

W. JONG YOON

Mechanical Engineering
School of Science, Technology, Engineering & Mathematics
University of Washington, Bothell
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<http://www.uwb.edu/mechanical>

PROFESSIONAL EXPERIENCE

Associate Professor, September 2017 – present
Mechanical Engineering, School of Science, Technology, Engineering & Mathematics
University of Washington, Bothell, WA

- **Research Interests:** design of multi-modal medical diagnostic devices; robot surgery; human computer interface; smart sensors and actuators; assistive/adaptive devices for the disabled
- **Teaching Interests:** machine design, mechatronics systems design, mechanism, statics/dynamics, vibrations, system dynamics, and medical device design.

Assistant Professor, September 2014 – 2017
Mechanical Engineering, School of Science, Technology, Engineering & Mathematics
University of Washington, Bothell, WA

Assistant Professor, September 2009 – June 2014
Department of Mechanical & Industrial Engineering
Qatar University, Doha, Qatar
Director of **Smart Medical Devices Lab (SMDL)**, <http://faculty.qu.edu.qa/wjyoon>

Research Assistant, October 2002 – August 2009
Human Photonics Lab & Human Interface Tech Lab
University of Washington, Seattle, WA

- Developed an automated bladder urothelium surveillance system using a shape memory alloy-based programmable distal steering mechanism, an efficient motion sequence, 3-D image stitching, and an ultra-thin and flexible scanning fiber endoscope (SFE).
- Designed, numerically simulated, and fabricated a low-cost active tip-bending system using an ionic conductive polymer metal composites (IPMC) type electro active polymer (EAP) actuator.
- Conducted a parametric study on the role of haptic and visual sensory information in the perception of curved objects using a low-cost haptic interfaces device.

Research/Manufacturing Engineer, Information & Optical Device Division, July 1997 - April 2001
Samsung Electro-Mechanics, Suwon, Korea (south)

- **R&D center.** Designed high speed (30,000RPM) miniature motors and gear systems used for cellular phone auto-folding system (November 2000 ~ April 2001).
- **Manufacturing Technology group.** Developed and implemented manufacturing process for 2.5" Hard Disk Drive (HDD) spindle motors used for TOSHIBA laptops. Took charge of miniature ball-bearings (May 1998 ~ November 2000).
- **Information Technology Group R&D laboratory.** Designed 3.5"/3.0" HDD/Zip Drive spindle motors (July 1997 ~ May 1998).

Executive Officer (First Lieutenant), Field Artillery,
Army of the Rep. of Korea

March 1995 - June 1997

- Took command responsibilities for 90 soldiers (private first/second class and corporals).

EDUCATION

Ph.D., Mechanical Engineering,
University of Washington, Seattle, WA

August 2009

Dissertation: Development of an automated bladder urothelium surveillance system using an ultra-thin image probe and active distal steering
Advisor: Eric J. Seibel

Master of Science, Mechanical Engineering,
University of Washington, Seattle, WA

September 2004

Thesis: New design and modeling of a bending mechanism of the single fiber endoscope

Bachelor of Engineering, Mechanical Engineering,
Hong Ik University, Seoul, Korea (south)

March 1995

SPONSORED RESEARCH/GRANTS

Funded

- **PI, Amazon Catalyst grant,** 2017-2018
“Modular kit development for the safe and easy use of public restrooms for wheelchair Patients”, \$35,000
- **Advisor,** ASME (Hacathon Project), Student Technology Fee, UW Bothell, \$20,000 2017
- **Advisor,** TrickFire Robotics, Student Technology Fee, UW Bothell, \$10,000 2016
- **PI,** Prototype Fund recipient, UW Health Innovation Challenge, \$ 800, 2015 December
- **Co-Lead PI, the National Priorities Research Program (NPRP),** Qatar Foundation, 2013-2016
“Blindness In Eastern Arabia: An Engineering Solution” NPRP 5 - 457 - 2 – 181, \$ 1,039,176
- **Student Project Grant,** Qatar University 2012-2013
“Design of Development of Solar Arrays Deployment Mechanism for Microsatellite”, QUST-CENG-FALL-12/13-16, QR 8,500
- **ABB Technology and Qatar University Student Projects on Robotics, ABB co.** 2011-2012
- **Lead PI, the National Priorities Research Program (NPRP),** Qatar Foundation 2012-2016
“Integrated Bio-Sensors and Automated Instrumentation for Early Stomach Cancer Detection Using Flexible Capsule Endoscope”, NPRP 4 - 049 - 2 - 021, US \$1,035,523
- **Co-Lead PI, the National Priorities Research Program (NPRP),** Qatar Foundation 2012-2016
“Development of Smart Minimum Invasive Surgery Tools With Tactile Sensing Capabilities for Telerobot Surgery System”, NPRP 4-368-2-135, US \$1,018,554
- **Student Project Grant,** Qatar University
2011-2012 “Design and Development of an Arabic Speech-Controlled Multifunction Toilet-friendly Wheelchair “, QUST-ENG-MIE-10/11-21, QR 32,400 – completed
- **Undergraduate Research Experience Program (UREP),** Qatar Foundation 2010-2011
“Parametric Study of Virtual Curvature Recognition: Discrimination Thresholds for Haptic and Visual Sensory Information” UREP 08-014-2-006, US \$30,000 – completed
- **Lead PI, the National Priorities Research Program (NPRP),** Qatar Foundation 2010-2013
“Development and Test of a Surgical Telerobot System Integrated With a Flexible Imaging Probe in Hostile Environments”, NPRP09-776-2-298, US \$859,027 – completed

- **Lead PI, the National Priorities Research Program (NPRP)**, Qatar Foundation 2010-2013
“Development of an Automated Urinary Bladder Surveillance System for Cancer Diagnosis”,
NPRP09-214-2-090, US \$982,941 -- completed
- **Start Up Fund**, Qatar University, QR 50,000 October 2009
- Recipient of the **Technology Gap Innovation Fund (TGIF) awards** (Co-PI), June 2008 – 2009
Washington Research Foundation/Royalty Research Fund, USA, US \$47,477

