Curriculum Vitae
Munenori UEMURA, Ph.D.

Personal details

Publications: 37, h-index: 14, i10-index: 19, Citation Index: 554 (Google Scholar) as of April 2019
(https://scholar.google.co.jp/citations?user=lEGER-AAAAAJ&hl=ja&oi=ao)
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Language: Japanese (native) / English (intermediate)
Date of Birth: 01/June/1982 (36)

Summary

- Over 10 years' experience in Academic Research and Development for Medical Devices and Surgical Education for Minimally Invasive Surgery.
- Over Two years' experience in Policy Decision and National Project Creation for Medical Devices in National Research Institute (AMED), Japan.
- Ability to design academic research projects (RCT) and write articles, to investigate *medical needs* for developing medical devices from doctors and co-medicals, to design and develop surgical simulators, to educate surgical skills for surgeons.
- Experienced in managing project team members as a manager (development for medical devices), creation five national projects as a leader, execution an academic event in JSES as a leader.
- Experienced in establishment a corporation for medical device development as the principal founder.

Education

- **Ph.D. degree (Medicine)** in Kyushu University, Graduate School of Medical Sciences, Department of Advanced Medical Initiatives, Fukuoka, Japan, in March 2014.

- **Ph.D. degree Course** in Kyushu University, Graduate School of Medical Sciences, Department of Advanced Medical Initiatives, Fukuoka, Japan, from April 2008 to March 2012.

- **M.S. degree (M.Med.Sci.)** in Kyushu University, Graduate School of Medical Sciences, Department of Advanced Medical Initiatives, Fukuoka, Japan, in March 2008.

- **B.S. degree** in Ehime University, Department of Mechanical Engineering, Matsuyama, Japan, in March 2006.

Carrera History

- **Director** in Allm Inc., Team Business Promotion Office, Yushin bldg. Shinkan 2F, 3-27-11 Shibuya, Shibuya-ku, 150-002, Tokyo Japan from April 2019 to Present.

- **Visiting Lecturer** in Kyushu University Department of Advanced Medical Initiatives, Faculty of Medical Sciences, 3-1-1 Maidashi Higashi-ku, Fukuoka 812-8582, Japan, from April 2019 to Present

- **Visiting Researcher** in Kagoshima Univerity, Department of Pediatrics, Field of developmental Medicine, Course of Health Research, Graduate School of Medical and Dental Sciences, 8-35-1 Sakuragaoka, Kagoshima City 890-0075, Japan, from April 2019 to Present

- **President** in MedTech Links, Japan, #716, 2-3-10 Tenjin, Chuo-ku, Fukuoka, 810-0001, Japan from February 2019 to Present.

- **Associate Professor** in Chiba University, Center for Frontier Medical Engineering, 1-33, Yayoi-cho, Inage-ku, Chiba 263-8522, Japan, from April 2017 to 2019.

- **Assistant Professor** in Kyushu University Hospital, Center for Clinical and Translational Research, 3-1-1 Maidashi Higashi-ku, Fukuoka 812-8582, Japan, from April 2017 to 2019

- **Deputy Manager** in Japan Agency for Medical Research and Development (AMED), Division of Medical Device Research Department of Industrial-Academic Collaboration, 23F Yomiuri Shimbun Bldg. 1-7-1 Otemachi, Chiyoda-ku, Tokyo 100-0004, Japan, from January 2016 to 2018.

- **Assistant Professor** in Kyushu University, Center for Clinical and Translational Research, Japan, from August 2015 to December 2015.

Graduate School of Medical Sciences, Department of Advanced Medical Initiatives, Japan, from April 2014 to July 2015.

- **Research Fellow** in Kyushu University, Center for Advanced Medical Innovation, from April 2012 to March 2014.

- **Research Associate/Assistant** in Kyushu University, Graduate School of Medical Sciences, Department of Advanced Medical Initiatives, Japan, April 2008 to March 2012.

Professional interests and skills

Business Field: He has developed a Surgical Simulator for Laparoscopic Surgery. The simulator was achieved to an objective evaluation for laparoscopic suture ligature skills using five criteria for the first time in the world. The Kyoto Kagaku which was cooperated with him has advanced into the field of surgery from nursing with this simulator. He has applied a new project which is using IoT and AI technology to a national project (AMED) only one week after joined a new company in April 2019.
Government Agency: He has created four national projects to develop innovative and next generation medical devices in AMED. These projects have been based on *medical needs* from doctors and co-medical staffs. He investigated medical needs by hearing (interview) from more than 500 medical staffs directly to create the projects in less than one year. He also manages project teams.
Academic Working: He has made contributions to the field of **Motion analysis and Medical imaging** to investigate **Surgical training/simulation system and Surgical navigation system**, based on the studies on **Statistical Analysis and Image Analytics**. His research interests are in **Surgical training, Surgical education, Psychology, Surgical image, Surgical navigation, Surgical simulation, Dental implant accuracy and Motion analysis based Chaos systems**.
- **Hardware skill:** Mechanical designs of simple mechanisms and small scale of data base (i.e. DICOM server) server system. Experience in development of devices and data management server in surgical navigation and training fields.

- **Software/Network skill:** Image processing programming on platform: Windows, Mac OS X and Linux in using C / C++ and general programming skill on Microsoft Visual Studio and Xcode. Experience in development of surgical navigation system for arthroscopic surgery using commercial base AZE Virtual Place SDK.

- **Technical writing skill:** Academic literatures writing with English and Japanese, Applications for national projects (AMED, NEDO, JSPS, JST and some public institutions) with English and Japanese.

