

North American Chinese Medical Physicists Association

Spring 2024 Volume 9 No. 1

NACMPA NEWSLETTER



Message from President	1
2024 NACMPA Awards	4
Candidates for NACMPA	7
NACMPA Website Domain Migration	9
The New NACMPA's Official Website	10
Development of Focused X-ray Luminescence Compute Tomography Imaging	11
From Student to Resident: My Path in Medical Physics	14
吃喝玩乐在洛杉矶	15



Lu Wang, PhD NACMPA President

Message from the President

Welcome to the Spring 2024 Edition of the NACMPA newsletter!

Time flies! One year has almost passed since our last annual meeting, and we find ourselves in the planning stages for hosting our traditional annual dinner meeting in Los Angeles. On

behalf of the NACMPA Executive Committee, I welcome all members to join the annual dinner meeting, which is held in conjunction with the AAPM annual meeting on July 24th. I encourage you to register for the meeting in advance, as this will reduce the amount of work for our volunteers at the restaurant. If you change your plans, the registration will be fully refundable. You can find the meeting program, location, and registration information in this newsletter.

Since I took the position, I have been focusing on fundraising for the NACMPA. This year, with the help of local NACMPA

members, we were able to reach out to additional vendors and have, thus, obtained more funding support for our annual event. I would like to take this opportunity to express my sincere appreciation to the local NACMPA members, particularly, Dr. Shen, Zhilei and Dr. Liu, Xiaoyu. There were other senior officers had been actively lobbing for sponsorship also. Their effort is a tremendous help to our organization, especially during these days of very high inflation. In order to make our annual event more attracting, we also added educational component for the first time. We hope this form of annual event will be well accepted.

Seeking Contributors 欢迎大家投稿

NACMPA NEWSLETTER is published by the North American Chinese Medical Physicists Association on a semiannually schedule. We welcome all readers to send us any suggestions or comments on any of the articles or new features to make this a more effective and engaging publi- cation and to enhance the overall reader- ship experience.

Contact us: nacmpa@yahoo.com

Newsletter Editor: Yi Rong, PhD

Time does fly, and I have almost completed my two-year term! It is once again time to choose a President-elect and Treasurer. You can find a summary and background of the candidates in this newsletter. I hope everyone will take the time to review the bios, as the information will help you when casting your important vote for this election. Our association relies on volunteers to complete its work toward our mission. Their valuable time and dedication are acknowledged and very much appreciated. I proudly encourage as many volunteers as possible to participate in future endeavors.

Every year, NACMPA members receive prestigious awards from professional societies. This year, Dr. Ding Xuanfeng received the John S. Laughlin Young Scientist Award. The number of fellows has doubled over the past year. The following members were elected as AAPM fellows: Dr. Hu Yanle, Dr. Lu Weiguo, Dr. Shen Jiajian, Dr. Wang Zhiheng, Dr. Wang Jing, Dr. Wu Dee H, Dr. Yu Hengyong, Dr. Zhang Hualin, Dr. Zhao Wei, and Dr. Zhou Yuxiang. Please join me in congratulating our colleagues!

Last but not least, we were recently shocked to learn that a devoted and outstanding physicist, Dr. Liu Wu, passed away. His loss was felt throughout our community, and our deepest condolences go out to his family and loved ones. On this note, I wish to remind everyone to keep a quality balance when it comes to work and health. While the pursuit of your career is important, managing your health and well-being is significant as well. Good health will help you work efficiently and enable you to enjoy a long career.

We hope every NACMPA member finds something of interest in every issue of the newsletter. All NACMPA members are encouraged to submit content and ideas for the newsletter directly to the editor.

Thanks to all of our outstanding volunteers and officers! See you at our annual meeting!

North American Chinese Medical Physicists Association

Executive Officers (2024) Board of Directors (2024) Nomination/Election Committee (2024)

President: Lu Wang

Yi Rong

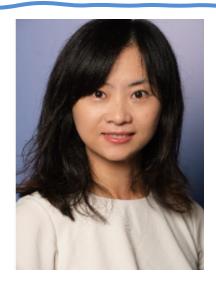
Brian Wang

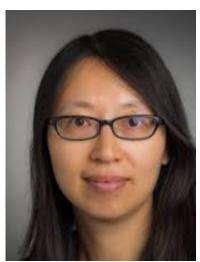
Qin Lei

President-Elect: Yi Rong Lu Wang Zhigang(Josh) Xu

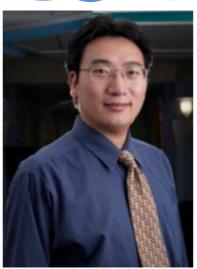
Zhigang(Josh) Xu Secretary: Jinzhong Yang Lei Qin

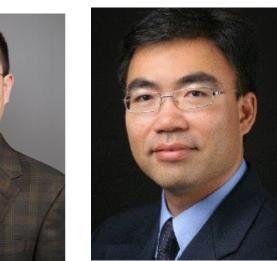
Treasurer: Dengsong Zhu Member-at-large: Lei Qin











2024 NACMPA Awards

为了感谢和表彰华人物理师志愿者的奉献和鼓励 更多医学物理师参与公益活动,NACMPA由陈昱纪 念基金会赞助,从2018年起设立一个新的年度奖 项-陈昱华人物理师最佳奉献奖。

评议过程主要以网上实名投票的方式进行,由大家投票选出。 2024年度的获奖者是Dr. Zhenyu Shou。陈昱纪念基金会为获奖者准备一个奖状铭牌和美元现金奖励。

陈昱华人物理师最佳奉献奖

Yu Chen Award for Excellent Community Contribution 2024 Recipient

Zhenyu Shou, PhD

In Recognition of Your Outstanding Volunteering Work for the American Chinese Medical Physics Community

NACMPA Service Award

In recognition and appreciation of your outstanding services to the NACMPA, as an executive officer:

Dandan Zheng, PhD, DABR Secretary (2022-2023)





In recognition and appreciation of your outstanding services to the NACMPA, as an executive officer:

Kai Yang, PhD. DABR Board Member-at-large (2022-2023)





2024 NACMPA service awards go to Dandan Zheng and Kai Yang who have both completed extraordinary years of service to NACMPA. This service award is to recognize their contributions to our society.

