Curriculum Vitae

Updated as of March 30, 2025

1. Personal Information

Name:	Jaesung Hong
Gender:	Male
Telephone:	+82-53-785-6201
Email:	jhong@dgist.ac.kr
Website:	http://sr.dgist.ac.kr

2. Biographical Summary

Jaesung Hong has been an Associate and Full Professor of Robotics and Mechatronics Engineering at DGIST, Korea since 2010. His research primarily focuses on surgical AR/VR and surgical robotics. Fundamentally, he is interested in the integration of vision and robotics technologies for clinical applications. He received his B.S. and M.S. degrees in Electronic Engineering from Kyungpook National University, Korea, and his Ph.D. in Frontier Sciences from The University of Tokyo, Japan, in 2004. After obtaining his Ph.D., he worked as a Foreign Researcher of the Japan Society for the Promotion of Science (JSPS), funded by the Japanese government, at The University of Tokyo, and as an Associate Professor at Kyushu University, Japan. He is currently a Professor in the Department of Robotics and Mechatronics Engineering at DGIST, Korea.

As of March 2025, Dr. Hong has published 63 peer-reviewed journal papers indexed in SCIE by Clarivate. Among them, 28 papers were ranked in the top 25% (Q1) in each category, and 38 papers were published as the first or corresponding author. He has registered 47 patents, including 4 US and 1 Japan patents. His most cited article, “An ultrasound-driven needle insertion robot for percutaneous cholecystostomy,” was presented at MICCAI 2004 and published in Physics in Medicine & Biology in 2004, with over 360 citations. While working at Kyushu University Hospital, Japan, he developed original ENT, abdominal, neurological, and dental surgical navigation systems based on 3D Slicer open-source software, and clinically applied them to various surgeries for more than 200 patients. Among them, the dental implant navigation software has been commercialized in Japan and Korea as an approved medical device. He also developed AR-based surgical navigation and applied it to bone tumor surgeries for the first time in Korea, which was featured in more than 40 newspapers.

Dr. Hong has received highly competitive research grants in Korea and Japan. During his junior faculty career at Kyushu University in Japan, he succeeded in obtaining multiple individual research grants, KAKEN funded by the Japanese government, including WAKATE-A and HOUGA grants. During his professor career at DGIST, Korea, he received competitive individual research grants such as NRF-JUNGYEON (Type 1) funded by the Korean government. He has carried out 11 Korean government research projects and 5 local government or industry projects, mostly as Principal Investigator. As of March 2025, the total research funding he has raised while working at DGIST is about 5.7 billion KRW (4.8 million USD). Through national group projects, two surgical robot systems have been commercialized in Korea, one of which, a Brain Stereotactic Surgery robot developed by Koyoung Inc., has recently cleared FDA approval in the US.

He has supervised 17 Master’s students and 8 Ph.D. students to completion. Among them, one is now a tenure-track Assistant Professor at the Korea University of Technology & Education (KOREATECH), established by the Korean government. Four are tenure-track Senior Researchers at national research institutes in Korea, such as the Korea Institute of Machinery and Materials (KIMM). Additionally, nine are senior researchers in industry, including at SAMSUNG Medicine and POSCO DX.

Since 2011, he has served as a program committee member for Computer-Assisted Radiology and Surgery (CARS), and since 2019, as a program committee member for the Hamlyn Symposium on Medical Robotics. He served as co-chair of the IEEE RAS Technical Committee on Surgical Robotics from 2017 to 2020. Since 2010, he has been appointed as Senior Vice President (President-elect) of the Korean Society of Medical Robotics (KSMR) for 2025 and 2026. As the General Chair, he hosted the 20th Asian Conference on Computer-Aided Surgery (ACCAS) in 2024. He is also a Program Chair of Medical Imaging Computing & Computer-

Assisted Surgery (MICCAI) 2025. He served as an Associate Editor for the IEEE RA-L Journal in 2015 and 2016, and for Computer Assisted Surgery since 2022. He has given keynote or invited talks at 23 international conferences and symposiums, including UK Robotics Week, IET International Robotics Showcase 2016, and IROS workshops in 2016 and 2019.

He has received 14 paper and presentation awards, including the Best Paper Award of the International Conference on Advanced Mechatronics (ICAM) 2010, the Olympus Best Paper Award of the International Society of Computer-Assisted Surgery (ISCAS) at CARS 2011, and the Best Video Presentation Award at the Augmented Reality & Surgical Guidance Workshop in the Hamlyn Symposium on Medical Robotics (HSMR) 2013.

3. Education

Apr. 2001 – Mar. 2004.	PhD of Frontier Science, Graduate School of Frontier Science, The University of Tokyo, Japan (Thesis: Image-guided needle insertion instrument adapted to organ motion and deformation)
Feb. 1999 - Feb. 2000.	Research student, Information Engineering, Toyohashi University of Technology, Japan
Mar. 1997 - Feb. 1999.	Coursework completion for PhD, Graduate School of Electronics, Kyungpook National University, Korea
Mar. 1995 - Feb. 1997.	Master of Engineering, Graduate School of Electronics, Kyungpook National University, Korea
Mar. 1991 - Feb. 1995.	Bachelor of Engineering, Graduate School of Electronics, Kyungpook National University, Korea

4. Position and Appointments

Mar. 2017 - Present	Professor, Robotics & Mechatronics Engineering, DGIST
Apr. 2015 - Jun. 2017	Department Chair, Robotics & Mechatronics Engineering, DGIST
Oct. 2010 - Feb. 2017	Associate Professor, Robotics & Mechatronics Engineering, DGIST
Apr. 2010 - Sep. 2010	Associate Professor, Innovation Center for Medical Redox Navigation, Kyushu University
Jan. 2008 - Mar. 2010	Research Associate Professor, Innovation Center for Medical Redox Navigation, Kyushu University
May. 2005 - Dec. 2007	Research Assistant Professor, Faculty of Medical Sciences, Kyushu University
Apr. 2004 - Apr. 2005	JSPS Foreign Researcher, Graduate School of Information Science and Technology, The University of Tokyo

