Examiner, Radiation Oncology, UMSOM  
 2 medical physics residents, 4 faculty members 8 contact hours/year  
 2016 Classical Treatment Planning Rotation Mentor, Radiation Oncology, UMSOM  
 2 medical physics residents, 1 contact hours/year  
 2016-present TG-51 and Annual Linac QA Mentor, Physics Resident, Radiation Oncology, UMSOM  
 1-2 medical physics residents, 8 contact hours/week, 2 weeks per year  
 (Jie Ding, Jingzhu Xu, Maryam Mashayekhi, Alexander Van Slyke, Kai Jiang, Michael Macfarlane, Rachel McCarroll, Pooya Sabouri, Fulya Cifter)

#### **Resident, Faculty and Staff Training**

- 2022 Allyship at Work, Radiation Oncology, UMSOM  
 25-30 participants (physicians, medical residents, medical physicists,

medical physics residents, dosimetrists, dosimetrist students, nurses, administrative staff) 6 contact hours/year

### Lectures

- 2017-present Instructor, Physics Lecture Series for Radiation Therapy, "*Radiation Generators and Accelerators*", Radiation Oncology, UMSOM.  
6-8 medical residents in radiation oncology, 2 dosimetrist students, and 1-2 medical physics residents. 2 weeks/year, 1 class hour/week.
- 2020-present Instructor, Physics Lecture Series for Radiation Therapy, "*Radioactive Decay*", Radiation Oncology, UMSOM.  
6-8 medical residents in radiation oncology, 2 dosimetrist students, and 1-2 medical physics residents. 2 weeks/year, 1 class hour/week.
- 2018-present Instructor, Orientation Lecture Series for Radiation Therapy, "*Basic Physics and Linacs*", Radiation Oncology, UMSOM.  
6-8 medical residents in radiation oncology, 2 dosimetrist students, and 1-2 medical physics residents. 1 week/year, 1 class hour/week.
- 2018-present Instructor, One-on-One Physics Review for Radiation Therapy, "*CT and 4DCT, PET, MR*", Radiation Oncology, UMSOM.  
1-2 medical residents in radiation oncology, 4 weeks/year, 1 class hour/week.
- 2021-present Instructor, Physics Residency Rotation Lecture "*Ethics and Professionalism in Medical Physics*" Radiation Oncology, UMSOM.  
1-3 medical physics residents. 1 week/year, 1 class hour/week.
- 2021-present Instructor, Physics Residency Chart Rounds "Clinical Conundrums" Radiation Oncology, UMSOM.  
1-2 medical physics residents. 1 week/year, 1 class hour/week.
- 2018 Physics Inservice, "*SABR for Centrally Located Early Stage NSCLC Physics and Dosimetric Considerations*" Radiation Oncology, UMSOM.  
All dosimetrists, physicists, dosimetrist students, and medical physics residents, 1 class hour/year.

### Patents

- US #00985665B2 Metzger GJ, Schmechel SC, **Kalavagunta C**, Koopmeiners JS, Warlick CA: *Medical Imaging Device Rendering Predictive Prostate Cancer Visualizations Using Quantitative Multiparametric MRI Models*, 2017
- US #20210361972A1 Yi B, Langner U, Mossahebi S, **Kalavagunta C**, *System and Method for Forming a Treatment Plan for Charged Particle Therapy Using Hydrogen Density*, 2021