NACMPA Best Paper Award

NACMPA best paper award, established in 2018, aside recognizing the outstanding contributions to the medical physics field by the awardee(s), another goal of this award is to promote our society and hopefully draw more participations and contributions to NACMPA. Therefore, the criteria for best paper award selection, set by the NACMPA EXCOM, are

1. 1st author is a member of NACMPA

Presents the

NACMPA Award for Excellence to

Junbo Peng, Richard L. J. Qiu, Jacob F. Wynne, Chih-Wei Chang, Shaoyan Pan, Tonghe Wang, Justin Roper, Tian Liu, Pretesh R. Patel, David S. Yu, Xiaofeng Yang

For the Best Medical Physics Paper Published during 2023 in

Med Phys doi: 10.1002/mp.16704. Epub 2023 Aug 30

Entitled

CBCT-Based synthetic CT image generation using conditional denoising diffusion probabilistic model



Brian Wang

Brian Wang, PhD, Chair NACMPA Best Paper Committee July, 2024

2. Publication was in 2023 and in a medical physics related journal. The 2024 NACMPA best paper award goes to: Junbo Peng, Richard L. J. Qiu, Jacob F. Wynne, Chih-Wei Chang, Shaoyan Pan, Tonghe Wang, Justin Roper, Tian Liu, Pretesh R. Patel, David S. Yu, Xiaofeng Yang: "CBCT-Based synthetic CT image generation using conditional denoising diffusion probabilistic model"

IJMPCERO Best Paper Award



International Journal of Medical Physics, Clinical Engineering and Radiation Oncology

Presents the

NACMPA Award for Excellence

to

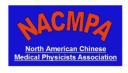
Xiaofeng Zhu, Wei Nie, James David George, Qianyi Xu, Dandan Zheng, Jiajin Fan

For the Best Medical Physics Paper Published during 2023-2024 in

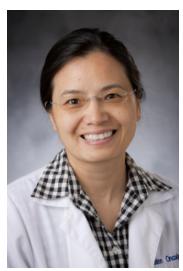
International Journal of Medical Physics, Clinical Engineering and Radiation Oncology

Field size evaluation with a high resolution 2D diode array for variable-aperture collimators used in robotic radiosurgery

\$500 Voucher from Scientific Research Publisher (SRP) (Order # IJMPCERO0504; Expiry Date: July 24, 2025)



Ning J. Yue, PhD Editor-in-Chief July 24, 2024



Q. Jackie Wu, Ph.D.

NACMPA Hall of Fame Award

The NACMPA Hall of Fame award is an annual award to acknowledge the individual who made outstanding contribution to the field of medical physics through research or clinical work, or the individual who was outstanding in service in NACMPA. Due to the outstanding accomplishments and the significant contributions to NACMPA, Dr. Q. Jackie Wu has been selected by NACMPA Awards Committee to receive the 2024 NACMPA Hall of Fame Award, the highest honor of NACMPA. Congratulation!

Q. Jackie Wu received her Ph.D. degree from Mayo Graduate School, Mayo Clinic in Rochester, MN in 1996. After two years as a clinic medical physicist in the private sector, Dr. Wu became a faculty member in the Dept. of Radiation Oncology of Case Western Reserve University. In 2005, she joined Duke University and is currently a Professor of the Radiation Oncology Department and a faculty member of the Medical Physics Program. She is also an adjunct faculty member of Electrical Engineering and Computer Science Department at CWRU. Dr. Wu has served on AAPM's Board of directors, professional and scientific committees, task groups/work groups, as well as on NRGs medical physics committee. Dr. Wu has published over 100 peer-

reviewed papers and has multiple grants funded by NIH, ACS, Whitaker Foundation, and industry. For over 25 years, she has been teaching various Medical Physics courses and lectures, supervising PhD/MS students and postdoc fellows. Dr. Wu's research interests include IGRT, adaptive RT, and knowledge based automatic treatment systems.

I am deeply humbled to receive the 2024 NACMPA Hall of Fame Award. Joining this community since its inception as a graduate student, I have received tremendous guidance and support from many great physicists in this society and forged many lifelong friendships along the way. Watching our community grow over the years and meeting bright young medical physicists each year has been a source of immense joy for me.

This award holds great significance, and I extend my deepest thanks to the NACMPA selection committee for recognizing my efforts and contributions in the field of medical physics. My heartfelt appreciation also goes to my mentors, colleagues, trainees, and friends. Your expertise, wisdom, and willingness to share your knowledge have been instrumental in my personal and professional development.

Message from Dr. Q. Jackie WU

In recognition of contributions to Medical
Physics Hall of Fame Recipient - 2024:

Q. Jackie Wu, PhD





Lastly, I am profoundly grateful to my family for their unwavering support and encouragement throughout the ups and downs of my journey.

I am honored and privileged to receive this award, and I sincerely hope that NACMPA will continue to stay strong and flourish.

Thank you.