5. Journal Publication (Clarivate SCIE, Q1:Top 25%, *:Corresponding author)

65. Ha H, Jeung D, Ullah I, Tokuda **J, Hong** J, Lee H*, Target-specified reference-based deep learning network for joint image deblurring and resolution enhancement in surgical zoom lens camera calibration, Computers in Biology and Medicine, 183:109309, Oct 2024 (Q1) (Top 5%)
64. Lee S, Kim H, Byeon J, Shim S, Lee H, **Hong J***, Flexible endoscope manipulating robot using quad-roller friction mechanism, Computer Assisted Surgery, 29(1):2404695, Dec 2024
63. Kim S*, Shin D, Lee C, Yu D, Cho J, Bang H, Lee H, Kim D, Park I, **Hong J**, Joung S, Clinical efficacy and performance evaluation of a bendable remote robot system for a bone tumour surgery: A pilot animal study, The International Journal of Medical Robotics and Computer Assisted Surgery, 20(4):e2653, Aug 2024

62. Ha H, Gu K, Jeung D, **Hong J**, Lee H*, Simulated augmented reality-based calibration of optical see-through head mound display for surgical navigation, International Journal of Computer Assisted Radiology and Surgery, 19(8):1647-1657, Aug 2024
61. Kim J, Jeung D, Cho R, Yang B*, **Hong J***, A Proof of Concept: Optimized Jawbone-Reduction Model for Mandibular Fracture Surgery, Journal of Imaging Informatics in Medicine, 37(3):1151-1159, Jun 2024 (Q1)
60. Ha H, Lee J, Jung G, **Hong J**, Lee H*, 2D-3D Reconstruction of a Femur by Single X-Ray Image Based on Deep Transfer Learning Network, Innovation and Research in BioMedical engineering, 45(1):100822, Feb 2024 (Q1)
59. Jeung D, Choi H, Ha H, Oh S*, **Hong J***, Intraoperative zoom lens calibration for high magnification surgical microscope, Computer Methods and Programs in Biomedicine, 238:107618, Aug 2023 (Q1)
58. Jeung D, Jung K, Lee H, **Hong J***, Augmented Reality-based Surgical Guidance for Wrist Arthroscopy with Bone-Shift Compensation, Computer Methods and Programs in Biomedicine, 230:107323, Mar 2023 (Q1)
57. Ha H*, Han G, Lee S, Nam K, Joung S, Park I, **Hong J**, Robot–patient registration for optical tracker-free robotic fracture reduction surgery, Computer Methods and Programs in Biomedicine, 228:107239, Jan 2023 (Q1)
56. Solzbacher RM, Kim S, Lee S, Kim H, Joung S, Lee H, **Hong J***, Bone cyst surgery robot with bendable drilling and remote control, Journal of Computational Design and Engineering, 9(6):2495-2505, Oct 2022 (Q1)
55. Kim S, Shim S, Ji D, **Hong J***, Wave-Shaped Notched Compliant Joint With High Rigidity, IEEE Robotics and Automation Letters (with IROS 2022), 7(4):10168-10175, Oct 2022 (Q1)
54. Chien J, Ha H, Lee S, Hong J*, A shape-partitioned statistical shape model for highly deformed femurs using X-ray images, Computer Assisted Surgery, 27(1):50-62, Jun 2022
53. Jung K, Ha H, Jeon I, **Hong J***, Object panorama construction using large-parallax images, Multimedia Tools and Applications, 81(27):39059-39075, Apr 2022
52. Lee S, Joung S, Ha H, Lee J, Park K, Kim S, Nam K, Lee J, Lee H, Oh C, Park I, **Hong J***, 3D Image-Guided Robotic System for Bone Fracture Reduction, IEEE Robotics and Automation Letters (with ICRA 2022), 7(2):4353-4360, Apr 2022 (Q1)
51. Ha H, Jung K, Lee S, Lee H, **Hong J***, Heterogeneous Stitching of X-ray Images According to Homographic Evaluation, J Digit Imaging, 34(5):1249-1263, Sep 2021 (Q1)
50. Jung K, **Hong J***, Quantitative assessment method of image stitching performance based on estimation of planar parallax. IEEE Access, 9:6152-6163, Jan 2021 (Q1)
49. Choi H, Ha H, Lee H, **Hong J***, Robust control point estimation with an out-of-focus camera calibration pattern. Pattern Recognition Letters, 143:1-7, Dec 2020
48. Jung K, Kim H, Kholinne E, Park D, Choi H, Lee S, Shin M, Kim D, **Hong J***, Koh K, Jeon I*, Navigation-assisted anchor insertion in shoulder arthroscopy: a validity study, BMC Musculoskeletal Disorders, 21(1):812, Dec 2020
47. Ji D, Shim S, Kim S, Joung S, **Hong J***, Master Device With Bending safety for Flexible Surgical Robots, ASME Journal of Mechanisms and Robotics, 12(6):061003, May 2020
46. Hwang Y, Lee S, **Hong J**, Kim J*, A Novel End-Effector Robot System Enabling to Monitor Upper-Extremity Posture During Robot-Aided Planar Reaching Movements, IEEE Robotics and Automation Letters, 5(2):3035-3041, April 2020 (Q1)
45. Lee S, Shim S, Ha H, Lee H, **Hong J***, Simultaneous Optimization of Patient-Image Registration and Hand-Eye Calibration for Accurate Augmented Reality in Surgery, IEEE Transactions on Biomedical Engineering, 67(9):2669-2682, Jan 2020 (Q1) (selected as Featured Article)
44. Shim S, Ji D, Lee S, Choi H, **Hong J***, Compact Bone Surgery Robot with a High-resolution and High-rigidity Remote Center of Motion Mechanism, IEEE Transactions on Biomedical Engineering, 67(9):2497-2506, Jan 2020 (Q1)
43. Micic I, Kholinne E, Hong H, Choi H, Kwak JM, Sun Y, **Hong J**, Koh K, Jeon I, Navigation-assisted

suture anchor insertion for arthroscopic rotator cuff repair, BMC Musculoskeletal Disorders, 20(1):633, 20(1):633, Dec 2019