Submitted or In-preparation

- **PI, NSF Smart and Connected Health**, (Proposal submitted 12/8/16 – not awarded), Intelligent Bladder-Endoscopic System For Remote Diagnosis
- **PI, Amazon Catalyst**, (Proposal submitted 11/20/16 – not awarded), Smart Multifunction Toilet Wheelchair (SMTW)
- **PI, Intuitive Surgical Technology Research Grants** (LOI submitted 06/03/16 – not awarded), Design and evaluation of an articulated imaging probe for generation of additional visual cues in minimally invasive robotic surgery
- **PI, Royalty Research Fund (RRF, eGC1 A112521)** (re-submitted – not awarded), 3/5/2016, Development of Integrated Multi-modal Flexible Endoscope Platform for Improved Diagnostic Yield of Gastric H. pylori Biopsy
- **PI, CoMotion Innovation Fund** (LOI re-submitted – not awarded), 2/26/2016, Smart Multifunction Toilet Wheelchair
- **PI, CoMotion Innovation Fund** (Proposal NO: F2015-7534_Yoon) (submitted - not awarded), 9/22/2015, Smart Multifunction Toilet Wheelchair
- **PI, NSF CAREER** (Proposal NO: 1552689) (submitted-not awarded), 7/21/2015, Highly Integrated Intelligent Gastro-Endoscopic Diagnostic System
- **PI, Royalty Research Fund (RRF, eGC1 A101913)** (submitted-not awarded), 3/3/2015, Development of Integrated Multi-modal Flexible Endoscope Platform for Improved Diagnostic Yield of Gastric H. pylori Biopsy
- **Co-PI**, Concept Paper (1261-2676) (submitted-not awarded), **ARPA-E**, 2/26/2015, Physically Connected Vehicles
- **Co-PI, Qatar National Research Fund**, 8th Cycle (Submitted-not awarded), Transfer of human haptic perception during the minimally invasive robotic surgery through sensorized surgical robotic system (NPRP8-1537-2-653)

HONORS & AWARDS

- **Advisor**, The UW Health Innovation Challenge, 2016, Measurement and Verification of CO2 gas sensor for Helico pylori infection, **Top 18 Teams**
- **Best Student Paper Award – Finalist**, July 15-17, 2015
7th IEEE International Conference on Cybernetics and Intelligent Systems (CIS) and the 7th IEEE International Conference on Robotics, Automation and Mechatronics (RAM), Angkor Wat, Cambodia, “Design of a Steering Mechanism for a Tethered Capsule Endoscope”
- **Outstanding Paper Award**, April 28, 2009
The Engineering & Urology Society 24th Annual Meeting, Chicago, IL, “In Vitro Test of an Automated Cystoscopic Procedure for Bladder Surveillance”
- **2nd Best Student Paper**, June 7 - 8, 2007
ASME Frontiers in Biomedical Devices Conference, Irvine, CA, “Steerable Guidewire with Eyes for Image guided Intervention in the Upper Urinary Tract”
- Recipient of **KUSCO (Korea-U.S. Science Cooperation) Scholarship**, February 2007

- **Certified Six Sigma qualification as Green Belt**, Samsung Electro-Mechanics. Carried out two Six Sigma projects related to HDD spindle motor resonance and productivity. Ranked in top 5%, 2000
- Recipient of **college scholarship**, Hong Ik Univ., Korea, March 1991 - February 1993
- Recipient of **National Scholastic Ability Test Fellowship**, Hong Ik Univ., Korea, March 1991

PUBLICATIONS

Peer-Reviewed Journals/Books

1. Carlos Velasquez, Yoon Sang Kim, Thomas Lendvay, Blake Hannaford, W. Jong Yoon, (accepted, International Journal of Control, Automation, and systems), RAVEN Eyes Around the Instrument from Modular Axis Sharing,
2. Junho Ko, W. Jong Yoon, and Yoon Sang Kim (accepted, Multimedia Tools and Applications), A Study on Surgical Robot Image Stabilization
3. Kishor kumar Sadasivuni, Ahmad Yaser Alhaddad, H. Javed, W. Jong Yoon, and John-John Cabibihan, Strain, Pressure, Temperature, Proximity, and Tactile Sensors From Biopolymer Composites, Biopolymer Composites in Electronics, Elsevier, pp.437-457, 2017, (DOI: 10.1016/B978-0-12-809261-3.00016-4)
4. Hieu T. Nguyen, Siva M. Tangutooru, Corey M. Rountree, Andrew J. Kantzos, Faris Tarlochan, W. Jong Yoon and John B. Troy, Thalamic visual prosthesis, *IEEE/ASME Transactions on Biomedical Engineering*, 2016, Vol. 63, No. 8, pp. 1573-1580 (**Feature Article, TMBE August 2016**)
5. Deepalekshmi Ponnamma, Kishor Kumar Sadasivuni, John-John Cabibihan, W. Jong Yoon, Bijandra Kumar, Reduced Graphene Oxide Filled Poly(dimethyl siloxane) based Transparent Stretchable, and Touch-Responsive Sensors, *Applied Physics Letters*, 2016, Vol. 108, Issue 17, pp. 171906
6. Y. Chen; Y. Zilberman; S. K. Ameri; W. J. Yoon; J. J. Cabibihan; S. Sonkusale, "A flexible gastric gas sensor based on functionalized optical fiber," *IEEE Sensors Journal* , vol. 16, issue 13, pp.5243-5248, (doi: 10.1109/JSEN.2016.2544701)
7. Tauseef Gulrez, A. Tognetti, W. Jong Yoon, and John-John Cabibihan, A Hands-Free Interface for Controlling Virtual Electric-Powered Wheelchair, *International Journal of Advanced Robotic Systems (IJARS)*, 2016, 13:49 doi:10.5772/62028.
8. Dong-Hyuk Lee, Uikyum Kim, Tauseef Gulrez, W. Jong Yoon, Blake Hannaford, and Hyouk Ryeol Choi, A Laparoscopic Grasping Tool with Force Sensing Capability, *IEEE/ASME Transactions on Mechatronics*, vol. 21, no. 1, pp. 130-141, Feb. 2016. (doi: 10.1109/TMECH.2015.2442591)
9. Xianming Ye, Yuanzheng Gong, W. Jong Yoon, Development of Multi-segment Steering Mechanism and 3D Panorama for Automated Bladder Surveillance System, *IEEE/ASME Transactions on Mechatronics*, Vol. 21, No. 2, pp. 993-1003, 2016, (DOI: 10.1109/TMECH.2015.2461596)
10. Carlos Velasquez, Nikhil V. Navkar, Amer Alsaied, Shidin Balakrishnan, Julien Abinahed, Abdullah Al-Ansari, and W. Jong Yoon, Preliminary Design of an Actuated Imaging Probe for Generation of Additional Visual Cues in a Robotic Surgery, *Surgical Endoscopy*, 30(6):2641-2648, 2016 (DOI: 10.1007/s00464-015-4270-2)
11. W. Jong Yoon, Wook-Yeon Hwang, Joel C. Perry, Study on Effects of Surface Properties in Haptic Perception of Virtual Curvature, *International Journal of Computer Applications in Technology*, 2016, Vol 53, No. 3, pp.236-243.
12. Uikyum Kim, Dong-Hyuk Lee, W. Jong Yoon, Blake Hannaford, and Hyouk Ryeol Choi, Force Sensor Integrated Surgical Forceps for Minimally Invasive Robotic Surgery, *IEEE Transactions on Robotics*, 2015, 31 (5), 1214-1224, (DOI: 10.1109/TRO.2015.2473515)
13. W. Jong Yoon, Carlos A. Velasquez, Lee W. White, Blake Hannaford, Yoon Sang Kim, and Tomas Lendvay, Preliminary articulable probe designs with RAVEN and challenges: Image