## **Publications**

### **Peer-reviewed journal articles**

1. Yukihara EG, Ruan C, Gasparian PBR, Clouse WJ, **Kalavagunta C**, Ahmad S, " *An optically stimulated luminescence system to measure dose profiles in x-ray computed tomography*", Phys. Med. Biol. 54:6337 (2009).
2. Yukihara EG, Gasparian PBR, Sawakuchi GO, Ruan C, Ahmad S, **Kalavagunta C**, Clouse WJ, Sahoo N, Titt U, " *Medical applications of optically stimulated luminescence dosimeters (OSLDs)*", Radiation Measurements. 45:658–662 (2010).
3. Gasparian PBR, Ruan C, Ahmad S, **Kalavagunta C**, Cheng CY, Yukihara EG, " *Demonstrating the use of optically stimulated luminescence dosimeters (OSLDs) for measurement of staff radiation exposure in interventional fluoroscopy and helmet output factors in radiosurgery*", Radiation Measurements. 45:677–680 (2010).
4. **Kalavagunta C**, Zhou X, Schmechel S, Metzger GJ, " *Registration of in vivo prostate MRI and pseudo whole mount histology using Local Affine Transformations guided by Internal Structures (LATIS)*", Journal of Magnetic Resonance Imaging 41:1104–1114 (2015).
5. Metzger GJ, **Kalavagunta C**, Spilseth B, Bolan PJ, Li X, Hutter D, Nam JW, Johnson AD, Henriksen JC, Moench L, Konety B, Warlick CA, Schmechel SC, Koopmeiners JS, " *Detection of Prostate Cancer: Multiparametric MR Imaging Models Developed by Using Registered Correlative Histopathologic Results*", Radiology 279.3:805-816 (2016).
6. Diwanji, T, Mohindra P, Vyfhuis M, Snider J, **Kalavagunta C**, Mossahebi S, Yu J, Feigenberg S, Badiyan S, " *Advances in radiotherapy techniques and delivery for non-small cell lung cancer: benefits of intensity-modulated radiation therapy, proton therapy, and stereotactic body radiation therapy*" Translational Lung Cancer Research 6, no. 2:131(2017).
7. **Kalavagunta C**, Xu H, Zhang B, Mossahebi S, MacFarlane M, Jiang K, Woo-Lee S, Chen S, Sawant A, Gopal A, Yi B, " *Is a weekly qualitative Picket Fence test sufficient? A proposed alternate EPID based weekly MLC QA program*", JACMP J Appl Clin Med Phys. 2022;e13699.

### **Non peer-reviewed journal articles**

1. Mossahebi S, **Kalavagunta C**, Chung H, " *Current technological state of radiation therapy for the treatment of lung cancer*", Internal Medicine Review 2 2016.

## **Major Invited Speeches**

### **International**

1. **Kalavagunta C**, " *Radiation Oncology Physics in Healthcare*", International Seminar on Physics for Healthcare, Sri Sathya Sai Institute of Higher Learning, Prashanti Nilayam, India, 2021.

**National**

2. **Kalavagunta C,** " *Patient Simulation and Classical Treatment Planning*", University of Maryland Annual Physics and Radiobiology Review Course, University of Maryland Medical Center, Baltimore, MD, May 30<sup>th</sup> 2023.
3. **Kalavagunta C,** " *Patient Simulation and Classical Treatment Planning*", University of Maryland Annual Physics and Radiobiology Review Course, University of Maryland Medical Center, Baltimore, MD, May 13<sup>th</sup> 2022.
4. **Kalavagunta C,** " *Patient Simulation and Classical Treatment Planning*", University of Maryland Annual Physics and Radiobiology Review Course, University of Maryland Medical Center, Baltimore, MD, June 6<sup>th</sup> 2021.
5. **Kalavagunta C,** " *Patient Simulation and Classical Treatment Planning*", University of Maryland Annual Physics and Radiobiology Review Course, University of Maryland Medical Center, Baltimore, MD, Oct 23<sup>rd</sup> 2020.
6. **Kalavagunta C,** " *Is Weekly MLC QA Necessary? A Two Year EPID based Weekly MLC QA Experience at the University of Maryland*" Sun Nuclear 10<sup>th</sup> QA and Dosimetry Symposium, Orlando, Florida, Feb 17<sup>th</sup> 2017.
7. **Kalavagunta C,** " *Is Weekly MLC QA Necessary? Two Year EPID-Based Weekly MLC QA Experience at the University of Maryland.*" AAPM 58<sup>th</sup> Annual Meeting Performance Assessment Safety and QA Session, Washington, DC, Aug 2<sup>nd</sup> 2016.