42. Ji D, Kang T, Shim S, **Hong J***, Analysis of Twist Deformation in Wire-driven Continuum Surgical Robot, International Journal of Control, Automation and Systems, 18(1):10-20, July 2019
41. Ji D, Kang T, Shim S, Lee S, **Hong J***, Wire-driven fexible manipulator with constrained spherical joints for minimally invasive surgery, International Journal of Computer Assisted Radiology and Surgery, 14(8):1365-1377, Aug 2019
40. Ahn J, Choi H, **Hong J**, Hong J*, Tracking Accuracy of a Stereo Camera-Based Augmented Reality Navigation System for Orthognathic Surgery, Journal of Oral and Maxillofacial Surgery, 77(5):1170.e1-1170.e11, May 2019
39. Lee S, Lee H, Choi H, Jeon S, Ha H, **Hong J***, Comparative study of hand–eye calibration methods for augmented reality using an endoscope, Journal of Electronic Imaging, 27(4):043017, July 2018
38. Ha H, Jeon S, Lee S, Cho H, **Hong J***, Perspective pinhole model with planar source for augmented reality surgical navigation based on C-arm imaging, International Journal of Computer Assisted Radiology and Surgery, 13:1671-1682, July 2018
37. Shim S, Choi H, Ji D, Kang W, **Hong J***, Robotic System for Bone Drilling Using a Rolling Friction Mechanism, IEEE/ASME Transactions on Mechatronics, 23(5):2295-2305, July 2018 (Q1) (Top 5%)
36. Kholinne E, J.Gandhi M, Adikrishna A, Hong H, Kim H, Hong J, Jeon I*, The Dimensionless Squared Jerk: An Objective Parameter That Improves Assessment of Hand Motion Analysis during Simulated Shoulder Arthroscopy, Biomed Research International, 2018:7816160, July 2018
35. Lee S, Kim J, **Hong J**, Baek S, Kim S, CT-based Navigation System Using a Patient-Specific Instrument for Femoral Component Positioning: An Experimental in vitro Study with a Sawbone Model, Yonsei Medical Journal, 59(6):769-780, Aug 2018
34. Song C, Jeon S, Lee S, Ha H, Kim J, **Hong J***, Augmented reality-based electrode guidance system for reliable electroencephalography, BioMedical Engineering OnLine, 17(1):64, May 2018
33. Cho H*, Park M, Cupta S, Han I, Kim H, Choi H, **Hong J**, Can Augmented Reality Be Helpful in Pelvic Bone Cancer Surgery? An In Vitro Study, Clinical Orthopasedics and Related Research, 476(9):1719-1725, Feb 2018 (Q1)
32. Jeon S, Chien J, Song C, **Hong J***, A Preliminary Study on Precision Image Guidance for Electrode Placement in an EEG Study, Brain Topography, 31(2):174-185, Mar 2018 (Q1)
31. Cho H*, Park Y, Gupta S, Yoon C, Han I, Kim H, Choi H, **Hong J**, Augmented reality in bone tumour resection, Bone & Joint Research, 6(3):137-143, 2017
30. Jung K, Choi H, Hong H, Adikrishna A, Jeon I, **Hong J***, A hands-free region-of-interest selection interface for solo surgery with a wide-angle endoscope: preclinical proof of concept, Surgical Endoscopy, 31(2):974-980, 2017 (Q1)
29. Choi H, Park Y, Lee S, Ha H, Kim S, Cho H, **Hong J***, A portable surgical navigation device to display resection planes for bone tumor surgery, Minimally Invasive Therapy & Allied Technologies, 26(3):144-150, 2017
28. Shim S, Kang T, Ji D, Choi H, Joung S, **Hong J***, An all-joint-control master device for single-port laparoscopic surgery robots, International Journal of Computer Assisted Radiology and Surgery, 11(8):1547-1557, 2016
27. Jung K, Kang D, Aashay L, Adikrishna A, **Hong J***, Jeon I, A new wide-angle arthroscopic system: a comparative study with a conventional 30° arthroscopic system, Knee Surgery Sports Traumatology Arthroscopy, 24(5):1722-1729, 2016 (Q1)
26. Lim H, Matsumoto N, Cho B, **Hong J**, Yamashita M, Hashizume M, Yi B, Semi-manual mastoidectomy assisted by human–robot collaborative control – A temporal bone replica study, Auris Nasus Larynx, 43(2):161-165, 2016
25. Choi H, Cho B, Masamune K, Hashizume M, **Hong J***, An Effective Visualization Technique for Depth Perception in Augmented Reality-based Surgical Navigation, International Journal of Medical Robotics and Computer Assisted Surgery, 12(1):62-72, 2016