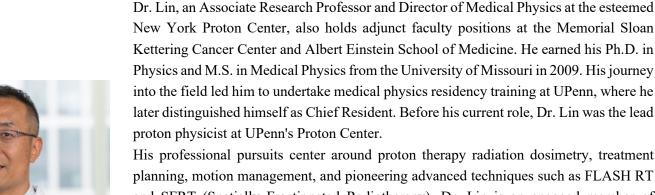
Q. Jackie Wu, Ph.D, DABMP, FAAPM

Candidates for NACMPA President 2024



Chengyu Shi, PhD, DABR, FAAPM

Dr. Shi is a senior physicist/clinical professor in the Department of Radiation Oncology at City of Hope National Medical Center. He also worked at the New York Proton Center as a senior physicist and at the Memorial Sloan Kettering Cancer Center as New Jersey's Lead Physicist before he joined the City of Hope. He was awarded the AAPM fellowship in 2020 and served in AAPM TG 148 for tomotherapy QA and TG 330 for EPID QA. He also serves as a member of the JACMP board of associate editors and published over 90 peer-reviewed papers. He also serves as the Apex surveyor, ABR part I question provider, and member of the virtual training resource working group of AAPM. Dr. Shi's research interests include Monte Carlo simulation, virtual human phantom development, and applications, quality assurance for LINAC, imaging-guided radiation therapy technologies, special treatment techniques, including stereotactic body radiotherapy and stereotactic radiosurgery, and more. He has many years of experience in facility start-up, commission modalities, and maintenance of continued QA. Dr. Shi loves to travel, do outdoor activities, and write novels as a hobby.



His professional pursuits center around proton therapy radiation dosimetry, treatment planning, motion management, and pioneering advanced techniques such as FLASH RT and SFRT (Spatially Fractionated Radiotherapy). Dr. Lin is an engaged member of numerous prestigious professional societies, including AAPM, ASTRO, PTCOG, ABR, RAMPS, RSS, NRG, ECOG, and IAEA. He assumes leadership roles as the vice chair of the particle therapy work group of AAPM, co-chair of the imaging subcommittee of PTCOG, and past president of RAMPS. Dr. Lin's scholarly contributions are substantial, with over 50 peer-reviewed publications, 5 book chapters, and more than 140 conference abstracts to his credit. He further enriches the field as an editorial member of journals like Medical Physics, JACMP, Cancers, and Frontiers in Oncology. In recognition of his outstanding contributions, Dr. Lin was honored with AAPM Fellow status in 2023. Beyond his professional endeavors, Dr. Lin finds joy in various sports, particularly basketball, tennis, and hiking. Dr. Lin aspires to serve the NCMPA society, offering a vision focused on fostering external financial support for NCMPA events and operations while nurturing the existing vibrant community.

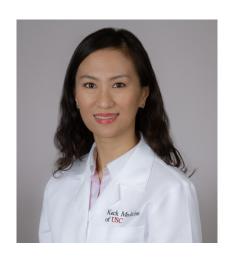


Haibo Lin, PhD, DABR, FAAPM

Candidates for NACMPA Treasurer 2024



Mu-Han Lin, PhD NACMPA Member



Zhilei Shen, PhD NACMPA Member

Dr. Mu-Han Lin is an esteemed Associate Professor and the Director of Adaptive Therapy at UT Southwestern Medical Center, where she oversees Xray guided and MR-guided adaptive therapy programs. Dr. Lin received her Ph.D. from National Tsing Hua University and has since dedicated her career to advancing the field of medical physics through both clinical practice and innovative research. With her experience in adaptive radiotherapy and AIassisted treatment planning, Dr. Lin has made significant contributions to the clinical implementation of advanced radiotherapy techniques. Dr. Lin has authored/co-authored more than 70 peer reviewed publications, as well as several book chapters and editorials. Her work not only pushes the boundaries of current radiotherapy practices but also aims to improve the precision and efficacy of cancer treatments. Beyond her academic and clinical pursuits, Dr. Lin is an active member of the medical physics community. She organizes events and symposiums that foster collaboration and innovation, demonstrating her commitment to advancing the field. Dr. Lin's involvement extends to prestigious organizations such as the AAPM Working Group on Treatment Planning and Task Group No. 395, where she contributes her expertise to shape the future of medical physics.

Dr. Zhilei (Julie) Shen is an assistant professor and lead physicist for treatment planning and IT in the Department of Clinical Radiation Oncology at the University of Southern California (USC). She obtained her PhD in Biomedical Engineering from Case Western Reserve University, followed by postdoctoral fellowship and residency in medical physics at Cleveland Clinic.

Her clinical expertise includes treatment planning, SRS/SBRT, Gamma Knife, CyberKnife, IGRT, DIBH, 4DCT, TBI, TSET, HDR (prostate, gyn, skin), LDR (eye plaque, GammaTile, prostate seeds), etc. Dr. Shen has served as Associate Editor for TCRT. Her research focuses on advanced treatment planning, auto-segmentation, and deformable image registration.

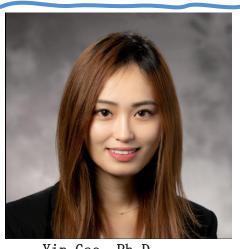
Dr. Shen has served as treasurer for both the Penn-Ohio Chapter and Southern California Chapter (SCC) of AAPM. Her efforts have led to a significant increase in industry sponsors for the AAPM-SCC symposium, rising from 18 in 2022 to 36 in 2024. She has organized the chapter student competitions at USC in 2022 and 2024. She is currently the president-elect of AAPM-SCC. Dr. Shen contributes to various AAPM national committees, including chairing the International Council Webpage Update Subcommittee and participating in several MPLA workgroups. She is the inaugural chair of USC Keck Asian Pacific Islander Faculty and Staff Association (APIFSA), demonstrating her dedication to promoting diversity and inclusion.

focused on fostering external financial support for NCMPA events and operations while nurturing the existing vibrant community.