- guided robotic surgery multi-tool system, *ASME Journal of Medical Devices*, 2013; 8(1):014505-014505-6. MED-13-1122 (DOI: 10.1115/1.4025908)
14. M. Burkhardt, T. Soper, W. Jong Yoon, and E. J. Seibel, Controlling the Trajectory of a Flexible Ultrathin Endoscope for Fully Automated Bladder Surveillance, *IEEE/ASME Transactions on Mechatronics*, 2014, Vol. 19, No. 1, pp. 366-373 (DOI:10.1109/TMECH.2013.2237783)
 15. W. Jong Yoon, Matthew A. Brown, Per. G. Reinhall, Sangtae Park, and Eric J. Seibel, Design and Preliminary Study of Custom Laser Scanning Cystoscope for Automated Bladder Surveillance, *Minimally Invasive Therapy and Allied Technologies (MITAT)*, September 2012, Vol. 21, No. 5, pp. 320-328 (DOI:10.3109/13645706.2011.653374)
 16. W. Jong Yoon, Sangtae Park, Per G. Reinhall, and Eric J. Seibel, Development of an automated steering mechanism for bladder urothelium surveillance, *ASME Journal of Medical Devices*, 2009; 3(1):011004-011004-9. (DOI: 10.1115/1.3054381)
 17. W. Jong Yoon, Per G. Reinhall, and Eric J. Seibel, Analysis of Electro Active Polymer Bending: A Component in a Low Cost Ultrathin Scanning Endoscope, *Sensors and Actuators A –Physical*, Volume 133, Issue 2, 12 February 2007, pp. 506-517. (DOI: 10.1016/j.sna.2006.04.037)

Peer-Reviewed Journals/books in preparation & submitted

1. John-John Cabibihan, W Jong Yoon, and Ahmad Yaser Alhaddad, (in preparation, will be submitted in 2017 3rd quarter), Haptic Feedback Influences the Sensory Integration Model more than Visual Feedback in a Low Force Grasping Task
2. Siva M. Tangutooru, Faris Tarlochan, W. Jong Yoon, and John B. Troy (submitted to *Journal of Computational Neuroscience* in June 2016), Computational Model of a Thalamocortical Neuron for Neural Prosthesis

Peer-Reviewed Conference Proceedings

1. W. Jong Yoon, Mohamed Shakir, Yasir Salih Osman, (in preparation, will be submitted 2017 3rd quarter), Design and Development of an Arabic Speech-Controlled Multifunction Toilet Wheelchair.
2. Xianming Ye, John-John Cabibihan, W. Jong Yoon, Design and Verification of a Flexible Device for Steering a Tethered Capsule Endoscope in the Stomach, the 14th International Conference on Ubiquitous Robots and Ambient Intelligence, June 28 - July 1, 2017, Jeju, Korea
3. W. Jong Yoon, CAD vs. Modeling, Design, and Analysis?, ASEE Pacific Northwest Section Conference 2016, Boise, Idaho
4. Kishor Kumar Sadasivuni, W. Jong Yoon and John-John Cabibihan, Cellulose nanocrystals (biomaterial) based touch sensors for biomedical applications, IEEE Life Sciences Grand Challenges Conference (LSGCC), 25-26 January, 2016, Abu Dhabi, UAE.
5. Xianming Ye, Cyril Hasson, W. Jong Yoon, John-John Cabibihan, Design of a Steering Mechanism for a Tethered Capsule Endoscope, 7th IEEE International Conference on Cybernetics and Intelligent Systems (CIS) and the 7th IEEE International Conference on Robotics, Automation and Mechatronics (RAM), 15-17 July, 2015 at c, **Best Student Paper Award - Finalist**.
6. Siva M. Tangutooru, W. Jong Yoon, and John B. Troy, Early Design Considerations for a Thalamic Visual Prosthesis to Treat Blindness Resulting from Glaucoma, Middle East Conference on Biomedical Engineering (MECBME'14), February 17-20, 2014, Doha, Qatar.
7. Dong-Hyuk Lee, Ui-Kyum Kim, Hyungpil Moon, Jachoon Koo, Woon Jong Yoon, and Hyouk Ryeol Choi, Preliminary Design of Multi-Axial Contact Force Sensor for Minimally Invasive Robotic Surgery Grasper, 2013 IEEE International Conference on Robotics and Automation (ICRA) (39% acceptance rate), May 6-10, 2013, Karlsruhe, Germany, pp. 1019 – 1024, DOI: 10.1109/ICRA.2013.6630698