24. Jeon S, Lee G, Jeon Y, Park I, **Hong J***, Kim J*, A preliminary study on surgical navigation for epiduroscopic laser neural decompression, Proceedings of the Institution of Mechanical Engineers Part H Journal of Engineering in Medicine, 229(10):693-702, 2015
23. Jeon S, Park J, Chien J, **Hong J***, A hybrid method to improve target registration accuracy in surgical navigation, Minimally Invasive Therapy & Allied Technologies, 24(6):356-363, 2015
22. Cheon B, Erkin G, Ji D, Tomikawa M, Hashizume M, Kim H, **Hong J***, A single port laparoscopic surgery robot with high force transmission and a large workspace, Surgical Endoscopy, 28(9):2719-2729, 2014 (Q1) (Top 5%)
21. Oka M, Cho B, Matsumoto N, **Hong J**, Jinnouchi M, Ouchida R, Komune S, Hashizume M*, A preregistered STAMP method for image-guided temporal bone surgery, International Journal of Computer Assisted Radiology and Surgery, 9(1):119-126, 2014
20. Tsutsumi N, Tomikawa M, Uemura M, Akahoshi T, Nagao Y, Konishi K, Ieiri S, **Hong J**, Maehara Y, Hashizume M*, Image-guided laparoscopic surgery in an open MRI operating theater, Surgical Endoscopy, 27(6):2178-2184, 2013
19. Cho B, Oka M, Matsumoto N, Ouchida R, **Hong J***, Hashizume M, Warning navigation system using real-time safe region monitoring for otologic surgery, International Journal of Computer Assisted Radiology and Surgery, 8(3):395-405, 2013
18. Inoue D, Cho B, Mori M, Kikkawa Y, Amano T, Nakamizo A, Yoshimoto K, Mizoguchi M, Tomikawa M, **Hong J**, Hashizume M*, Sasaki T, Preliminary Study on the Clinical Application of Augmented Reality Neuronavigation, Journal of Neurological Surgery Part A-Central European Neurosurgery, 74(2):71-76, 2013
17. Kobayashi Y, Hamano R, Watanabe R, **Hong J**, Toyoda K, Hashizume M, Fujie G*, Use of puncture force measurement to investigate the conditions of blood vessel needle insertion, Medical Engineering & Physics, 35(5):684-689, 2013
16. Matsumoto N, Oka M, Cho B, **Hong J**, Jinnouchi M, Ouchida R, Hashizume M, Komune S, Cochlear Implantation Assisted by Noninvasive Image Guidance, Otology & Neurotology, 33(8):1333-1338, 2012
15. Kobayashi Y, **Hong J***, Hamano R, Okada K, Fujie G, Hashizume M, Development of a needle insertion manipulator for central venous catheterization, International Journal of Medical Robotics and Computer Assisted Surgery, 8(1):34-44, 2012
14. Masamune K, **Hong J***, Advanced Imaging and Robotics Technologies for Medical Applications, International Journal of Optomechatronics, 5(4): 299-321, 2011
13. Kim S, **Hong J***, Joung S, Yamada A, Matsumoto N, Kim S, Kim Y, Hashizume M, Dual Surgical Navigation Using Augmented and Virtual Environment Techniques, International Journal of Optomechatronics, 5(2): 155-169, 2011
12. Souzaki R, Kinoshita Y, Matsuura T, Tajiri T, Taguchi T, Ieiri S, **Hong J**, Uemura M, Konishi K, Tomikawa M, Tanoue K, Hashizume M*, Koga Y, Suminoe A, Hara T, Kohashi K, Oda Y. Successful resection of an undifferentiated sarcoma in a child using a real-time surgical navigation system in an open magnetic resonance imaging operation room, Journal of Pediatric Surgery, 46(3):608-611, 2011
11. Ieiri S, Nakatsuji T, Higashi M, Akiyoshi J, Uemura M, Konishi K, Onimaru M, Ohuchida K, **Hong J**, Tomikawa M, Tanoue K, Hashizume M*, Taguchi T, Effectiveness of basic endoscopic surgical skill training for pediatric surgeons, Pediatric Surgery International, 26(10):947-954, 2010
10. Tomikawa M, **Hong J**, Shiotani S, Tokunaga E, Konishi K, Ieiri S, Tanoue K, Akahoshi T, Maehara Y, Hashizume M*, Real-Time 3-Dimensional Virtual Reality Navigation System with Open MRI for Breast-Conserving Surgery, Journal of the American College of Surgeons, 210(6):927-933, 2010 (Q1)
9. **Hong J**, Hashizume M*, An Effective Point-based Registration Tool for Surgical Navigation, Surgical Endoscopy, 24(4):944-948, 2010 (Q1)
8. Maeda T, **Hong J**, Konishi K, Nakatsuji T, Yasunaga T, Yamashita Y, Taketomi A, Kotoh K, Enjoji M, Nakashima H, Tanoue K, Maehara Y, Hashizume M, Tumor ablation therapy of liver cancers with an open magnetic resonance imaging-based navigation system, Surgical Endoscopy, 23(5):1048-1053, 2009 (Q1)
7. **Hong J**, Matsumoto N, Ouchida R, Komune S, Hashizume M, Medical navigation system for otologic

surgery based on hybrid registration and virtual intraoperative computed tomography, IEEE Transactions on Biomedical Engineering, 56(2):426-432, 2009 (Q1)

6. Matsumoto N, **Hong J**, Hashizume M, Komune S, A minimally invasive registration method using surface template-assisted marker positioning (STAMP) for image-guided otologic surgery, Otolaryngology–Head and Neck Surgery, 140(1):96-102, 2009
5. **Hong J**, Hata N, Konishi K, Hashizume M, Real-time magnetic resonance imaging driven by electromagnetic locator for interventional procedure and endoscopic therapy, Surgical Endoscopy, 22(2):552-556, 2008 (Q1)
4. Yasunaga T, Konishi K, Yamaguchi S, Okazaki K, **Hong J**, Ieiri S, Nakashima H, Tanoue K, Fukuyo T, Hashizume M, MR-compatible laparoscope with a distally mounted CCD for MR image-guided surgery, International Journal of Computer Assisted Radiology and Surgery, 2(1):11-18, 2007
3. **Hong J**, Nakashima H, Konishi K, Ieiri S, Tanoue K, Hashizume M, Interventional navigation for abdominal surgery by simultaneous use of MRI and ultrasound, Medical & Biological Engineering & Computing, 44(12):1127-1134, 2006
2. **Hong J**, Dohi T, Hashizume M, Konishi K, Hata N, An ultrasound-driven needle insertion robot for percutaneous cholecystostomy, Physics in Medicine & Biology, 49(3):441-455, 2004 (Q1) (cited 250+)
1. **Hong J**, Kaneko T, Sekiguchi R, Park K, Automatic liver tumor detection from CT, IEICE Transactions on Information and Systems, E84-D(6):741-748, 2001

6. International Conference Proceeding (selected)

34. Jeung D, Lee H, Kim H, Hong J, Augmented Reality-based Surgical Guidance for Anterior and Posterior Cruciate Ligament Reconstruction, Proceeding of Hamlyn Symposium on Medical Robotics 2023, pp51-52, 2022
33. Lee S, Kim S, Solzbacher R, Kim H, Hong J, Robotic system with intuitive control for endoscopic bone cyst surgery, Proceeding of Hamlyn Symposium on Medical Robotics 2022, 2022
32. Kim S, Shim S, Ji D, Hong J, Wave-Shaped Notched Compliant Joint With High Rigidity, Proceeding of IROS 2022, 2022
31. Lee S, Joung S, Ha H, Lee J, Park K, Kim S, Nam K, Lee J, Lee H, Oh C, Park I, Hong J, 3D Image-Guided Robotic System for Bone Fracture Reduction, Proceeding of ICRA 2022, 2022
30. Kim S, Shim S, Ji D, Hong J, Wave-Shape Notched Compliant Joint with High Rigidity, Proceeding of Hamlyn Symposium on Medical Robotics 2019, 2019
29. Ha H, Jeon S, Lee S, Choi H, Hong J, Perspective pin-hole model with planar source for augmented reality surgical navigation based on C-arm imaging, Proceeding of CARS 2018, 2018
28. Shim S, Lee S, Ji D, Choi H, Hong J, Trigonometric ratio-based remote center of motion mechanism for bone drilling, Proceeding of IROS 2018
27. Shim S, Choi H, Ji D, Kang W, Hong J, Vision guided robotic system for bone drilling based on rolling friction, IROS 2017 Workshop on Medical Imaging Robotics, 2017.
26. Lee S, Kim J, Hong J, Kim H, Beak H, Kim S, Computed Tomography-Based Navigation System Using a Patient-Specific Instrument for Femoral Component Positioning: An Experimental in Vitro Study With a Sawbone Model, Proceeding of ISTA 2017, 2017
25. Lee S, Cho B, Matsumoto N, Hashizume M, Hong J, Augmented Reality System with a Simple Interface for Endoscopic Ear Surgery, Proceeding of EMBC 2017, 2017
24. Lee S, Hong J, Kim B, Kim S, Kim J, Computed tomography-based navigation system using a patient-specific instrument for femoral component positioning: an experimental in vitro study with a sawbone model, Proceeding of CARS 2017, 2017.
23. Jeon S, Chien J, Song J, Hong J, Image Guidance for Improving Electrode Placement Precision in EEG Study, Proceeding of CARS 2016, 2016