NACMPA Website Domain Migration



Our Association's website (www.nacmpa.org) has successfully migrated its domain to a public hosting service wix.com. You may not notice the difference, as it all happened in the background and the web address remains the same. Since NACMPA was established 30 years ago, our association has been using the same web address. In the 1990's, internet just started and there was no economical public hosting services. Dr. Raymond Wu and Mr. Jeff Luo set up a private server to host our association's domain with a very reasonable cost. Through the years, technology has involved, and public hosting services have become common. The ExCom decided to migrate our website to wix.com for easier maintenance. I was honored to lead this project. It may seem straightforward, yet a lot were tested and coordinated. We are all physicists, so we like to do testings and dry runs before the magic switch ©. It was Dr. Wu's idea that we registered a temporary nacmpa.info domain at a very low cost for the testing. We successfully did the migration one year after the initiation of the project! It was truly a teamwork: Yi Rong, Dengsong Zhu, Josh Xu, Lu Wang, Chengyu Shi, Zhicong Huang, and most importantly, Francis Yu and Yin Gao, who did majority work. Thank you all!



Yin Gao, Ph.D. University of Pennsylvania

The New NACMPA's Official Website

In 2023, the North American Chinese Medical Physicists Association (NACMPA) successfully launched the new official website. Having an effective official website as a centralized platform is important for NACMPA to foster a sense of community and distribute information. As the website designer, I would like to discuss its development and outline our future plans.

Several key features were incorporated into the new website. The news and events section keeps members updated on recent

activities and upcoming events. A resource library provides access to important documents, newsletters, and other relevant materials, facilitating ongoing education and professional development within the association. An interactive member directory facilitates networking and collaboration. Additionally, the new NACMPA website offers a user-friendly interface with easy navigation, a secure members-only area, online membership registration, and a contact form for direct communication with NACMPA, which further enhance the website's functionality and utility. These features not only enhance the user experience but also ensure that the website serves as a valuable tool for both the association and our members.

To ensure optimal service for our members, NACMPA has implemented a strategic management approach for the official website and other social media platforms, including WeChat. The WeChat group chat serves as a platform to spotlight crucial updates from the website and engage members in real-time to generate excitement around events. The official website remains the primary hub for essential information, guaranteeing 24/7 access for members from anywhere. This approach ensures consistent communication, enhances member engagement, and effectively promotes events across both channels.

Future work on the development of our official website will focus on enhancing user experience through improved navigation, mobile optimization, and personalized member dashboards. Additionally, we will strengthen the integration with social media by implementing seamless content sharing and real-time updates, ensuring consistent and synchronized communication across all channels. By leveraging analytics and member feedback, we aim to continually refine our website to meet the evolving needs of our members and maintain a dynamic, connected community.

Lastly, I would like to acknowledge the leadership of NACMPA and Dr. Raymond Wu. Their contribution and support were instrumental in the successful redesign and migration of the NACMPA website.

Development of Focused X-ray Luminescence Compute Tomography Imaging

Yile Fang¹, Yibing Zhang¹, Changqing Li^{2*}

¹Department of Bioengineering, University of California, Merced, Merced, CA 95343, USA.

²Department of Electrical Engineering, University of California, Merced, Merced, CA 95343, USA.

*Corresponding Author: Changqing Li, Email: cli32@ucmerced.edu







Dr. Yile Fang

Yibing Zhang Dr.

Dr. Changqing Li

X-ray luminescence is produced when contrast agents absorb energy from X-ray photons and release a portion of that energy by emitting photons in the visible and near-infrared range. X-ray luminescence computed tomography (XLCT) was introduced in the past decade as a hybrid molecular imaging modality combining the merits of both X-ray imaging (high spatial resolution) and optical imaging (high sensitivity to tracer nanophosphors).

Narrow beam XLCT imaging

Particularly, the narrow X-ray beam based XLCT has been demonstrated to have very high spatial resolution at depths of several centimeters with good molecular sensitivity inside turbid media [1, 2]. As shown in Fig. 1, X-ray photons excite X-ray excitable contrast agents emitting optical photons that propagate to the object surface to be measured by photodetectors. These measurements are used for model based XLCT image reconstructions usually with the anatomical guidance of X-ray beam position for better spatial resolution.

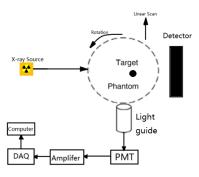


Figure 1. Schematic diagram of the narrow beam XLCT imaging system.

The first demonstration of XLCT imaging was reported by Pratx et al. [3, 4] using a selective excitation scanning scheme, like the pencil beam X-ray CT imaging and then by many other groups [5-7]. We have shown that by using a focused beam of x-rays as the excitation source in XLCT, orders of magnitude of better sensitivity were achieved due to higher flux and efficient use of x-ray photons compared with the collimation-based method [8]. Our studies have demonstrated that the spatial resolution could be improved to be close to the X-ray beam size by reducing the scanning step size to be smaller than the X-ray beam size [9]. To perform multi-color XLCT imaging, we synthesized biocompatible nanophosphors with bright and distinct Xray luminescence spectra and compared them with commercially available nanophosphors [10]. However, the long scan time of the narrow beam based XLCT limits its applications in 3D and in vivo imaging.

Benchtop Focused beam based XLCT imaging System

Fig. 2 shows a benchtop focused beam based XLCT imaging system we have built. To improve the scan time, we have developed a continuous scanning scheme where the X-ray beam moves across the object continuously [11]. Furthermore, we have shown that the data acquisition time can be further reduced by using a gated photon counter to replace the high-speed oscilloscope [12]. With the proposed superfast scan scheme, we have achieved 43 seconds per transverse scan, which is 28.6 times faster than before with slightly better XLCT image quality [13]. The superfast scan allows us to perform 3D XLCT imaging and pencil beam CT imaging simultaneously.