**Local**

8. **Kalavagunta C,** " *Predicting Maximum Pacemaker/ICD Dose in SAVI HDR Brachytherapy*", Annual Meeting of the Mid Atlantic Chapter of AAPM, Young Investigator Symposium, Baltimore, MD, Oct 2<sup>nd</sup> 2015.
9. **Kalavagunta C,** " *Correlation of Digital Pathology with In-vivo MRI for Assessment of Prostate Cancer Aggressiveness and Extent*", Spring Meeting of North Central Chapter of the AAPM, Young Investigator Symposium, St Paul, MN, May 3<sup>rd</sup> 2013.
10. **Kalavagunta C,** " *Application of OSL in CT Dosimetry.*" Spring Clinical Meeting of the Southwest Regional Chapter of the AAPM, Young Investigators Symposium, Austin, Texas, Apr 18<sup>th</sup> 2008.

**Proffered Communications****International**

1. **Kalavagunta C,** Warlick CA, Zhou X, Li X, Koopmeiners JS, Henriksen JC, Johnson AD, Schmechel S, Metzger GJ," *Analysis of Quantitative MRI and Pathology based on Co-registered Regions of Prostate Cancer*", International Society of Magnetic Resonance in Medicine 20<sup>th</sup> Annual Meeting, Melbourne, Australia, ePoster Presentation, 2012.
2. **Kalavagunta C,** Zhou X, Henriksen JC, Schmechel S, Metzger GJ," Registration of In-vivo Prostate MRI and Pseudo Whole Mount Histology using Local Affine Transformation with Internal Structures (LATIS)", International Society of

Magnetic Resonance in Medicine 20<sup>th</sup> Annual Meeting, Melbourne, Australia, ePoster Presentation, 2012.

### **National**

3. MacFarlane M, **Kalavagunta C**, Gopal A, Xu H, Tehrani J, Zhou J, Chen S," *Clinical Robustness of Multi-Isocentric Volumetric Modulated Arc Based Craniospinal Irradiation*", AAPM 65<sup>th</sup> Annual Meeting, Houston, TX, General ePoster Presentation, 2023.
4. **Kalavagunta C**, Vaish I, Cammin J, Guerrero M, McAvoy S, Vyfhuis M, Slyke A, Mashayekhi M, Ding J, Gopal A," *Assessing the Prevalence of Diversity, Equity and Inclusion Information in Campep Accredited Medical Physics Residency Program Webpages in the United States*", AAPM 65<sup>th</sup> Annual Meeting, Houston, TX, Best of Professional ePoster Presentation, 2023.
5. **Kalavagunta C**, Gopal A," *Chatting with Chatgpt about the Future of Medical Physics*", AAPM 65<sup>th</sup> Annual Meeting, Houston, TX, General ePoster Presentation, 2023.
6. Xu, J, Xu, J, **Kalavagunta C**," *Auto Analysis Commissioning On EPID Image Based Winston Lutz Tests*", AAPM Spring Clinical Meeting, New Orleans, FL, General ePoster Presentation, 2022.
7. Tehrani JN, **Kalavagunta C**, Lasio G, Chen S, Yi B," *Motion of Electronic Portal Imaging Devices and Clinical Implications for Multi-Leaf Collimator Quality Assurance*" Joint AAPM and COMP Meeting, Columbus, OH, General ePoster Presentation, 2022.
8. **Kalavagunta C**, " *UMDRadOnckB: A Search Term Driven Online Knowledge Base*", AAPM 60<sup>th</sup> Annual Meeting, Nashville, TN, General ePoster Presentation, 2018.
9. **Kalavagunta C**, Becker S, Gopal A, Prado K," *A Lean Truebeam Commissioning Beam Dataset for Multi-Linac Facilities-The University of Maryland Experience*", AAPM 59<sup>th</sup> Annual Meeting, Denver, CO, General Poster Presentation, 2017.
10. **Kalavagunta C**, Lasio G," *Using Robust Optimization in Raystation to Achieve Flash in Breast VMAT Plans*", AAPM 59<sup>th</sup> Annual Meeting, Denver, CO, General Poster Presentation, 2017.
11. Chen S, Zhang B, Yi B, Langen K, Nichols E, Langner U, Gopal A, **Kalavagunta C**, Prado K, D'Souza W," *Post-Upgrade Quality Assurance of the Radiation Oncology Information System*", AAPM 59<sup>th</sup> Annual Meeting, Denver, CO, General ePoster Presentation, 2017.
12. Gopal A, Xu H, **Kalavagunta C**, Chen S," *Accuracy of Step-Function Based CBCT-Density Calibration and Dose Calculation in a Raystation Treatment Planning System*", AAPM 59<sup>th</sup> Annual Meeting, Denver, CO, SNAP Oral Presentation, 2017.
13. Mossahebi S, Langen K, Guerrero M, Yi B, Lu W, **Kalavagunta C**, Prado K, Chen S," *SU-F-T-286: Calculation-Based Patient Specific IMRT QA Detects Potential Errors That Measurement-Based QA Does Not*", AAPM 58<sup>th</sup> Annual Meeting, Washington, DC, General Poster Presentation, 2016.
14. Snider JW, **Kalavagunta C**, Xu H, Schrum A, Vadnais P, Marter K, Lin MH, Suntharalingam M," *Bolus effect of immobilization masks in head and neck radiotherapy mitigated by mask alteration and dosimetric optimization for skin*