22. Shim S, Kang T, Ji D, Hong J, All Joints Controlling Master Device For Y-Type Single Port Laparoscopic Surgery Robot, Proceeding of CARS 2015, 10:S248-S249, 2015
21. Choi H, Park Y, Joung S, Cho H, Hong J, A simple and portable surgical navigation system for bone tumor resection, Proceeding of CARS 2015, 10:S85-S87, 2015
20. Chien J, Jeon S, Choi S, Kim J, Hong J, Navigation-based EEG Electrode Placement Method, 7th International IEEE/EMBS Conference on Neural Engineering (IEEE EMB Conference), 2015
19. Lee S, Lee H, Choi H, Hong J, A Simple and Accurate Camera-Sensor Calibration for Surgical Endoscopes and Microscopes, The 2014 Workshop on Augmented Environments for Computer Assisted Interventions (AECAI 2014), pp98-107, 2014
18. Shim S, Ji D, Arata J, Hashizume M, Hong J, A Master Slave Y-type Single Port Laparoscopic Surgery Robot with High Force Transmission and Large Workspace, Hamlyn Symposium on Medical Robotics, pp27-28, 2014
17. Shim S, Ji D, Hashizume M, Arata J, Hong J, A whole arm mimicking master device for single incision laparoscopic surgery robot, Proceeding of CARS 2014, 9:S313-S315, 2014.
16. Jeon S, Hong J, Surgical navigation system for assisting epiduroscopic laser neural decompression (ELND) procedure: its clinical application in 14 patients, Proceeding of CARS 2014, 9:S104-S105, 2014.
15. Choi H, Hong J, Zoom lens calibration for surgical microscope, Proceeding of CARS 2014, 9:S160-S161, 2014.
14. Cheon B, Ji D, Erkin G, Hong J, Development of a New Single Port Surgery Robot with Increased Torque, Proceeding of CARS 2013, 8:S112-S113, 2013
13. Chien J, Park J, Jeon S, Hong J, Improvement of Target Registration Accuracy with Anatomical Landmarks, The Hamlyn Symposium on Medical Robotics, 2013
12. Choi H, Hong J, Augmented reality navigation system for ear surgery, The Hamlyn Symposium on Medical Robotics, video presentation, 2013
11. Cheon B, Erkin G, Hong J, Design of a New Single Port Surgery Robot with Large Torque and Workspace, Proceeding of the IAS-12, p38, 2012
10. Tomikawa M, Hong J, Akahoshi T, Tsutsumi N, Ohuchida K, Ieiri S, Ohdaira T, Hashizume M, Usefulness of a real-time virtual reality navigation system using and open magnetic resonance imaging: tumor ablation therapy for 50 liver cancers, Proceeding of CARS 2011, 6:S95-S96, 2011
9. Oka M, Cho B, Matsumoto N, Hong J, Komune S, Hashizume M, Pre-registered STAMP method for instant registration in image-guided temporal bone surgery, Proceeding of CARS 201, 6:S123-S124, 2011
8. Cho B, Oka M, Matsumoto N, Hong J, Hashizume M, Augmented reality of surgical microscope for otologic surgery, Proceeding of CARS 2011, 6:S245-S246, 2011
7. Chung J, Toyoda K, Hong J, Tomikawa M, Hashizume M, Implementation of a 4-DOF master device with a hybrid structure for a needle insertion task, Proceeding of CARS 2011, 6:S280-S281, 2011
6. Hong J, Matsumoto N, Ouchida R, Komune S, Hashizume, An optimally designed surgical navigation system for otologic surgery, Proceeding of CARS 2008, 1:S251-S252, 2008
5. Hong J, Konishi K, Nakashima H, Ieiri S, Tanoue K, Nakamuta M, Hashizume M, Integration of MRI and ultrasound in surgical navigation for robotic surgery, Proceeding of IFMBE 2006, 14:2930-2933, 2006
4. Hong J, Konishi K, Nakashima H, Ieiri S, Tanoue K, Hashizume M. Hashizume,Image-guided abdominal surgery by integration of MRI and ultrasound, Proceeding of IFMBE 2006, 14:4026-4028, 2006
3. Hong J, Muragaki Y, Inomata T, Nakamura R, Hata N, Dohi T, Iseki H, Intraoperative 3-D Display of Tumor Resection Status based on the Trace of Surgical Device, IFMBE Proceeding of IFMBE 2005, 8:PA-3-89, 2005
2. Hong J, Dohi T, Hashizume M, Konishi K, Hata N, A motion adaptable needle placement instrument based on tumor specific ultrasonic image segmentation, Lecture Notes in Computer Sciences, Proceeding of

MICCAI 2002, 2488:122-129, Tokyo, Japan, 2002

1. Hong J, T. Kaneko, R. Sekiguchi, K. Park, Computer-aided Diagnostic System Based on Liver CT image, IAPR Workshop on Machine Vision Applications, pp419- 422, Tokyo, Japan, 2000