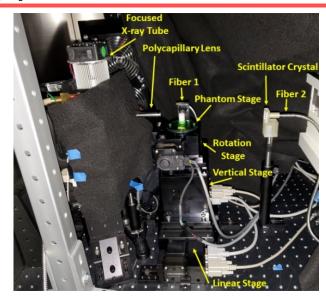


Figure 2. Photographs of the 3D XLCT imaging system.

Focused beam based XLCT Imaging System with a Rotary Gantry

So far, only benchtop systems have been developed to show proof-of-principle with phantom experiments [14, 15]. To perform in vivo imaging for small animals, we have designed and built a first-of-its-kind Focused X-ray Luminescence Tomography (FXLT) imaging system based on a rotary gantry as shown in Fig. 3 and Fig. 4 [16]. There is a co-registered cone beam microCT imaging system using a cone beam x-ray tube. We are able to perform both XLCT imaging and a pencil beam based microCT simultaneously using the superfine focused beam x-ray tube (fleX-Beam, XOS). All the major devices are mounted on the rotary gantry while the imaged objects such as small animals are placed on a linear stage in the rotary center.

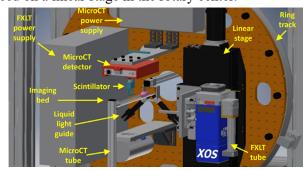


Figure 3. Design of the FXLT imaging system.

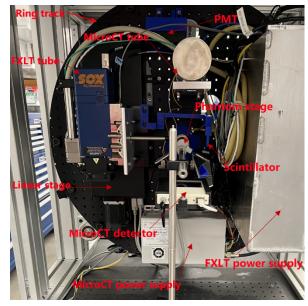


Figure 4. Photographs of the FXLT imaging system.

A lab-made C++ program was coded to control the imaging system [17]. The linear scan at each angular projection was performed by moving the focused X-ray tube with the heavy-duty linear stage in a continuous motion using a flyscanning scheme [13]. Using synthesized biocompatible nanophosphors as contrast agent, we have performed phantom experiments with capillary tube targets and 3D printed targets, scanned both euthanized and in vivo mice with xenografted tumors to evaluate the performance of the imaging system. The results indicated that the scanner is able to obtain in vivo 3D functional images and 3D structural images simultaneously, at high spatial resolution (150 µm), and with good molecular sensitivity (around 0.18 μM) in deep tissue. The nanoparticles inside the xenografted tumors of a live mouse have been successfully reconstructed three-dimensionally by the pencil beam XLCT for the first time.

Future Directions

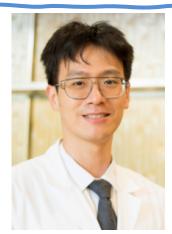
In future studies, we will use the proposed XLCT imaging modality to image the molecular oxygen with high spatial resolution [14]. We will also use the scan scheme and reconstruction algorithm in XLCT to perform X-ray fluorescence computed tomography imaging with the focused beam x-ray tube [18].

References

- [1] M.C. Lun and C. Li, "High-resolution x-ray luminescence computed tomography," Proc. of SPIE 11317, Medical Imaging 2020: Biomedical Applications in Molecular, Structural, and Functional Imaging; 11317D (2020).
- [2] M.C. Lun, W. Zhang, and C. Li, "Sensitivity study of x-ray luminescence computed tomography," Appl. Opt. **56** (11), 3010-9 (2017).
- [3] G. Pratx, C.M. Carpenter, C. Sun, R. Rao, and L. Xing, "Tomographic molecular imaging of x-ray excitable nanoparticles," Opt. Lett. **35**, 3345-3347 (2010).
- [4] G. Pratx, C.M. Carpenter, C. Sun, and L. Xing, "X-ray Luminescence Computed Tomography via Selective Excitation: A Feasibility Study," IEEE Trans. Med. Imag. 29 (12), 1992-1999 (2010).
- [5] C. Li, G. Mitchell, J. Dutta, S. Ahn, R. Leahy, and S. Cherry, "A three-dimensional multispectral fluorescence optical tomography imaging system for small animals based on a conical mirror design," Optics Express, vol. 17, no. 9, pp. 7571-7585, 2009, 2009.
- [6] C. Li, G. Wang, J. Qi, and S. Cherry, "Three-dimensional fluorescence optical tomography in small-animal imaging using simultaneous positron-emission-tomography priors," Optics Letters, vol. 34, no. 19, pp. 2933-2935, 2009, 2009.
- [7] H. M. Hertz, J. C. Larsson, U. Lundstrom, D. H. Larsson, and C. Vogt, "Laboratory x-ray fluorescence tomography for high-resolution nanoparticle bio-imaging," Opt Lett, vol. 39, no. 9, pp. 2790-3, May 1, 2014.
- [8] W. Zhang, M.C. Lun, A. Nguyen, and C. Li, "A focused x-ray beam based x-ray luminescence computed tomography," J. of Biomed. Opt. 22 (11), 116004 (2017).
- [9] Y. Zhang, M.C. Lun, C. Li, Z. Zhou, "Method for improving the spatial resolution of narrow x-ray beam-based x-ray luminescence computed tomography imaging", Journal of Biomedical Optics, 24(8), 086002 (2019).
- [10] Lun MC, Ranasinghe M, Arfuzzman M, Fang YL, Guo YP, Anker JN, Li CQ, "Investigation of contrast agents for x-ray luminescence computed tomography", Applied Optics, 60 (23), 6769-6775 (2021).
- [11] M. C. Lun, Y. Fang, and C. Li, "Fast three-dimensional focused x-ray luminescence computed tomography," in