- avoidance*", ASTRO 57<sup>th</sup> Annual Meeting, San Antonio, TX, General Poster Presentation, 2015.
15. Snider JW, **Kalavagunta C**, Xu H, Schrum A, Vadnais P, Marter K, Lin MH, Suntharalingam M, " *Improved Skin Sparing with Volumetric Modulated Arc Therapy (VMAT) in Head and Neck Irradiation Utilizing Skin-Avoidance Optimization*", ASTRO 57<sup>th</sup> Annual Meeting, San Antonio, TX, General Poster Presentation, 2015.
  16. **Kalavagunta C**, Lasio G, Yi B, Zhou J, Lin MH, " *Characterization of Pacemaker/ICD Dose in SAVI HDR Brachytherapy*", AAPM 57<sup>th</sup> Annual Meeting, Anaheim, CA, General Poster Presentation, 2015.
  17. **Kalavagunta C**, Lin MH, Snider J, Xu H, Schrum A, Vadnais P, Marter K, Suntharalingam M, " *A Radiochromic Film Based Quantitative Assessment of Thermoplastic Mask Bolus Effect in Head and Neck IMRT/VMAT*", AAPM 57<sup>th</sup> Annual Meeting, Anaheim, CA, General Poster Presentation, 2015.
  18. Metzger GJ, **Kalavagunta C**, Schmechel S, Bolan PJ, Konety B, Spilseth B, Warlick CA, Koopmeiners JS, " *Development of Quantitative Multi-Parametric MRI Models for Prostate Cancer Assessment Using Registered Correlative Pathology* ", ISMRM 23<sup>rd</sup> Annual Meeting, Toronto, Canada, General ePoster Presentation, 2015.
  19. Metzger GJ, Fossen B, Bolan PJ, Warlick CA, Konety B, Schmechel S, **Kalavagunta C**, Tkac I, " *Detection and Grading of Prostate Cancer Using Model-Based Spectral Fitting* ", Joint ISMRM-ESMRMB 22<sup>nd</sup> Annual Meeting, Milan, Italy, General ePoster Presentation, 2014.
  20. **Kalavagunta C**, Zhou X, Schmechel S, Koopmeiners JS, Warlick CA, Konety B, Metzger GJ, " *Pixel-Wise Multi-Parametric Assessment of Prostate Cancer from Co-registered regions of Pathologically defined Disease*", Joint ISMRM-ESMRMB 22<sup>nd</sup> Annual Meeting, Milan, Italy, General ePoster Presentation, 2014.
  21. **Kalavagunta C**, Zhou X, Henriksen J, Schmechel S, Metzger GJ, " *Image Registration of Histopathology and MR and Prostate Cancer using LATIS*", Fourth Annual Masonic Cancer Research Symposium, Minneapolis, MN, General Poster Presentation, 2013.
  22. **Kalavagunta C**, Warlick CA, Zhou X, Li X, Koopmeiners JS, Henriksen JC, Johnson AD, Schmechel S, Metzger GJ, " *Improved post-prostatectomy pathology co-registration with in-vivo MRI by a novel deformable registration strategy*", Donald Gleason Conference on Prostate Cancer, Minneapolis, MN, General Poster Presentation, 2013.
  23. Nam JW, **Kalavagunta C**, Dankbar SC, Henriksen J, Schmechel S, Metzger GJ, " *JPStitch 2.0: a Software for Volumetric Reconstruction and Analysis of Digitized Pathology*", Donald Gleason Conference on Prostate Cancer, Minneapolis, MN, General Poster Presentation, 2013.
  24. **Kalavagunta C**, Warlick CA, Zhou X, Li X, Koopmeiners JS, Henriksen JC, Johnson AD, Schmechel S, Metzger GJ, " *Analysis of Quantitative MRI and Pathology based on Co-registered Regions of Prostate Cancer*", ISMRM 20<sup>th</sup> Annual Meeting, Melbourne, Australia, General ePoster Presentation, 2012.
  25. **Kalavagunta C**, Zhou X, Henriksen JC, Schmechel S, Metzger GJ, " *Registration of In-vivo Prostate MRI and Pseudo Whole Mount Histology using Local Affine*