7. Patents (registered)

Korea Patents

39. Jeung D, Ha H, **Hong J**, Method and apparatus for image guided surgery, Korea Patent Number 10-2708210, 2024-09-12
38. Lee H, Jeung D, **Hong J**, Apparatus and method for arthroscopy based on movement of bones in joint, Korea Patent Number 10-2700171, 2024-08-23
37. Kim H, **Hong J**, Shim S, Apparatus for controlling endoscope, Korea Patent Number 10-2682015, 2024-07-02
36. Lee H, Lee S, Jung K, Ha H, **Hong J**, Method and apparatus for stitching medical images, Korea Patent Number 10-2655362, 2024-04-02
35. Solzbachr R, Lee S, **Hong J**, Module detachable structure for medical equipment, Korea Patent Number 10-2635808, 2024-02-06
34. An J, **Hong J**, Jeong S, Pang J, Dental occlusion simulation method and system, Korea Patent Number 10-2498809, 2023-02-07
33. Ha H, **Hong J**, Lee S, Han K, Bone surgical apparatus and method based on registration between coordinates of a surgical robot and coordinates of a patient, Korea Patent Number 10-2460864, 2022-10-26
32. Kang W, **Hong J**, Jeon S, Image processing apparatus and method for generating virtual X-ray image, Korea Patent Number 10-2354701, 2022-01-19
31. Jeon S, **Hong J**, Calibration method of X-ray apparatus and calibration apparatus for the same, Korea Patent Number 10-2289327, 2021-08-06
30. Jeon S, **Hong J**, Calibration method and apparatus of X-ray apparatus, Korea Patent Number 10-2285337, 2021-07-28
29. Choi H, **Hong J**, Apparatus and method for camera calibration, Korea Patent Number 10-2242202, 2021-04-14
28. Jeung D, **Hong J**, Lee H, Surgical navigation system, Korea Patent Number 10-2177805, 2020-11-05
27. Shim S, Ji D, **Hong J**, Kim S, Compliant joint, Korea Patent Number 10-2082272, 2020-02-21
26. Kang T, Jj D, **Hong J**, Method for estimating deformation degree of endoscope by tendon-based actuating system using the same, Korea Patent Number 10-2134342, 2020-07-09
25. Jung K, **Hong J**, Method for generating panoramic image and apparatus thereof, Korea Patent Number 10-2082277, 2020-02-21
24. Jeon S, **Hong J**, Calibration method of X-ray apparatus and calibration apparatus for the same, Korea Patent Number 10-2082272, 2020-02-21
23. Choi H, **Hong J**, System for identifying marker, Korea Patent Number 10-2081061, 2020-02-19
22. Jeon S, **Hong J**, Apparatus for image overlay and method for the same, Korea Patent Number 10-2042762, 2019-11-04
21. Choi H, **Hong J**, Projector, method for creating projection image and system for projecting image, Korea Patent Number 10-2002231, 2019-07-15
20. Shim S, **Hong J**, Apparatus for positioning instrument, Korea Patent Number 10-1976961, 05/02/2019
19. Ha H, **Hong J**, Park I, Park C, Oh C, Lee S, Jeong S, Chien J, Navigation apparatus and method for fracture correction, Korea Patent Number 10-1961682, 03/19/2019
18. Park S, Song W, Choi H, Seo D, Song C, **Hong J**, Deformable scaffold, manufacturing method thereof and deforming, recovery method, Korea Patent Number 10-1957562, 03/06/2019
17. Kim M, **Hong J**, Choi H, Method for tracking maker, apparatus and system for executing the method, Korea Patent Number 10-1929471, 12/10/2018
16. Jeon I, Hong H, **Hong J**, Choi H, Jung K, Augmented Reality Angle Measuring Apparatus for Non-radiographic Correction Osteotomy Surgery, Korea Patent Numbert 10-1868120, 06/08/2018
15. Choi H, **Hong J**, Park Y, Shim S, An Apparatus for guiding a needle and a system incorporating the same, Korea Patent Number 10-1862924, 05/24/2018

14. Shim S, **Hong J**, An Apparatus for inserting a needle, Korea Patent Number 10-1855581, 04/30/2018
13. **Hong J**, Jeon S, Song J, System for directing placement of detector for measuring bio signal and method thereof, Korea Patent Number 10-1853560, 04/24/2018
12. Kang T, Ji D, **Hong J**, Moon J, Endoscopic structure for variable length, Korea Paten Number 10-1828010, 02/05/2018
11. Lee S, **Hong J**, Kim J, Kim S, A Surgical navigation system for total hip arthroplasty, Korea Patent Number 10-1817438, 01/04/2018
10. **Hong J**, Jeon S, Chien J, A system for inducing the electroencephalogram electrode displacement, Korea Patent Number 10-1797375, 11/07/2017
9. Jeon I, Hong H, **Hong J**, Choi H, Jung K, A medical gyro stick, Korea Patent Number 10-1746761, 06/07/2017
8. **Hong J**, Choi H, Jung K, Jeon I, Hong H, Anold E, Tool for selection of image of region of interest and its use of selection method, Korea Patent Number 10-1707113, 02/09/2017
7. Jeon I, Aashay K, **Hong J**, Choi H, Jung K, Method for displaying a surgery instrument by surgery navigation, Korea Patent Number 10-1652888, 08/25/2016
6. **Hong J**, Choi H, Jo H, Device and method for measuring using augmented reality, Korea Patent Number 10-1629134, 06/02/2016
5. **Hong J**, Choi H, Camera parameter computation method, Korea Patent Number 10-1596868, 02/17/2016
4. **Hong J**, Choi H, Method for operating surgical navigation system and surgical navigation system, Korea Patent Number 10-1536115, 07/07/2015
3. **Hong J**, Park J, High accuracy image matching apparatus and high accuracy image matching method using a skin marker and a feature point in a body, Korea Patent Number 10-1492940, 02/06/2015
2. **Hong J**, Kim J, Jeon S, Hybrid navigation system and method to track position thereof, Korea Patent Number 10-1491922, 02/03/2015
1. **Hong J**, Cheon B, Surgery robot, Korea Patent Number 10-1401138, 05/22/2014

International Patent

5. Jeon S, **Hong J**, Lee S, Navigation System for Vascular Intervention and Method for Generating Virtual X-ray Image, US Patent Number US 11,596,369, 03/07/2023
4. Song C, Jeon S, **Hong J**, System and method of directing biosignal detector arrangement, US Patent Number US 10-653-360, 05/19/2020
3. **Hong J**, Cheon B, Surgery robot, US Patent Number US 9,795,448 B2, 10/24/2017
2. **Hong J**, Park J, High accuracy image matching apparatus and high accuracy image matching method using a skin marker and a feature point in a body, US Patent Number US 9,342,887 B2, 05/17/2016
1. **Hong J**, Hashizume M, Needle Insertion System, Japan Patent Number, JP 5531239, 05/09/2014