- Medical Imaging 2021: Biomedical Applications in Molecular, Structural, and Functional Imaging, B. S. Gimi and A. Krol, Eds., Online Only, United States: SPIE, Feb. 2021, p. 44.
- [12] Y. Fang, M. C. Lun, Y. Zhang, J. N. Anker, G. Wang, and C. Li, "Super-fast three-dimensional focused x-ray luminescence computed tomography with a gated photon counter," in Medical Imaging 2022: Biomedical Applications in Molecular, Structural, and Functional Imaging, B. S. Gimi and A. Krol, Eds., San Diego, United States: SPIE, dApr. 2022, p. 8.
- [13] Y. Fang, Y. Zhang, M. C. Lun, and C. Li, "Superfast Scan of Focused X-Ray Luminescence Computed Tomography Imaging," IEEE Access, vol. 11, pp. 134183–134190, (2023).
- [14] Y. Zhang et al., "Oxygenation imaging in deep tissue with x-ray luminescence computed tomography (XLCT)," in Medical Imaging 2023: Biomedical Applications in Molecular, Structural, and Functional Imaging, B. S. Gimi and A. Krol, Eds., San Diego, United States: SPIE, Apr. 2023, p. 16.
- [15] Y. Fang, Y. Zhang, and C. Li, "Quantitative study of x-ray luminescence computed tomography," in Medical Imaging 2024: Clinical and Biomedical Imaging, B. S. Gimi and A. Krol, Eds., San Diego, United States: SPIE, Apr. 2024, p. 37.
- [16] Lun MC, Cong WX, Arifuzzaman M, Ranasinghe M, Bhattacharya S, Anker JN, Wang G, Li CQ, "Focused x-ray luminescence imaging system for small animals based on a rotary gantry", Journal of Biomedical Optics, 26(3), 036004 (2021).
- [17] Y. Fang, Y. Zhang, M. C. Lun, J. N. Anker, G. Wang, and C. Li, "Development of fast and three-dimensional focused x-ray luminescence tomography system," in Medical Imaging 2023: Biomedical Applications in Molecular, Structural, and Functional Imaging, B. S. Gimi and A. Krol, Eds., San Diego, United States: SPIE, Apr. 2023, p. 34.
- [18] I. O. Romero, Y. Fang, M. Lun, and C. Li, "X-ray Fluorescence Computed Tomography (XFCT) Imaging with a Superfine Pencil Beam X-ray Source," Photonics, vol. 8, no. 7, p. 236 (2021).

From Student to Resident: My Path in Medical Physics



Jingwei Duan, Ph.D.
University of Alabama at Birmingham (UAB)

Jingwei Duan, PhD, is currently a Medical Physics Resident at the University of Alabama at Birmingham (UAB). He received both his Ph.D. and M.Sc. in Radiation and Radiological Science from the University of Kentucky in 2023. His research interests include clinical workflow automation, medical image processing, and adaptive therapy.

My journey in medical physics began in 2019 when I started studying at the University of Kentucky (UK). As I neared the end of my undergraduate studies, I began considering career options. Quite by chance, I came across medical physics and immediately developed a profound interest in it. Fortunately, this discovery led me to pursue a graduate program in medical physics at the University of Kentucky.

Thanks to the graduate program, I had the opportunity to learn about the clinical responsibilities of medical physicists in radiation oncology and engage in meaningful research. The comprehensive coursework and hands-on training equipped me with a deep understanding of medical physics principles and applications. Additionally, I participated in several research projects, primarily focused on optimizing clinical workflows through automation and medical image processing innovations.

After graduation, I was fortunate to start my residency training

at the University of Alabama at Birmingham (UAB). Transitioning from a student role to a resident with direct clinical duties was a uniquely challenging yet rewarding experience. While the training is undoubtedly demanding, it is absolutely attainable. During this transition, I realized that my daily work had a direct impact on patients, which made me appreciate and enjoy this career even more. One of the most rewarding aspects of my residency has been the opportunity to apply my knowledge in a clinical setting. Working alongside experienced physicians, physicists, dosimetrists and therapists, I have gained practical skills and insights that are invaluable in the role of medical physicist. Every day brings new learning experiences and challenges. These hands-on experiences have solidified my understanding of the theoretical concepts I learned during my graduate studies. I was also lucky enough to continue my research on topics that could positively impact patient care, such as adaptive therapy.

Overall, no one's journey to medical physics is the same. I am still a newcomer in this profound field, with much left to learn. However, I hope that my experience can encourage others. This field is full of challenges, it is also filled with endless opportunities and possibilities for growth and innovation. Follow your interests, keep learning and growing, and you will find that every step on this path is worth it.

吃喝玩乐在洛杉矶

Chengyu Shi, PhD, DABR, FAAPM

洛杉矶,天使之城。洛杉矶座落在美国西海岸加利福尼亚州南部,濒临太平洋东侧的圣佩德罗湾和圣莫尼卡湾沿岸,背靠圣盖博山,面积1213.8平方公里。为加州第一大城市,同时也是美国人口第二大都市,仅次于纽约。全市面积为469.1平方英里(1214.9平方公里)。由洛杉矶、长滩、安那翰3市组成的洛杉矶都会区拥有约1331万的人口,涵盖范围更广的大洛杉矶地区则达到1870万,两者在统计上均次于纽约都会区,为全美国第二大都会区。



AAPM会议将于7月在洛杉矶市中心会展中心举行,除了参加会议享受最新的业界知识,与医学物理相关的信息和会见老友,您一定还想吃喝玩乐一番,这里我们简单介绍一下华人喜欢的旅游和就餐地点。