- Transformation with Internal Structures (LATIS)*", ISMRM 20<sup>th</sup> Annual Meeting, Melbourne, Australia, General ePoster Presentation, 2012.
26. Mangia S, Chamberlain R, De Martino F, Moeller S, Corum C, Kim T, **Kalavagunta C**, Michaeli S, Garwood M, Kim S, Ugurbil K, " *Functional MRI with SWIFT*", ISMRM 20<sup>th</sup> Annual Meeting, Melbourne, Australia, General Poster Presentation, 2012.
  27. Li X, **Kalavagunta C**, Nelson MT, Metzger GJ, " *Arterial Spin Labeling Perfusion Studies of the Prostate with an ERC*", ISMRM 19<sup>th</sup> Annual Meeting, Montreal, QC, Canada, Oral Presentation, 2011.
  28. Li X, **Kalavagunta C**, Metzger GJ, " *Prostate Perfusion Using Arterial Spin Labeling: Initial Experience*", ISMRM 19<sup>th</sup> Annual Meeting, Montreal, QC, Canada, Oral Presentation, 2011.
  29. **Kalavagunta C**, Metzger GJ, " *A field comparison of  $r_1$  and  $r_2^*$  relaxivities of Gd-DTPA in aqueous solution and whole blood: 3T vs. 7T*", ISMRM 18<sup>th</sup> Annual Meeting, Paris, France, General Poster Presentation, 2010.
  30. Gasparian PBR, Yukihara EG, Ruan C, Ahmad S, **Kalavagunta C**, Cheng CY, " *Preliminary results on the application of optically stimulated luminescence (OSL) to dosimetry in diagnostic radiology and radiosurgery*", 14th Brazilian Congress on medical Physics, Brazil, 2009.
  31. Ruan C, **Kalavagunta C**, Yukihara EG, Gasparian PBR, Salahuddin A, " *Estimation of Radiation Dose from Multi-Slice CT Using Optically Stimulated Luminescence Dosimeters: A Preliminary Study*", RSNA 94<sup>th</sup> Annual Meeting, Chicago, IL, General Poster Presentation, 2010.

