



Review of the Spring Conference of the Korean Society of Medical Informatics 2023: Revolution and Innovation in Smart Healthcare

Jungchan Park^{1,2}, Taehoon Ko³, Younghee Lee⁴, Kwangmo Yang⁵ on behalf of the KOSMI's Academic Committee

¹Department of Biomedical Informatics, Ajou University School of Medicine, Suwon, Korea

²Department of Anesthesiology and Pain Medicine, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, Korea

³Department of Medical Informatics, The Catholic University of Korea College of Medicine, Seoul, Korea

⁴College of Veterinary Medicine, Seoul National University, Seoul, Korea

⁵Center for Health Promotion, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, Korea

The integration of smart technologies and digital solutions into healthcare systems holds immense promise for improving patient outcomes, enhancing clinical decision-making, streamlining processes, and enabling personalized care [1]. The Spring Conference of the Korean Society of Medical Informatics (KOSMI) is a prestigious event that brings together healthcare professionals, researchers, industry experts, and policymakers to explore the latest advances in the field of medical informatics (Table 1). In 2023, the conference took place against the backdrop of a rapidly evolving healthcare landscape, marked by groundbreaking technological innovations and the pursuit of a smarter and more efficient healthcare system. With the theme of “Revolution and Innovation in Smart Healthcare,” the conference aimed to foster an environment of collaboration, knowledge exchange, and forward-thinking discussions.

The conference featured a diverse range of sessions, keynote speeches, workshops, and interactive panel discussions that covered a broad spectrum of topics related to medical informatics. These discussions provided participants with the chance to delve into how these advancements can be ef-

Table 1. Highlight successes for the Spring Conference of the KOSMI 2023

Category	n
Participant	1,058
Symposium	21
Poster presentation	83
Oral presentation	40

KOSMI: Korea Society for Medical Informatics.

fectively harnessed to drive positive change in healthcare delivery and management. Herein, we present a comprehensive review of the conference, highlighting key insights, noteworthy research findings, and emerging trends discussed during the event.

Day 1

The conference kicked off with a series of online tutorials, providing participants with valuable insights into various aspects of medical informatics. The tutorials were divided into three sections: “Research Applications for ChatGPT Beginners,” “Advanced SNOMED CT,” and “Hands-on Nursing Informatics Curriculum for Instructors.” Each section offered a focused learning opportunity, allowing attendees to deepen their understanding of specific topics. The tutorials featured engaging presentations, live demonstrations, and interactive discussions.

This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (<http://creativecommons.org/licenses/by-nc/4.0/>) which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Day 2

The main event of the conference kicked off on the second day, beginning with a competitive session. This provided speakers with a chance to present their individual studies and participate in a friendly competition. This platform allowed researchers and experts to showcase their research work, share insights, and engage in a vibrant exchange of ideas. Following this session, President Dai-Jin Kim and Chairperson In Young Choi announced the official commencement of the Spring Conference of KOSMI with an opening ceremony. During the opening ceremony, congratulatory speeches were delivered by Pil-hwan Lee, Executive Vice President of Keimyung University; Seok Jun Hong, a member of the National Assembly; Seong Ho Eun, Director-General of the Ministry of Health and Welfare; and Geunchan Lim, President of the Korea Health Information Service.

In every room, attendees had the privilege of experiencing the “Bumsan” special lecture. The “Bumsan” is an honorary title, commemorating the late Changsoon Koh, the founding president of KOSMI. To honor his legacy and vision, KOSMI invites esteemed speakers from both local and international medical informatics fields to deliver insightful keynote speeches at each academic conference. This year, the lecture was presented by Soondo Cha, the President of the Korea Health Industry Development Institute, on the subject of “Digital Transformation Era: Sustainable Strategies for Innovative Growth in Biohealth.” The lecture emphasized the swift transformation of the biohealth industry, propelled by digital technologies, data, and artificial intelligence, which are all fostering innovation in healthcare services. The government is committed to playing a pivotal role in encouraging and supporting this transformation through initiatives such as smart hospital models, the creation of a national bio big data infrastructure, and the enforcement of digital healthcare regulations.