8. Junho Ko, Woon Jong Yoon, and Yoon Sang Kim, Image Stabilization of Tele-surgical Robot based on Image Sensor, *Advanced Science and Technology Letters*, Vol.30 (ICCA 2013), pp.74-77, <http://dx.doi.org/10.14257/astl.2013.30.15>
9. Xianming Ye and W. Jong Yoon, Preliminary Design of a Bending Mechanism for Automated Cystoscope, The 8th IEEE International Conference on Automation Science and Engineering (CASE 2012), August 20-24, 2012, Seoul, Korea, pp. 261-266, DOI: 10.1109/CoASE.2012.6386429
10. Carlos A. Velasquez, H. Hawkeye King, Blake Hannaford and W. Jong Yoon, Development of a Flexible Imaging Probe integrated to a Surgical Telerobot System: Preliminary Remote Control Test and Probe Design, Fourth IEEE RAS/EMBS International Conference on Biomedical Robotics and Biomechatronics, June 2012, Rome, Italy, pp. 894-898, DOI: 10.1109/BioRob.2012.6290880
11. Eric J. Seibel, Timothy D. Soper, Matthew R. Burkhardt, Michael P. Porter, W. Jong Yoon, Multimodal flexible cystoscopy for creating co-registered panoramas of the bladder urothelium, *Photonic Therapeutics and Diagnostics VIII*, edited by Nikiforos Kollias, et al., *Proc. of SPIE* Vol. 8207, 82071A (2012);, presented on 21 – 26, January 2012 Moscone Center, San Francisco, CA, USA, DOI: 10.1117/12.909035
12. Carlos A Velasquez, Xianming Ye and, and W. Jong Yoon. Design of a Flexible Imaging Probe for Robotics Surgery. *Qatar Foundation Annual Research Forum Proceedings: Vol. 2011, BMP9*. DOI: 10.5339/qfarf.2011.bmp9
13. Xianming Ye, Carlos Velasquez and, and W. Jong Yoon. Design of Steering Mechanism for Automated Cystoscopy. *Qatar Foundation Annual Research Forum Proceedings: Vol. 2011, BMP3*. DOI: 10.5339/qfarf.2011.bmp3
14. W. Jong Yoon, Tim Soper, and Eric J. Seibel, Automated 3D Mosaicing and Scan Trajectories for Surveillance of Bladder Cancer, *Proceedings of the 2011 Design of Medical Devices Conference, DMD2011-5289*, April 12-14, 2011, Minneapolis, MN, USA.
15. W. Jong Yoon, Joel C. Perry, Blake Hannaford, Parametric Study of Virtual Curvature Recognition: Discrimination Thresholds for Haptic and Visual Sensory Information, The fifth International Workshop on Haptic and Audio Interaction Design (HAID), LNCS 6306, pp. 26–36, Copenhagen, Denmark, September 16-17, 2010.
16. W. Jong Yoon, Matthew A. Brown, Eric J. Seibel, Automated Cystoscopic Surveillance System with Endoscopic Image Mosaicing, *The 12th Mechatronics Forum Biennial International Conference*, Swiss Federal Institute of Technology, ETH Zurich, Switzerland, June 28-30, 2010, book ½, pp. 86-90.
17. W. Jong Yoon, Sangtae Park, Per G. Reinhall, and Eric J. Seibel, In Vitro Test of an Automated Cystoscopic Procedure for Bladder Surveillance, *The Engineering & Urology Society 24th Annual Meeting*, Chicago, IL, April 25th 2009. **Ranked Top 10** among the 127 submitted to the E&U meeting.
18. W. Jong Yoon, Sangtae Park, Per G. Reinhall, and Eric J. Seibel, Automated Bladder Surveillance System Using an Ultrathin Laser Imaging Probe and Active Distal Steering, *The Engineering & Urology Society 23rd Annual Meeting*, Orlando, FL, May 17th 2008. *Journal of Endourology*, 22(11), November 2008, pp. 2595
19. W. Jong Yoon, Per G. Reinhall, and Eric J. Seibel, Steerable Guidewire with Eyes for Image-guided Intervention in the Upper Urinary Tract, *Proceedings of ASME 2nd Frontiers in Biomedical Devices Conference, BioMed 2007-38059*, Irvine, CA, June 7-8, 2007, pp.57-58.

ABSTRACTS/POSTERS AND TALKS

1. W. Jong Yoon, Danny Robinson*, Vincent Valdez*, Perapat Tantawarak*, Smart Wheelchair, UWB Undergraduate Research and Creative Practice Symposium (poster and oral presentation)
2. W. Jong Yoon, Embedded systems, IOT Devices and Electronics Pre-Hackathon, UWB Makerspace, March 31, 2017

3. W. Jong Yoon, 11th North West Regional Conference, October 29-30, 2016, San Jose, CA
4. Xianming Ye, W. Jong Yoon, John-John Cabibihan, Design of a Flexible Soft Tether for Omnidirectional Camera Manipulation within the Stomach, US-Korean Conference (UKC 2016) on Science, Technology, and Entrepreneurship, August 10-13, 2016, Dallas, TX
5. Xianming Ye, W. Jong Yoon, John-John Cabibihan, Flexible Tethered Capsule Steering for Stomach Screening, IEEE Life Sciences Grand Challenges Conference (LSGCC), 25-26 January, 2016, Abu Dhabi, UAE
6. W. Jong Yoon, How to apply creativity and innovation toward currently unmet clinical needs, *Research In Progress*, Spring 2015, B CUSP 290
7. Yu Chen, Shideh Kabiri, W. Jong Yoon, John-John Cabibihan and Sameer Sonkusale, Functionalized optical fiber sensor platform for detection of gastric ammonia and carbon dioxide for early screening of stomach disease, *2nd International Conference on Label-Free Technologies*, 12-14 March 2015, Boston Marriott Cambridge, MA, USA
8. Ayub Mohammed, Mohammad Hassan Mohammad Khorasani, Nikhil V. Navkar, Carlos A. Velasquez, W. Jong Yoon, Julien A. Abi-Nahed, Abdullah Al Ansari, Preliminary Design of an Actuated Probe for Enhance Visualization in Robotic Surgeries, *Qatar Foundation Annual Research Forum 2014*, Doha, Qatar
9. SM Tangutooru, W J Yoon, JB Troy - Theoretical characterization of current and voltage distribution in lateral geniculate nucleus of thalamus using deep brain stimulation, *Neuromodulation*, 17(5):e79, 2014
10. Xianming Ye, Yuanzheng Gong, and W. Jong Yoon, In Vitro Results Of Robotic Cystoscope And 3d Panorama For Automated Bladder Surveillance System (ABSS), *The Engineering & Urology Society*, 29th Annual meeting, May 17, 2014, Hyatt Regency, Orlando, FL, USA, **Top 10 Abstracts Award.**
11. Cyril Hasson, W. Jong Yoon, Navigation capabilities for a flexible tethered capsule endoscope, *Qatar Foundation Annual Research Forum 2013*, Doha, Qatar
12. Siva M. Tangutooru, W. Jong Yoon, and John B. Troy, Preliminary Studies for a Thalamic Visual Prosthesis to Treat Blindness Resulting from Glaucoma, *Qatar Foundation Annual Research Forum 2013*, Doha, Qatar
13. Xianming Ye, W. Jong Yoon; Design of An Automated Cystoscope For Bladder Cancer Surveillance, *The Engineering & Urology Society*, May 19, 2012, Georgia World Congress Center, Atlanta, GA, **Top 10 Abstracts Award.**
14. **Invited Speaker**, "Evolution: From No Intelligence to Autonomous and Smarter Biomedical Diagnostic and Assistive Devices" Workshop, *Robotics and Intelligent Control*, AI-2012 Thirty-second SGAI International Conference on Artificial Intelligence, Cambridge, England 11-13 December 2012
15. Invited talk, "Hang in there tough, and keep believing in your dream.": Bio-Medical engineering?", Department of Mechanical and System Design Engineering, Hong Ik University, Seoul, Korea, September 5th, 2011.
16. Poster Presentation, "Discrimination Thresholds of Virtual Curvature for Haptic and Visual Sensory Information and Future Applications in Medical Virtual Training", Qatar Foundation Annual Research Forum 2010, Doha, Qatar, December 12-13th, 2010.
17. Invited talk, "Qatar, Qatar University and Smart Medical Devices Lab.", College of Engineering, Konkuk University, Seoul, Korea, July 14th, 2010.
18. QU Research Forum-2010, Session 6, Health 2, *In Vitro Test of An Automated Cystoscopic Procedure for Bladder Surveillance*, May 5, 2010.
19. Invited talk, "Development of an Automated Bladder Urothelium Surveillance System", Korean World Urologic Congress, American Urology Association (AUA) annual meeting, Hyatt Regency McCormick Place, Chicago, IL, April 26, 2009.
20. Invited talk, "Mechanical Engineering in the Computer Components and Medical Device Industries in Korea, Japan, and the U.S.", Department of Mechanical and System Design Engineering, Hong Ik University, Seoul, Korea, December 9th, 2008.