### Local

32. **Kalavagunta C**, "Physics Policies and Procedures on Sharepoint " Physics Clinical Meeting, University of Maryland Medical Center, Baltimore, MD, Apr 23 2020.
33. **Kalavagunta C**, "Sun Nuclear QA & Dosimetry Symposium - Follow up" Physics Educational Event, University of Maryland Medical Center, Baltimore, MD, Mar 19 2020.
34. **Kalavagunta C**, "Total QA Evaluation at BWMC." Physics Educational Event, University of Maryland Medical Center, Baltimore, MD, Nov 07 2019.
35. **Kalavagunta C**, "SABR for Centrally Located Early Stage NSCLC." Physics In-service, University of Maryland Medical Center, Baltimore, MD, Aug 09 2018.
36. **Kalavagunta C**, "HDR Annual Applicator QA." HDR Rotation Seminar, University of Maryland Medical Center, Baltimore, MD, Dec 16 2015.
37. **Kalavagunta C**, "TG142 vs UMMC QA Tolerances." Linac QA Rotation Seminar, University of Maryland Medical Center, Baltimore, MD, Oct 8 2015.
38. **Kalavagunta C**, "BWMC Truebeam Commissioning Results." Commissioning Rotation Seminar, University of Maryland Medical Center, Baltimore, MD, July 9 2015.
39. **Kalavagunta C**, "TG51 vs TG21." TG51 Rotation Seminar, University of Maryland Medical Center, Baltimore, MD, April 21 2015.

40. **Kalavagunta C**, "*An EBT2 Film based Quantitative Assessment of Thermoplastic Mask Bolus Effect.*" Radiation Oncology Department Research Meeting, University of Maryland Medical Center, Baltimore, MD, Feb 2 2015.
41. **Kalavagunta C**, "*An Assessment of Thermoplastic Mask Bolus Effect using OSLD and EBT2 Film -A Rotation Narrative.*" Dosimetry Rotation Seminar, Univ. of Maryland Medical Center, Baltimore, MD, Dec 11 2014.
42. **Kalavagunta C**, "*Overview of Linac QA.*" Linac QA Rotation Seminar, University of Maryland Medical Center, Baltimore, MD, Oct 22 2014.
43. **Kalavagunta C**, "*Image Registration of Histopathology and MR and Prostate Cancer using LATIS.*" Fourth Annual Masonic Cancer Research Symposium, Tumor Microenvironment Section Poster No. 87, Univ. of Minnesota, Minneapolis, Minnesota, Oct 16 2013.
44. **Kalavagunta C**, "*Multi-parametric MR and Digital Pathology of Prostate Cancer: An Image Registration based Correlation study.*" Biophysical Sciences and Medical Physics Program Research Colloquium, Univ. of Minnesota, Minneapolis, Minnesota, May 24 2013.
45. **Kalavagunta C**, "*Cone Beam CT QA Program.*" Radiation Therapy Physics Seminar. OU Health Sciences Center, Oklahoma City, Oklahoma, April 25 2008.
46. **Kalavagunta C**, "*A MRS Brain Cancer Metabolite Repository.*" Radiologic Physics Colloquium. OU Health Sciences Center, Oklahoma City, Oklahoma, March 4 2008."
47. **Kalavagunta C**, "*The Derivation of the Klein Nishina Formula.*" Nuclear Medicine Physics Seminar, OU Health Sciences Center, Oklahoma City, OK, Oct 8 2007.
48. **Kalavagunta C**, "*Techniques in MRI Quality Control. Radiologic Physics Colloquium.*" OU Health Sciences Center, Oklahoma City, OK, March 6 2007.
49. **Kalavagunta C**, "*The Effect of Space Radiation on the Induction of Chromosomal Damage.*" Radiobiology Seminar, OU Health Sciences Center, Oklahoma City, Oklahoma, March 6 2007.