8. Technology Transfer

- Measuring device and method using augmented reality, 5,000,000 KRW, 2022.05
- Surgical navigation device for fracture and deformity correction, 20,000,000 KRW, 2020.11
- Panoramic image generation method and device, 1,000,000 KRW, 2019.10
- Retro-reflective marker identification system, 0 KRW, 2018.07
- Navigation software for dental implants, 10,000,000 KRW, 2017.03
- Needle Insertion System (Kyushu University), 2016.10

9. Media Coverage (selected)

- Augmented Reality Surgical Navigation, Donga-science, 2018.04
- Augmented Reality for Bone Tumore Surgery, JoongAng Ilbo, Chosun Health, 2017.05
- Ear Surgery Robot, Dong-A Ilbo, 2011.07
- Meeting with a Medical Robot Expert, Science Boy, 2011.01

10. Research Fundings (1200 KRW ≒ 1 USD)

- High Magnification Non-Invasive Augmented Reality Navigation for Microscopic Surgery, Korea Government (NRF), PI, 954 million KRW, 2024-2028
- Development of Intelligent Surgical Navigation Based on Medical Twin, PI, Hutom Co., Ltd, 2024
- Dental Navigation System Based on High-Precision 3D Positioning Technology, PI, Korea Government (Ministry of Venture Business), 80 million KRW, 2021-2022
- Non-invasive Augmented Reality Surgical Navigation based on Soft Tissue Modeling for Narrow Space Arthroscopic Surgery, PI, Korea Government (NRF), 675 million KRW, 2020-2024
- Surgical Navigation for Oral and Maxillofacial Surgery, Co-PI, Korea Government (MOTIE), 361 million KRW, 2019-2023
- Bone Endoscopic Surgery Robot, PI, Korea Government (MOTIE), PI, 1.1 billion KRW, 2018-2022
- Computer-aided Practice for Dental Implant, Korea Government (SMBA), PI, 574 million KRW, 2016-2020
- Bone Deformation and Fracture Reduction Device, Korea Government (MOTIE), PI, 574 million KRW, 2016-2019
- Micro-robot for chronic total occlusion treatment, Korea Government (MOTIE), Co-PI, 2015-2018
- Image Processing and Augmented Reality for Arthroscopy, PI, Korea Government, Korean Government (MOHW), PI, 670 million KRW, 2013-2018
- Surgical Robot and Navigation System for ENT and Neurological Surgery, Korea Government (MOTIE), PI, 600 million KRW, 2011-2015
- Multi-modal Image Registration, Samsung (SAIT), PI, 10 million KRW, 2011
- Development of Intuitive 3D Surgical Navigation, Japan Government (KAKEN/Wakate-A), PI, 200 million KRW, 2008-2010
- Needle Insertion Robot for Central Vein Catheterization, Japan Government (KAKEN/Houga), PI, 100 million KRW, 2008-2009
- US-guided Needle Insertion Robot for Moving Organ, Japan Government (KAKEN/Kiban-C), PI, 150 million KRW, 2005-2007

11. Awards and Honors

- Excellent Paper Award
  Jeung D, Hong J, Augmented Reality based Surgical Navigation for Robot Assisted Partial Nephrectomy, 2022 ACCAS
- Excellent Paper Award
  Solzbahcer R, Hong J, Robotic Compliant Joint Based Endoscopic Surgery System for Bone Cyst Surgery, 2021 ACCAS
- Best Paper Award
  Choi H, Lee H, Hong J, The Development of Optical Tracking System and Registration Method for Dental Implant Navigation, 2018 Annual Conference of Korean Society of Medical Robotics
- Excellent Award
  Choi H, Lee H, S Kim, Hong J, 2017 Joint Startup Competition of Science and Technology Specialized Universities
- Best Poster Award
  Song J, Jeon S, Lee S, Hong J, Markerless Augmented Reality-based Navigation for Precise Electrode Positioning, 2016 The Sector Union Conference of Society for Computational Design and Engineering
- DGIST Contribution Award
  Hong J, 2013
- Best Video Presentation
  Choi H, Hong J, Augmented Reality Navigation System for Ear Surgery, Augmented Reality & Surgical Guidance Workshop in The Hamlyn Symposium on Medical Robotics, 2013
- Best Paper Award
  Park J, Hong J, High accuracy target registration method using ultrasonography, The 4th SPENALO International Symposium on Marine and Medical Robotics (SIS), 2012
- Best Paper Award
  Tomikawa M, Hong J, Akahoshi T, Tsutsumi N, Ohuchida K, Ieiri S, Ohdaira T, Hashizume M, Usefulness of a real-time virtual reality navigation system using and open magnetic resonance imaging: tumor ablation

therapy for 50 liver cancers, International Society of Computer Aided Surgery (ISCAS) in Computer Assisted Radiology and Surgery (CARS), 2011

- Best Paper Award
  Hong J, Lim H, Yi B-J, Lee SH, Jeong JH, Matsumoto N, Oka M, Komune S, Hashizume M, Phantom Experiment of An Ear Surgery Robot for Automatic Mastoidectomy, Proceeding of the 5th International Conference on the Advanced Mechatronics(ICAM), 2010
- Presentation Paper Award, Tomikawa M, Konishi K, Akahoshi T, Hong J, Ieiri S, Tanoue K, Maehara Y, Hashizume M, Image-guided Laparoscopic Surgery and its Equipments in Open MRI Therapeutic Room, J. JSCAS 11(3):352-353, 2009
- Best Paper Award
  Hong J, Matsumoto N, Ouchida R, Komune S, Hashizume M, Image-guided Otologic Surgery based on Patient Motion Compensation and Intraoperative Virtual CT, ACCAS2007, 2007
- Best Engineering Paper Award
  Hong J, Dohi T, Hashizume M, Konishi K, Hata N, Tomographic Image Driven Needle Insertion Robot Adaptive to Organ Motion and Deformation, J. JSCAS 5(4):443-448, 2007
- Presentation Paper Award, S.Nishimura, K.Hamata, T.Yasunaga, J.Hong, H.Nakashima, K. Konishi, M.Hashizume, K.Tanoue, Contrast Enhancement of Sentinel Lymph Node using Interventional-MR, J. JSCAS 8(3):204-205, 2006
- Presentation Paper Award, E.Aoki, K.Shimizu, G.Ali, J.Hong, E.Kobayashi, N.Hata, R.Nakamura, T.Maruyama, Y.Muragaki, H.Iseki, I. Sakuma, Development and Evaluation of the Integrated system of different platforms for Neurosurgery(translated), J. JSCAS 7(3):359-360, 2005
- Japan Government (JSPS) Postdoctoral Fellowship for Foreign Researchers 2004-2005
- Japan Government (MEXT) Scholarship 2001-2003