21. Conference presentation, “Active Steering Mechanism for Bladder Tumor Surveillance”, The 3rd KSEA Northwest Regional Conference, University of Phoenix, Sacramento, CA, Nov 1st, 2008.
22. Invited talk, “Efficient Automated Bladder Urothelium Imaging”, Young Generation Professional Forum, KSEA Pacific Northwest Chapter, Hilton Hotel, Bellevue, WA, March 1st, 2008
23. Conference presentation, “Steerable Ultrathin Scanning Endoscope Development for Image-guided Interventions”, The 17th Annual KSEA South-Western Regional Technology Conference, Hilton Pasadena, CA, February 10th, 2007
24. Poster, “Current Development of Scanning Fiber Endoscope and Steering Mechanism for Upper Urinary Applications”, the Visiting Committee and Advisory Board Day, University of Washington, February 9th 2007

PATENTS/ INVENTION DISCLOSURES

Patents

1. Tauseef Gulrez, W. Jong Yoon, Cutaneous Haptic Feedback System and Methods of Use. UPSTO, Patent serial number No.: 14/956,135 (filed on Dec. 1st, 2015).
2. W. Jong Yoon, Eric Seibel, Matthew (Matt) Burkhardt, Timothy Soper, Image-Based Feedback During Comprehensive Endoscopy, U.S. Patent Serial number: 14/611,114 (filed on January 30, 2015).
3. W. Jong Yoon, Eric J. Seibel, Per G. Reinhall, Rob Sweet, Efficient Automated Urothelial Imaging Using an Endoscope with Tip Bending, U.S. Patent application number, #20090208143

Invention Disclosures

1. W. Jong Yoon, Smart Multifunction Toilet Wheelchair, Record of Innovation (ROI) Reference Number: 3312 (September 2, 2015), University of Washington
2. W. Jong Yoon, E. J. Seibel, P. G. Reinhall, R. Sweet, Efficient Automated Bladder Urothelium Imaging with an Optimum Trajectory of the Scanning Fiber Endoscope and Mosaic Algorithm: Scanning the Scanner, Record of Invention-file #7771D, 2007, University of Washington
3. W. Jong Yoon, E. J. Seibel, B. Otis, Design of Multi-Segmented Shape Memory Alloy Actuators for Navigation of Ultrathin Flexible Endoscopes, Record of Invention-file #7519D, 2006, University of Washington
4. E. J. Seibel, W. Jong Yoon, Active Tip Bending and shaft Control of Ultrathin Flexible CatheterScopes, Record of Invention-file # 7132D, 2004, University of Washington

TEACHING EXPERIENCE

Advanced Special Topics in Mechanical Engineering: Mechatronics (B ME 493 B)	Instructor, University of Washington, Bothell
Introduction of Mechatronics; Review of basic programming language; Analog and digital circuit fundamentals; Microcomputer architecture and applications; Fundamentals of electro-mechanical actuators/sensors; Smart materials and application to intelligent systems.	
Spring 2016	Evaluation: 4.1/5.0 (No. of students: 22)
Spring 2017	Evaluation: 3.9/5.0 (No. of students: 14)
Fundamentals of Solid Mechanics I: Statics (B ME 221)	Instructor, University of Washington, Bothell
Applies vector analysis to equilibrium of rigid body systems and subsystems. Includes force and moment resultants, free body diagrams, internal forces, and friction. Analyzes basic structural and machine systems and components.	
Winter 2015	Evaluation: 4.7/5.0 (No. of students: 7)

Fundamentals of Solid Mechanics III: Accelerating Bodies (B ME 223)	Instructor, University of Washington, Bothell
Kinematics of particles, systems of particles, and rigid bodies; moving reference frames; equilibrium, energy, linear momentum, angular momentum. Includes laboratory.	
Spring 2015	Evaluation: 4.9/5.0 (No. of students: 15)
Spring 2016	Evaluation: 3.9/5.0 (No. of students: 34)

Intro to 3D Modeling, Design, and Analysis (B ME 315)	Instructor, University of Washington, Bothell
Design, representation, and analysis of three-dimensional objects using computational methods and computer-aided design (CAD). Topics include free hand sketching, optimization of design parameters, documentation and communication of design information using appropriate engineering standards and practices.	
Winter 2015	Evaluation: 2.9/5.0 (No. of students: 24)
Summer 2015	Evaluation: 4.0/5.0 (No. of students: 8)
Fall 2015	Evaluation: 4.0/5.0 (No. of students: 5)
Winter 2016	Evaluation: 4.7/5.0 (No. of students: 10)
Fall 2016	Evaluation: 3.9/5.0 (No. of students: 16)
Winter 2017	Evaluation: 3.9/5.0 (No. of students: 18)
Fall 2017	

Mechanical Systems Design III (B ME 343)	Instructor, University of Washington, Bothell
Covers dynamic system modeling (mechanical, electrical, fluid, and thermos systems); linear oscillator analysis (Laplace transforms, Fourier transforms, eigenvalue problems, and modal analysis); performance specifications of feedback control systems; and controller designs for single input single output systems. Includes laboratory experiences.	
Fall 2015	Evaluation: 3.9/5.0 (No. of students: 29)
Fall 2016	Evaluation: 4.2/5.0 (No. of students: 27)
Fall 2017	