下图介绍了初来洛杉矶可能要去的地方。



沙矶必打卡景点



01 迪士尼乐园

Disnevland

时间:8:30AM-9:00PM(以官网为准)

NACMPA NEWSLETTER

门票:\$83起/天(以官网为准)

评价:迪士尼乐园是一个充满魔法的世 界,可以在这里与心爱的迪士尼角色相 遇,体验各种刺激有趣的游乐设施。



圣莫尼卡码头

Santa Monica Pier

门票:免费

评价:洛杉矶网红景点,可以在这里欣赏到壮丽的海景,同时还有许多餐馆



好莱坞环球影城

Universal Studios Hollywood

时间:8:30AM-9:00PM(以官网为准)

门票:\$109起/天(以官网为准)

评价:好莱坞环球影城是洛杉矶的必游 之地,游客可以参观电影制作过程,体验 特技镜头,回顾经典影片的精彩片段。



盖蒂中心 07

Getty Center

时间:10:00AM-5:30PM(以官网为准)

门票:免费(需要预约)

评价:盖蒂中心是一座艺术博物馆,拥 有丰富的欧洲绘画、雕塑和装饰艺术 藏品,是艺术爱好者们闭眼冲。



道奇体育场

Dodger Stadium

时间:09:00-17:00(周日闭馆)

门票:免费

评价:道奇体育场是洛杉矶道奇棒球队 的主场,是棒球迷们观看比赛的好去



09

环球城市大道

Universal CityWalk

时间:与环球影城同步开放

门票:免费(但内部设施需单独购票)

评价:环球城市大道是一个集购物、餐 饮和娱乐于一体的综合性步行区,游客 可以在这里品尝美食、购买纪念品,并 欣赏到各种现场表演。

河必打卡景点



好莱坞星光大道 Hollywood Boulevard

时间:全天开放

门票:免费

评价:洛杉矶著名的旅游景点之一,它是 一条沿着好莱坞大道和藤街的人行道 嵌着超过2500枚代表娱乐产业杰出成 就的"星星"。



05 大中央市场

Grand Central Market 时间:8:00AM-9:00PM

门票:免费

评价:大中央市场是洛杉矶著名的室内 食品市场,拥有各种美食摊位和餐馆,是 游客品尝地道美食的好去处。



06 格里斐斯公园

时间:全天开放

门票:免费

评价:洛杉矶最大的公园之一,一定要去公园里的格里菲斯天文台,爱乐之城 LalaLand取景地,洛杉矶夜景最佳的位 置,视野辽阔很震撼。



第三步行街

Third Street Promenade

时间:全天开放

门票:免费

评价:第三步行街是圣塔莫尼卡市中心 的一条著名购物街,拥有各种时尚精 品店、餐厅和咖啡馆。



太平洋水族馆

Aquarium of the Pacifi

时间:9:00AM-6:00PM

门票:\$20~30左右

评价:太平洋水族馆位于长滩市,是美国 最大的海洋主题公园之一.这里展示了 丰富的海洋生物,包括鲨鱼,海豚,海狮 和各种珊瑚礁生物。





RMS Queen Mary

时间:全天开放

门票:成人票价\$40,儿童票价\$20

玛丽皇后号

评价:玛丽皇后号是一艘历史悠久的邮 轮,曾是第二次世界大战前欧洲上流社 会奢华生活的象征.游客可以参观其内 部装饰和船舱,感受其独特的历史氛围.



13 加密网竞技场

Crypto.com Arena

时间:比赛日开放,具体时间因比赛而定

门票:具体价格请查询官网

评价:加密网竞技场,美国体育馆,是 NBA洛杉矶湖人队,洛杉矶快船队主场, 前身是斯台普斯中心。



4 格罗夫购物中心

The Grove

时间:10:00AM-9:00PM

门票:免费

评价:一个集购物,餐饮和娱乐于一体的综合性购物中心.这里汇聚了众多世界知名品牌,同时也提供各种美食选择和娱乐设施,如电影院,喷泉表演等。



好莱坞露天剧场

Hollywood Bowl

时间:根据演出季和具体活动而有所不同

门票:座位不同票价不同

评价:是一个露天音乐厅,这里经常举办各种音乐会、歌剧和芭蕾舞等演出活动,剧场的音响效果极佳。

注意:洛杉矶部分地区治安比较差,例如中国城,韩国城,建议多人一起白天出行,不要佩戴会议牌牌,入夜不要将车停在路边,尽量用出租车,Uber,Lyft等出行。白天观光巴士也是不错的选择。天气也会比较炎热,建议遮阳(包括男士)和多带点水。钱包了准备些小的零钱,大约几十块吧,以防万一。

下面再列举几个喝和浪漫的餐厅酒吧:

Hive and Honey Rooftop Bar Mama Shelter Catch LA

浪漫的餐厅:

Moon Shadows Lvory on sunset The rooftop lounge

购物:

Westfield Century City (UCLA 附近)

Perch LA
The Rooftop by JG

Geoffrey Gastaway burbank Dirftwood Kichen

Desert Hill Premium Outlets (需要开车 2h)

下面的项目可能得有时间才行:

- ◆去long beach观鲸
- ◆去Catalina Island潜水
- ◆在Venice beach学习冲浪
- ◆去newport beach 出海垂钓,抓大龙虾
- ◆去White Point beach等退潮捡海胆
- ◆去学飞行基地学开飞机
- ◆去gun club试一试实弹射击
- ◆和小伙伴们去红杉公园漂流
- ◆Coachella科切拉音乐节
- ◆去沙漠奥莱购物
- ◆去Rose Bow1跳蚤市场淘货

UCLA附近:

- 1. Fifty-one 伍拾壹: 北京菜广东菜和dim sum
- 2. Qin West 桂陕一家: 桂林米粉和陕西凉皮肉夹馍
- 3. Feng Mao BBQ Lamb Kebab Western
- 4. Northern Cafe 颐丰园:面食、烧烤和火锅
- 5. Popcorn Chicken: 好吃的台湾便当
- 6. Mr Rice 米先生: 双椒肥牛米线和红烧牛腩饭
- 7. Sichuan Impression 锦城里: 合格的四川味道
- 8. Capital Seafood Beverly Hills: 港式点心
- 9. 海底捞

东边的中国城地区:

- 10. 幺妹儿火锅:四川火锅*!
- 11. 山城辣妹子火锅:
- 12. 那年遇见串串: 串串🍢
- 13. 老刘家烤鱼:最喜欢的烤鱼!老刘家绝味
- 14. 海港大酒楼: Dim Sum
- 15. 老码头火锅
- 16. 辣椒王: 湖南菜 辣
- 17. 洞庭春: 湖南菜, 麻辣小龙虾
- 18. 隆兴记: 蟹黄汤包
- 19. 北京缘: 烤鸭和全鱼泡饼
- 20. 那家小馆: 米其林北京菜
- 21. 金海餐厅: 煎饼果子豆浆油条
- 22. 西安食府
- 23. 一品香: 麻辣香锅
- 24. 山里屯: 东北铁锅炖大鹅
- 25. 吴铭火锅
- 26. 原味店: 正宗的广东小食
- 27. 上海壹号: 好吃♡
- 28. 上海滩: 正宗上海菜
- 29. 大院炒鸡: 山东菜
- 30. 壹家砂锅馆: 黄焖鸡米饭
- 31. 禄鼎记: 老牌米线
- 32. Alice's Kitchen: 港式茶餐厅,菠萝油
- 33. 活粥王:海鲜粥
- 34. 从前的小酒馆: 烤串
- 35. 沸腾石锅鱼
- 36. 滋味成都: 老牌四川菜
- 37. 聚点串吧: 最喜欢的烤串
- 38. 唇辣号重庆火锅
- 39. Dolans Uyghur Cuisine:新疆菜!羊肉!咸奶茶!
- 40. 杨铭宇黄焖鸡米饭
- 41. 宽窄巷子: 好吃的川菜
- 42. 金鸭子: 烤鸭
- 43. 吉荣烤鸭
- 44. 祥记私房菜: 港式茶餐厅
- 45. 老西面馆儿: 山西人觉得还可以
- 46. 一瓢红油: 川菜
- 47. 喜湘御: 湖南菜
- 48. 那家老菜馆: 地道的东北菜

- 49. 宽窄巷子: 四川菜
- 50. 康康小美: 贼好吃的生煎包!

啥?嫌不够档次?这里还有啊

那家小馆

◇精致北京菜,米其林一星☆从中式庭院风装修,到菜品摆盘和精致的宫廷风餐具,处处流露出中国韵味。建议提前订位,人均\$80-100,广场可免费停车

╱推荐菜品: 酥皮大明虾、那府自制豆腐、鹌鹑蛋烧牛腩、黑椒羊排、小吊梨汤

- 9055 Las Tunas Dr, Temple City, CA
- \bigcirc 11:00 AM 2:30 PM, 5:00 PM 9:00 PM

品味长安

心地道陕西菜,招牌菜品长安炙鸭,有专门从国内请来的师傅现场片鸭,片鸭前还有白酒火浇表演,人均\$150,所在的plaza很好停车

─推荐菜品: 烤鸭+爆炒鸭架+鸭汤馄饨、炭烤牛肋骨、鸭酥饼、一品鲍鱼鹌鹑蛋红烧肉

- 13051 Newport Ave, Tustin, CA
- 11:30 AM 2:30 PM, 5:00 PM 10:00 PM

眉州东坡

国内外都有连锁店的知名川菜餐厅,味道正宗,环境雅致,招牌东坡烤鸭皮脆肉嫩,有师傅现切,服务细致,人均\$70,所在商场可以免费停车

╱推荐菜品: 东坡烤鸭、松鼠鱼、辣子鸡、宫廷小火锅、夫妻肺片、鱼香茄子

- 9 400 S Baldwin Ave, Arcadia, CA
- 11:30 AM 9:00 PM

三十六宴

之这家餐厅环境宁静雅致, 菜品融合了川菜、本帮菜和各种创新菜品,服务员一口吴侬软语让人倍感亲切,包间还可以唱KTV 人均\$75-100

╱推荐菜品: 脆皮乳鸽、话梅脆皮虾、36宴红烧肉、本帮响油鳝丝

- ⁹ 5449 Rosemead Blvd, San Gabriel, CA
- 11:30 AM 2:30 PM, 5:00 PM 9:30 PM

新避风塘

○港式餐厅,每一道菜味道都很正宗,特式炒虾/蟹外脆里嫩,螃蟹肉质肥厚,火候到位,盘底无油,一点都不会油腻,适合家庭聚餐,人均\$30

╱推荐菜品:避风塘特式炒蟹、白切鸡、鱼锅、乳鸽、潮州泡饭

₹ 684 W Garvey Ave, Monterey Park, CA

声明:以上资料来自网络,多谢网上的大侠们,不能一一鸣谢。可以搜索小红书和微信。





Date/Time:

July 24, 2024 5:30PM - 9:30 PM

Place:

888 Seafood Restaurant

Address:

8450 E. Valley Blvd., #121, Rosemead, CA 91770 Bus pick up <u>5:00pm</u> at the Convention Center

Reception style/seated dinner will be provided

Pre-registration is required.

Email address: nacmpa@yahoo.com

30th Annual Meeting of North American Chinese Medical Physicists Association (NACMPA)

Los Angeles, CA