Eight symposiums were conducted across four separate rooms. The topics of these symposiums were “Application Strategies of Ultra-Large AI in the Medical Field,” “Promotion of Health and Medical Data Interoperability through Standardization,” “Empirical Cases of Daegu Regulatory Free Zone for Medical Information Utilization,” “Legal and Ethical Considerations for Research Utilizing Medical Records,” “Utilization of My Health Way and Improvement of Legal Framework,” “Strategies for Developing Talents for the Future of Medical Artificial Intelligence in South Korea,” “Overview and Domestic Expansion Activities of Health and Medical International Terminology Standardization,” and

“Building an Innovative Ecosystem for Medical Research through Federated Learning of Medical Data.”

Day 3

The last day of the conference also began with a competitive session, followed by eight additional symposia, on the following topics: “Application and Future Prospects of Natural Language Processing and ChatGPT Technology in the Medical Field,” “COVID-19 Time Capsule Archive and Digital Health,” “Research Approaches for Enhancing the Value of Digital Healthcare through Convergence Medicine,” “NI Symposium 1: Application and Future Directions of Smart Nursing Practices in Healthcare Institutions,” “Issues and Strategies for Medical MyData Towards Precision Medicine,” “Leaders Forum: Trends and Domestic Applications of Digital Health International Collaborative Bodies,” “Development of Korean Intensive Care Unit Data (K-MIMIC) and Clinical Decision Support System for Physicians (AI-CDSS),” and “NI Symposium 2: Participation Strategies for Nurses in the Digital Health Field.” Additionally, five industry-supported symposia were presented by Kakao Healthcare, Lemon Healthcare, AITRICS, Naver Cloud, and Zoom.

Professor Seong Ki Mun of Virginia Tech gave a keynote address entitled “Clinical Adoption of AI in Radiology: A Case Study of Innovation in Smart Healthcare.” His speech explored the evolution of medical informatics within the field of radiology, with a particular focus on the challenges and progress made in AI-based computer-aided detection (CADe) systems. He underscored the importance of value-driven radiology services and the necessity for cooperation between healthcare professionals and engineers. The question-and-answer session covered areas such as collaboration, patient consent, the use of Institutional Review Boards, and the fair evaluation of human and machine performance in radiology.

The Spring Conference of the KOSMI served as a vibrant forum for healthcare professionals to engage in meaningful discussions, forge collaborations, and explore groundbreaking ideas that have the potential to revolutionize healthcare delivery. We believe that, by fostering a dynamic exchange of knowledge and experiences, the conference played a crucial role in shaping the future of smart healthcare, driving innovation, and ultimately improving patient care outcomes.

Acknowledgments

This summary of the conference is based on daily KOSMI

updates, which were made possible by the valuable input and efforts of KOSMI's academic committee members as below.

Kwangsoo Kim, Seoul National University Hospital; Nahyun Kim, Korea Advanced Institute of Science and Technology; Junghyun Namkung, SK Telecom; Yu Rang Park, Yonsei University; Jungchan Park, Samsung Medical Center; Seo Yeon Baik, Yeonsung University; Ingi Song, Yonsei University; Kwangsoo Shin, The Catholic University of Korea; Dukyong Yoon, Yonsei University; Seo Hung Lee, SeSeung LLC; Suehyun Lee, Gachon Univeristy; Seung-Bo Lee, Keimyung University; Seunghwa Lee, Wiltse Memorial Hospital; Yura Lee, Asan Medical Center; Jung Woo Lee, Wonju Severance Christian Hospital; Jisan Lee, Gangneung-Wonju National University; Baek Hwan Cho, Cha University; Sooh Cho, Seoul National University; Arok Choi, Seoul National University; Hyun Wook Han, Cha University.

Conflict of Interest

No potential conflict of interest relevant to this article was reported.

ORCID

Jungchan Park (<http://orcid.org/0000-0002-7794-3547>)

Taehoon Ko (<http://orcid.org/0000-0002-4045-0036>)

Younghee Lee (<http://orcid.org/0000-0002-6850-0082>)

Kwangmo Yang (<http://orcid.org/0000-0002-7176-4935>)

References

1. Dar H, Kashyap K. Smart healthcare system (SHS): medical tourism delivering, consumption, and elevating tool in the ages of smart technologies. *Tour Plan Dev* 2023; 20(3):397-415. <https://doi.org/10.1080/21568316.2022.2109206>