Mechatronics System Design (MECH 463)	Instructor, Qatar University
Introduction and definition of Mechatronics. Analog and digital circuit fundamentals. Microcomputer architecture and applications. Data acquisition systems. Actuation systems: mechanical, hydraulic and pneumatic systems. Programmable logic controllers (PLC). Smart materials and application to intelligent systems. Weekly laboratory	
Fall 2012	Evaluation: 90.00/100 (No. of students: 10)
Fall 2013	Evaluation: 100.00/100 (No. of students: 4)

Engineering Mechanics I, Statics (GENG 221)	Instructor, Qatar University
Fundamental concepts and principles of mechanics, vectors, and force systems. Centroids and centers of gravity, Moments of inertia. Concepts of free-body-diagram, principles of equilibrium of particles and rigid bodies in two and three dimensions	
Spring 2010	Evaluation: 93.60/100 (No. of Students: 17)
Fall 2010	Evaluation: 90.59/100 (No. of Students: 21)
Fall 2011	Evaluation: 89.16/100 (No. of students: 30)
Fall 2012	Evaluation: 90.85/100 (No. of students: 39)

Fall 2013 (two groups)	Evaluation: 93.86/100 (No. of students: 32) Evaluation: 95.59/100 (No. of students: 31)
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Statics and Dynamics (GENG 220)	Instructor, Qatar University–Industrial Eng.
Principles of mechanics. Concepts of free-body diagram, principles of equilibrium of particles and rigid bodies. Fundamental concepts of kinematics and kinetics. Plane motion of rigid bodies. Rectilinear and curvilinear motion of particles. Newton’s 2 nd law. Dynamics of system of particles. Energy and momentum methods	
Spring 2010	Evaluation: 91.75/100 (No. of Students: 25)

Mechanical Mechanisms (MECH 321)	Instructor, Qatar University
Introduction and Kinematics fundamentals. Position analysis and graphical linkage synthesis. Velocity and acceleration diagrams for mechanisms. Cam and cam design. Dynamic force analysis, Gear trains. Weekly laboratory experiments.	
Fall 2009	Evaluation: 91.14/100 (No. of Students: 21)
Fall 2010	Evaluation: 94.12/100 (No. of Students: 4)
Fall 2011	Evaluation: 96.18/100 (No. of students: 30)

Control Systems (MECH 361)	Instructor, Qatar University
Introduction to control systems. Mathematical models for various feedback systems. Transfer functions. State space representation. System time and frequency responses. Performance specifications of feedback control systems. Analysis and design of systems by means of root-locus and frequency response methods. Compensation techniques. Computer-aided control system design of single input single output systems. Weekly laboratory experiments.	
Spring 2010	Evaluation: 86.71/100 (No. of Students: 18)
Spring 2011	Evaluation: 83.06/100 (No. of Students: 12)
Spring 2012	Evaluation: 84.76/100 (No. of Students: 19)
Spring 2013	Evaluation: 86.55/100 (No. of students: 16)

Engineering Mechanics II, Dynamics (GENG 222)	Instructor, Qatar University
Fundamental concepts of kinematics and kinetics with application of particles and plane motion of rigid bodies. Rectilinear and curvilinear motion of particles. Newton’s second law, impulse and momentum methods, impact. Dynamics of systems of particles. Kinematics of rigid bodies. Plane motion of rigid bodies: Forces and accelerations	
Spring 2011	Evaluation: 89.81/100 (No. of Students: 37)
Spring 2012	Evaluation: 88.41/100 (No. of Students: 24)
Spring 2013	Evaluation: 90.96/100 (No. of students: 34)
Spring 2014 (two groups)	Evaluation: N/A (No. of students: 26 & 29)

Introduction to System Dynamics (ME 373)	Teaching Assistant, University of Washington
Topics covered were mathematical modeling, analysis, and design of physical dynamic systems. Led 10 weekly laboratory experiments and taught hands-on experimental procedures and data acquisition /analysis of time-domain response of mechanical, electrical, and fluid systems. Training covered numeric simulation using LabVIEW, Matlab, and laboratory instruments.	
Winter 2008	Evaluation: N/A (No. of Students: 50)

Introduction to Mechanical Design (ME 395)	Teaching Assistant, University of Washington
Taught design process and methodology, decision making, optimization techniques, project planning, engineering economics, probabilistic and statistical aspects of mechanical design, ethical and legal issues. Conducted quiz section and labs section meetings maintaining website for course materials.	
Spring 2007	Evaluation: N/A (No. of Students: 35)

ACADEMIC ADVISING ACTIVITIES

University of Washington, Bothell

- **Undergraduate Research Project Advisor, University of Washington Bothell, Mechanical Engineering** (total accumulative 57 credits as of Summer 17)
 - Dawson Brown, (ME major, STEM), Collaborative Robot project (2credit/summer'17)
 - Seungbo Ha (ME major, STEM), Automated Bladder Surveillance System, 2017 Spring (2credit/spring'17)
 - Patrick Alan McCurry (MSEE), Tethered capsule project (2credit/spring'17), Collaborative Robot project (3credit/summer'17)
 - Perapat Tantawarak, (ME major, STEM), Smart Multifunction Toilet Wheelchair, 2017 Spring - present (2credit/spring'17)
 - Daniel C. Robinson, (ME major, STEM), Smart Multifunction Toilet Wheelchair, 2017 Winter - present (2credit/win'17, 2credit/spring'17)
 - Shayan Ebrahimi, Yang Bai, Daniel Bui Huynh, Carpal Tunnel Assistive Devices, 2016 Summer – Fall (3*2credit/summer'16, Shayan & Daniel 2*2credit/fall '16))
 - Young-Man Ashworth and Huy Hoang, Design of Exoskeleton for arthritis patient, 2016 Spring – Fall (2*2credit/spring'16, fall '16)
 - Vincent Vic Valdez (ME major, STEM), Smart Multifunction Toilet Wheelchair, Winter 2016 - present (2credit/spring '16, 2credit/summer'16, 2credit/fall'16, 2credit/win'17)
 - Michael Yacoub (BioChem major, STEM), Measurement and Verification of CO2 gas sensor for Helico pylori infection, 2015 Fall – 2016 Winter (3credit/fall '15, 3credit/winter '16)
 - Andy Chapman (ME major, STEM), Design of Exoskeleton for arthritis patient, 2014 Fall – 2015 Summer (2credit/ summer '15)
 - Megan Hewitt (ME major, STEM), Cystoscope project, 2015 Summer – 2016 Winter (2credit/summer '15, 2credit/fall '15, 2 credit/winter '16)
 - John Lynch, Simranjeet Singh, Continuum multi-DOF shaft design, 2014 Fall (2*2 credit/fall '14)

Qatar University

- **Advisor, Master of Science in Engineering Management Project (EMP), Qatar University,** Department of Mechanical and Industrial Engineering,
 - Amera Al-Mannai, 2013 fall, *Cost Effectiveness Analysis of Automated Bladder Surveillance System (ABSS)*
- **Advisor, Master of Science in Mechanical Engineering (MSME), Qatar University,** Department of Mechanical and Industrial Engineering,
 - Ahmed Mohamed El-Noamany, 2012 fall – 2013fall
- **Intern Advisor,** Yasir Salih Osman (PhD student), Universiti Teknologi PETRONAS, Perak, Malaysia, *Development of an embedded image processing unit for the toilet friendly wheelchair sensing system using 2D triangulation*, 2012 December – 2013 February.