12. Invited and Keynote Talks

- Potential & Challenge of Surgical Robotics in Orthopedics, Keynote Speech, International Conference on Control and Robotics (ICCR 2023), Tokyo, Japan, Nov 2023
- Augmented & Virtual Reality Integrated with Surgical Robotics, Invited Talk, Medical Imaging and Augmented Reality 2022, Online, China, Jul 2022
- Accuracy, Rigidity and Control of Orthopaedic Surgery Robot, Invited Talk, Summer School of Institute of Medical Robotics, Online, China, Jul 2022
- Future of Surgical Robot with Augmented Reality, Invited Talk, Asian Society for Gynecologic Robotic Surgery Congress 2022, Jeju, Korea, Jun 2022
- Image-guided Surgery with Medical Augmented Reality, Keynote Speech, 8th International Conference on Signal Processing and Integrated Networks (SPIN-2021), Online, India, Aug 2021
- Image guided Surgery and Medical Augmented Reality, Keynote Speech, 3rd Annual International Conference on Innovative Engineering-Intelligent System Integration (ICISI-2021), Online, India, Jul 2021
- Surgical Robotics with Advanced Hands and Eyes, Keynote Speech, Asia-Pacific Conference on Intelligent Robot Systems, ACIRS 2021, Online, Japan, Jul 2021
- Accurate Patient-Image Registration for Medical Augmented Reality, Invited talk, 2020 Academic Forum of Institute of Medical Robotics, Online, China, Dec 2020
- Ultrasound Navigation for Abdominal Surgery, Plenary talk, 3rd Congress of Asian Surgical Ultrasound Society, Seoul, Korea, Nov 2020
- Augmented Reality for Orthopeadic Surgery, Invited talk, 17th International Conference on Biomedical Engineering, Singapore, Dec 2019
- High Rigidity Bone Endoscopic Surgery Robot, Invited talk, Workshop of IEEE/RSJ International Conference on Intelligent Robots and Systems, Macau, Nov 2019
- Augmented Reality for Surgery & Computer-Assisted Orthopedic Surgery, Invited talk, The Summer school of Shanghai Jiao Tong University, Shanghai, China, Jul 2019.
- Augmented Reality for Surgical Vision, Invited talk, Annual Conference of SJTU Institute of Medical Robotics, Shanghai, China, Dec 2018.
- Anti-Aging and AR/VR, Invited talk, APAAC 2018, Daegu, Nov 2018.
- Surgical Navigation based on AR/VR Technology, Invited talk, SMIT_IBEC2018, Seoul, Nov 2018.

• Surgical Navigation using Augmented Reality, Invited talk, ICCAS 2017, Jeju, Oct 2017.
• Augmented Reality and Surgical Navigation, Invited talk, ICBME 2016, Singapore, Dec 2016.
• Surgical Navigation for Microrobot, Invited talk, IROS 2016 Workshop on Microrobots for next generation biomedical applications, Daejeon, Korea, Oct 2016
• Augmented Reality in Medicine, Plenary talk, Annual Fall Conference of Korea CDE Society, Busan, Aug 2016
• Robotics Challenge of South Korea, Invited talk, UK Robotics Week, IET International Robotics Showcase 2016, London, United Kingdom, Jul 2016
• Principle and Issues of Surgical Navigation, Distinguished lecture, Hamlyn Medical Center, London, Feb 2016
• Principle and Applications of Image-guided Surgery, Invited talk, ACCAS2015, Singapore, Oct 2015
• Possibility and Technical Issues of Surgical Navigation, Invited talk, Joint Annual Conference of KSMR, KSGE, and K-NOTES. Seoul, Sep 2015
• Surgical Navigation and Surgical Robot, Invited talk, ELSA 2015, Daegu, Sep 2015
• Application of Surgical Navigation, Invited talk, ISSIS 2015, Seoul, Jun 2015
• Principle and Application of Surgical Navigation, Surgical Grand Round, Severance Hospital, Yonsei University, Seoul, 2014
• Surgical Imaging and Robot, Samsung Advanced Institute of Technology (SAIT) Forum, Suwon, May 2011
• Surgical Image and Robot for Minimally Invasive Surgery, International Symposium for Industrial, Academic and Research Institutions Collaboration, Kyungpook National University, Daegu, Jun 2010

13. Appointments in Academic Society and Conference

• Program Chair, Medical Imaging Computing and Computer Assisted Intervention (MICCAI) 2025
• Senior Vice President (President-elect) of Korean Society of Medical Robotics, 2025-2026
• Area Chair (Program Committee) of MICCAI 2024, 2024
• General Chair, 20th Asian Conference on Computer-aided Surgery (ACCAS), 2024
• Academic Director, Asian Society of Computer-aided Surgery, 2023-2024
• Associate Editor, Computer-Assisted Surgery, 2022-2025
• Co-organizer, IROS 2019 workshop on Intelligent Robot Interactions with the Anatomy, 2019
• Program co-chair, 10th Annual Conference of Korea Society of Medical Robotics, 2019
• Co-chair, Technical Committee on Surgical Robotics of IEEE/RAS, 2016-2019
• Co-organizer, IROS 2016 workshop (ISCAS/ASCAS/IROS jointed) on Intelligent Instruments and Software for Future Medical Workspace, 2016
• Associate Editor, IEEE Robotics and Automation Letters, 2015-2016
• Financial chair, Korea Society of Medical Robotics, 2014-2015
• International network chair, Korea Society of Medical Robotics, 2011-2013
• Organizing committee, Frontier of Computer Vision (FCV) 2012 Conference, 2012
• General Secretary, 3rdAnnual Conference of Korea Society of Medical Robotics, 2011
• Program co-chair, 7th Asian Conference on Computer Aided Surgery (ACCAS), 2011
• Program committee, Computer Assisted Radiology and Surgery (CARS), 2010-2025
• International program committee, 6th International Conference on Ubiquitous Robots and Ambient Intelligence (URAI), 2009
• Award committee, International Conference on Intelligent Robots and Systems (IROS) 2009, 2009
• Program co-chair, 5th Asian Conference on Computer Aided Surgery (ACCAS), 2009
• Appointed reviewer, Journal of Japan Society of Computer-Aided Surgery (JSCAS), 2008-2010