- **Language:** Intermediate in English. His native language is Japanese.

Achievements

- **National Project (2017):** Theme1: R&D of surgical system which realizes that even unskilled surgeon becomes skilled surgeon for micro surgery with robotics and information technology. Theme2: R&D of navigation / suggestion system which assists doctors' decision making during surgery and therapy with AI and IoT technology.
- **National Project (2016):** Theme1: R&D of detection / treatment system for early stage of dementia. Theme2: R&D of optimized emerging transportation system with AI and IoT technology.
- **Surgical Simulator (2014):** Objective assessment of the suture ligature method for the laparoscopic intestinal anastomosis model using a new computerized system. See PMID: 25005015,
This simulator has been already commercialized: https://www.kyotokagaku.com/products/detail01/mw16.html
- **Surgical Navigation System:** Visualization of Affected Lesion in Arthroscopic Surgery Using Augmented Reality Navigation System → Created a proto type system and tested two medical cases.

Awards

- **Innovative Research Award** from the 20th Needlescopic Surgery Meeting, Japan in Feb. 2019

- **Paper Award (Medical)** from the 24th Japan Society of Computer Aided Surgery in Nov. 2016

- **Young Investigator Award** from Biomedical Engineering Society and IEEE EMBS Singapore Chapter with Anniversary Asian Conference on Computer Aided Surgery in Jul. 2015.

- **Presentation Award** from the 22nd Japan Society of Computer Aided Surgery in Feb. 2014.

- **2nd Place Technology Innovation Award** from 14th International Meeting on Simulation in Healthcare in Jan. 2014.

- **Excellent Presentation Award** from the 12th SICE System Integration Division Annual Conference in Dec. 2011.

- **Young Investigator Award (Silver Award)** from the 19th Japan Society of Computer Aided Surgery, in Nov. 2010.

Professional Society Membership

- International Society for Computer Aided Surgery. Member, from Jan. 2013
- Japan Society for Endoscopic Surgery, Member, from Aug. 2010.
- Japan Society of Computer Aided Surgery, Member, from April 2007.
- Japan Society of Mechanical Engineers, Member, from April 2006.

Publications (37 publications, citation: 544, h-index: 14, i10-index: 19)

1. Busch C, Nakadate R, **Uemura M,** Obata S, and Jimbo T (2018) Objective assessment of robotic suturing skills with a new computerized system : A step forward in the training of robotic surgeons. 1–8.

2. **Uemura M***, Tomikawa M, Miao T, Souzaki R, Ieiri S, Akahoshi T, Lefor AK, and Hashizume M (2018) Feasibility of an AI-Based Measure of the Hand Motions of Expert and Novice Surgeons. Comput Math Methods Med 2018:1–6. (in press)

3. Takeoka T, Takiguchi S, **Uemura M**, Miyazaki Y, Takahashi T, Kurokawa Y, Makino T, Yamasaki M, Mori M, and Yuichiro Doki A (2017) Assessment potential of a new suture simulator in laparoscopic surgical skills training. Minim Invasive Ther Allied Technol 26:338–345.

4. Jimbo T, Ieiri S, Obata S, **Uemura M**, Souzaki R, Matsuoka N, Katayama T, Masumoto K, Hashizume M, and Taguchi T (2017) A new innovative laparoscopic fundoplication training simulator with a surgical skill validation system. Surg Endosc 31:1688–1696.

5. Jimbo T, Ieiri S, Obata S, Uemura M, Souzaki R, Matsuoka N, Katayama T, Masumoto K, Hashizume M, and Taguchi T (2016) Preoperative simulation regarding the appropriate port location for laparoscopic hepaticojejunostomy: a randomized study using a disease-specific training simulator. Pediatr Surg Int 32:901–907.

6. **Uemura M***, Jannin P, Yamashita M, Tomikawa M, Akahoshi T, Obata S, Souzaki R, Ieiri S, and Hashizume M (2016) Procedural surgical skill assessment in laparoscopic training environments. Int J Comput Assist Radiol Surg 11:543–552.

7. Tomikawa M, **Uemura M**, Kenmotsu H, Konishi K, Ohuchida K, Okazaki K, Ieiri S, Tanoue K, and Hashizume M (2016) Evaluation of the 10-year history of a 2-day standardized laparoscopic surgical skills training program at Kyushu University. Surg Today 46:750–6.

8. Ieiri S, Jimbo T, Koreeda Y, Obata S, **Uemura M**, Souzaki R, Kobayashi Y, Fujie MG, Hashizume M, and Taguchi T (2015) The effect of forceps manipulation for expert pediatric surgeons using an endoscopic pseudo-viewpoint alternating system: the phenomenon of economical slow and fast performance in endoscopic surgery. Pediatr Surg Int 31:971–976.

9. Jimbo T, Ieiri S, Obata S, **Uemura M**, Souzaki R, Matsuoka N, Katayama T, Masumoto K, Hashizume M, and Taguchi T (2015) Effectiveness of short-term endoscopic surgical skill training for young pediatric surgeons: a validation study using the laparoscopic fundoplication simulator. Pediatr Surg Int. 2015 Sep;25(9):775-81

10. **Uemura M***, Sakata K, Tomikawa M, Nagao Y, Ohuchida K, Ieiri S, Akahoshi T, Hashizume M (2015) Novel surgical skill evaluation with reference to two-handed coordination. Fukuoka Acta Medica. 2015 Jul;106(7):213-22.