- **Undergraduate Research Advisor, University of Washington**, Seattle, Department of Mechanical Engineering, Matthew Ryan Burkhardt, *Controlling the Trajectory of a Scanning Fiber Endoscope for Automatic Bladder Surveillance*, 2011 spring – summer.
- **Undergraduate Senior Project Advisor, Qatar University**, Department of Mechanical and Industrial Engineering
 - Faisal Ibrahim Jaber, *ABB Technology and Qatar University Student Projects on Robotics*, , Department of Mechanical Engineering, 2011 Fall, 2012 Spring, Demonstrated at *the 20th World Petroleum Conference and Exhibition*, National Convention Center, December 4th -8th, Doha, Qatar
 - Khalid Al-Fahad, Omar L. Aljammal, Khaled Hussein, *Design and Development of an Arabic Speech-Controlled Multifunction Toilet-friendly Wheelchair*, 2011 Spring, 2011 Fall. Co-advised CSE undergraduates, Hind Almerkhi and Khansa Chemnad Abdul Jaleel
 - Haitham Jamal Alkababji, Ahmed Hashim Hamouda, Abdullah Zakaria Atia, *Discrimination Thresholds for Haptic and Visual Sensory Information*, 2010 Fall, 2011 Spring
 - Firas, Zirie, Mustafa, Thamer, Mohammed Hafes, *Design of a Formula SAE Racing Car*, 2010 Spring, 2010 Fall.
 - Nasser Jassim AL-Obaidli, Abdulrahman Nooh AL-Zahed, *The Potential of Stand-Alone Photovoltaic System Technology in Qatar*, 2009 Fall.

PROFESSIONAL COMMITTEES

- **Session Co-Chair, Medical Robots session**, the 14th International Conference on Ubiquitous Robots and Ambient Intelligence (URAI), June 28 - July 1, 2017, Jeju, Korea
- **Associate Editor (AE)**, Conference Editorial Board (CEB) of the IEEE Robotics and Automation Society for **ICRA 2016** (<http://www.icra2016.org>), **ICRA 2017** (<http://www.icra2017.org>), and **ICRA 2018** (<http://www.icra2018.org>)
- **Review Editor**, Editorial Board of Frontiers in Bionics and Biomimetics, a specialty of Frontiers in Bioengineering and Biotechnology and Robotics and AI, 2015- present
- **Session Moderator**, Hands on Learning, the ASEE PNW Section Conference 2016, Boise
- **Advisory/Editorial Board**, International Journal of Energy, Information and Communications, 2011 – present
- **Program Committee**, CIS-RAM 2015 (IEEE Int. Conf. on Cybernetics and Intelligent Systems (CIS) Robotics, and IEEE Int. Conf. on Automation and Mechatronics (RAM), [www.cis-ram.org])
- **Session co-chair (Biorobotics)**, The 7th IEEE International Conferences On Cybernetics And Intelligent Systems (CIS), and Robotics, Automation And Mechatronics (RAM), 15-17 July, 2015, Angkor Wat, Cambodia
- **Track Chair (Urologic), Scientific Program Committee Member, Design of Medical Devices Conference (DMD)**, Minneapolis, 2011- present.
- **Associate editor** (Biomechanics, Biomaterials and Tissue Engineering) and **Track co-Chair**, Middle East Conference on Biomedical Engineering (MECBME'14), Doha, Feb. 17-20, 2014
- **Organizer**, Special Sessions (s15: Towards Autonomous Learning Machines), The 19th International Conference on Neural Information Processing (ICONIP 2012), Doha, Qatar, November 12-15, 2012.
- **International Program Committee (IPC), ICCAS 2012 (12th International Conference on Control, Automation and Systems)**, Jeju Island, Korea, 2012
- **Scientific Committee Member, CompIMAGE 2012 Conference-Computational Modeling of Objects Presented in Images: Fundamentals, Methods and Applications**, Rome (Italy) from 5th to 7th of September 2012.
- **Scientific Committee Member, 6th International Conference on Technology and Medical Sciences (TMSi2010)**, October 2010, Porto, Portugal.

- **Scientific Committee Member**, VipIMAGE2011 - 3rd ECCOMAS (**European Community on Computational Methods in Applied Sciences**), Thematic Conference on Computational Vision and Medical Imaging Processing, 2011 October, Algarve, Portugal.
- **ABET Quality Assurance Committee**, MIE Department, Qatar University, 2009 – present
- **Research and Graduate Studies Committee**, College of Engineering, Qatar University, 2010 - present
- **Research Committee**, MIE Department, Qatar University, 2009 – present

PROFESSIONAL AFFILIATIONS

- American Society of Mechanical Engineers (ASME) member, 2004 - present
- IEEE member, 2010 – present
- ASEE member, 2016 - present
- Korean-American Engineers and Scientists Association (KSEA) member, 2005 – present

UNIVERSITY AND COMMUNITY SERVICE/ACTIVITIES

University of Washington, Bothell

- Member, School of STEM Search Committee for ABET Coordinator and Personnel Processes support staff, 2017 Spring
- Panelist, Computer Code and Your Career, UW Bothell chapter of the Society of Manufacturing Engineers (SME) and ASME, November 14, 2016, Discover Hall, Maker Space
- Temporary **STEM EC representative** (Standing in for Jeffery Jensen), The Executive Council (EC) of the GFO, 2016 Fall
- **Assistant coordinator**, School of STEM **ABET committee, 2016 - 2017**
- Member, School of STEM Search Committee for Mechanical Engineering Lab Coordinator, 2016 Fall
- **UWB Faculty Senate representative**, September 16, 2016 - September 15, 2018
- **Faculty advisor, Society of Manufacturing Engineering (SME) Student Chapter** at UWB May 2016- present.
- **Faculty advisor, ASME Student Chapter** at UWB, Jan 2016 - present
- **Faculty Advisor**, TrickFire Robotics Club, University of Washington, 2016 – present
 - NASA Robotic Mining Competition 2017 May 22-26
- **Member, Petition committee for E&M Grad Program**, 2016 - present
- **Reviewer**, UW Bothell Founder's Fellow Research and Creative Practice Scholarships, 2015
- **Chapter President**, Korean-American Engineers and Scientists Association (KSEA) Pacific Northwest chapter, 2015 - present.
- **Exhibitor** (Robot Doctor), the Inspire STEM Festival, UWB October 12th, 2015
- Member, School of STEM Search Committee for Professor-of-Practice in Systems Engineering, 2015 Fall – 2016 Spring
- Member, University of Washington Graduate Faculty, 2015- present
- **Faculty advisor**, Badges for college credit (BCC), to develop a system to associate informal science learning with college credit. The project partners with three regional informal science institutions, the Pacific Science Center, the Future of Flight and the Seattle of Aquarium. 2015 Fall - present
- Member, School of STEM **ABET committee**, 2014 - present
- Member, School of STEM **Search Committee** for Thermofluids/Ocean Engineering TT Faculty, 2014 Fall – 2015 Spring

- Member, School of STEM Search Committee for Electrical Engineering TT Faculty, 2014 Fall – 2015 Spring

Qatar University

- **Advisor, Stars of Science season 4 (SOS, www.starsofscience.com)**, Saud Al-Shammari ‘Mechanical shoes for orthopedic patient’, Amina Alhawaj ‘Lower Limb Rehabilitation Device’, February – June, 2012
- **Forum coordinator**, Advance health informatics and engineer better medicines, National Academy of Engineering Grand Challenges Forum, May 9th, 2011
- **Chair**, Biomedical Engineering Workshop, CENG Research and Graduate Studies Week College of Engineering, Qatar University, March 27 – 30th, 2011

Others

- **Chapter President Chair (CPC), Korean-American Engineers and Scientists Association (KSEA)**, 46th term (August 2017 – August 2018).
- Member, the 46th Contest Committee, **Korean-American Engineers and Scientists Association (KSEA)**, 46th term (August 2017 – August 2018).
- **Chapter president, Korean-American Engineers and Scientists Association (KSEA), Seattle Chapter**, 44 (acting), 45, and 46th terms (Nov. 2015 – June 2018)
- **Research Proposal Reviewer**, National Medical Research Council (NMRC), under the Ministry of Health, Singapore
- **Reviewer, IEEE/ASME Transactions on Mechatronics**, 2009 – present
- **Reviewer, IEEE/ASME Transactions on Biomedical Engineering**, 2012 – present
- **Reviewer, Journal of Microscopy**, 2014 – present
- **Reviewer, International Journal of Precision Engineering and Manufacturing (IJPEM)**, 2009 - present
- **Reviewer, Journal of Mechanical Science and Technology**, 2013 – present
- **Research Proposal Reviewer**, The Emirates Foundation for philanthropy, Abu Dhabi, United Arab Emirate, 2010 - present
- **Reviewer, ASME Word Conference on Innovative Virtual Reality (WINVR 2011)**
- Member of University of Washington **Toastmasters Club**, October 2003 – August 2009
Vice President of University of Washington Toastmasters club, July 2005 - June 2008
Recognized as an **Advanced Toastmaster Silver (ATM-S)**, August 2009
- Advisor, Science Olympiad, North Shore Junior High school, 2016 Fall - present
- **Director of National Mathematics Competition of Korean-American Engineers and Scientists Association (KSEA) Pacific Northwest chapter**, 2005 – 2009, 2014 - present.
- **Volunteer Assistant Teacher, Readings in Contemporary Korean**, University of Washington, Autumn 2008
- Organization committee of KSEA Northwest Regional Conference (NWRC), 2006 - 2009
- Vice President of Korean Graduate Student Association (KGSA) at the University of Washington, September 2004 - September 2005
- **Executive committee of the Reserve Officers’ Training Corps (ROTC)**, 1994 – 1995

TECHNICAL SKILLS

- Programming & computing tools: NI LabVIEW, MATLAB, C, C++, MS VC++, Mathematica, ANSYS, COMSOL Multiphysics (FEMLAB), ADAMS, Solidworks, Rhinoceros CAD, and Microsoft Office
- Languages: Korean (Fluent), Japanese (Conversant and reading)
- Apply statistical & failure analysis to most projects with the proper methodological tools, such as Six Sigma, to eliminate process variation. Have extensive experience with Six Sigma Statistics software applications (Minitab)
- Extensive experience in precision motor test setups, quality control, and clean-room management

RESEARCH COLLABORATORS

- **Eric Seibel**, Research Professor,
Human Photonics Lab, Mechanical Engineering,
University of Washington, WA, USA
- **Myong-Kee Jeong**, Professor
Department of Industrial & Systems Engineering (ISE)
Rutgers, The State University of New Jersey, NJ, USA
- **Blake Hannaford**, Professor,
Biorobotics Lab, Electrical Engineering,
University of Washington, WA, USA
- **John B. Troy**, Professor, Chair,
Biomedical Engineering,
Northwestern University, IL, USA
- **Hyouk Ryeol Choi**, Professor, Chair
Intelligent Robotics & Mechatronic System Laboratory,
Department of Mechanical Engineering,
Sungkyunkwan University, Korea
- **Yoon Sang Kim**, Professor,
School of Computer Science and Engineering,
Korea University of Technology and Education, Korea
- **Per G. Reinhall**, Professor, Chair,
Mechanical Engineering,
University of Washington, WA, USA
- **Thomas S. Lendvay**, M.D.,
Department of Urology, University of Washington, School of Medicine and
Seattle Children's Hospital, Seattle, WA, USA
- **Sangtae Park**, M.D.,
Section of Urology, Department of Surgery,
University of Chicago Pritzker School of Medicine, Chicago, IL, USA
- **Sameer Sonkusale**, Associate Professor,
Nanoscale Sensors, Integrated Circuits and Metamaterials Laboratory,
Electrical and Computer Engineering,
Tufts University, MA, USA

- **Robert M. Sweet**, M.D., Associate Professor of Urologic Surgery,
The Center for Research in Education and Simulation Technologies (CREST),
University of Minnesota in Minneapolis, MN, USA
- **Joel C. Perry**, PhD, Assistant Professor
Department of Mechanical Engineering
University of Idaho, ID, USA
- **Matthew A. Brown**, PhD, Assistant Professor,
Department of Computer Science,
University of Bath, UK
- **Julien Abi Nahed**, PhD, Lead R&D Executive
Qatar Robotic Surgery Center (QRSC)
Qatar Science and Technology Park (QSTP), Qatar

- The end -