Chun-Feng Lai

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Delft, the Netherlands

EDUCATION

Oct.. 2019 – Present **Double degree PhD student, Marie Curie European fellowship, ATLAS**
Host: Delft University of Technology(TU Delft), Delft, the Netherlands
BITE-MISIT group — Department of BioMechanical engineering, Faculty of Mechanical, Maritime and Material engineering
Second Host: Polytechnic University of Milan, Milan, Italy
NearLab — Department of Electronics Information and Bioengineering

RWTH-Aachen University, Aachen, Germany
Sep. 2017 – Aug. 2018 Exchange Program — Faculty of Mechanical Engineering

National Taiwan University(NTU), Taipei, Taiwan
Sep. 2015 – Sep. 2017 Master of Science — Institute of Biomedical Engineering
Sep. 2010 – Jun. 2014 Bachelor of Science — Department of Mechanical Engineering

WORK AND RESEARCH PUBLICATIONS

Oct. 2019 – Present **Marie Curie European fellowship, ATLAS project**
Modularization of medical robotic manipulator for adapting soft robotic arms with varying numbers of DOFs
Proc. of the 10th Conference on New Technologies for Computer and Robot Assisted Surgery (CRAS), 2020

Nov. 2018 – Oct. 2019 **Early-stage Researcher, BioMechanical Engineering, MISIT, TU Delft**
Marie Curie European fellowship, HiperNav project:
Developing deep learning CNNs for automatic localization of surgical tools in laparoscopic liver surgery.
Realizing Real-Time Localization Of Surgical Instruments In Laparoscopic Liver Surgeries By YOLOV3
2020 international Society for Medical Innovation and Technology (iSMIT) 32nd ANNUAL SMIT CONGRESS

Sep. 2015 – Sep. 2017 **Master Thesis Research, Biomechanics Laboratory, NTU**
Biomedical Device Design and Development:
A Follow Up of an In-Vivo Animal Experiment of a Self-Adaptive Growing Rods System for Early Onset Scoliosis
2017 ORS Annual Meeting, San Diego, Conference Paper, Poster
Biomechanical Effect of Ultrasound stimulation on biological tissue:
Ultrasound Stimulation Reduces Friction between Soft Tissue and Viscous Fluid Interface
2017 ORS Annual Meeting, San Diego, Conference Paper, Poster

Sep. 2014 – Aug. 2015 **Substitute Military Service, Hsinchu County, Hsinchu Government**
Purchasing and cataloging collections of books and magazines for the local library

Feb. 2014 – Jun. 2014 Application of MEMS Technology in Telehealth:
- Developing a vitals monitoring system with smart phone and Arduino.

Jul. 2012 – Aug. 2013 **Precision Metrology Laboratory, NTU**
Individual Studies in Automated Optical Inspection:
- Detecting defect, such as cracks, with speckles in the background on microchips production line.
- Constructing 3D image of a circuit board using phase-shift technique.

Conferences and publications

[1] Jorge F.Lazo*, **Chun-Feng Lai***, Sara Moccia, Michele Catellani, Benoit Rosa, Michel de Mathelin,Giancarlo Ferrigno, Paul Breedveld, Jenny Dankelman2and Elena De Momi, Deep Learning-Based Visual Servoing for Endoscopic Navigation in Narrow Luminal Structures, The International Conference on Intelligent Robots and Systems (IROS) presentation option, 2022.
*equal contribution

[2] Xuan Thao Ha, Di Wu, **Chun-Feng Lai**, Mouloud OURAK, Gianni Borghesan, Arianna Menciassi, Emmanuel B Vander Poorten, "Contact Localization of Continuum and Flexible Robot Using Data-driven Approach", RA-L journal paper with The International Conference on Robotics and Automation.

[3] Martina Finocchiaro*, Xuan Thao Ha*, Jorge F. Lazo*, **Chun-Feng Lai***, Sanat Ramesh*, Albert Hernansanz, Gianni Borghesan, Diego Dall'Alba, Selene Tognarelli, Benoit Rosa, Alicia Casals, Nicolas Padoy, Paolo Fiorini, Jenny Dankelman, Emmanuel Vander Porten, Arianna Menciassi and Elena De Momi, Multi-level-assistance Robotic Platform for Navigation in the Urinary System: Design and Preliminary Tests, Proc. of the 10th Conference on New Technologies for Computer and Robot Assisted Surgery (CRAS), 2022.
*equal contribution

[4] Jonathan CJ Wei, Bryan Blaauw, Dieter G.M. van der Pol, Mauricio Cruz Saldívar, **Chun-Feng Lai**, Jenny Dankelman, Tim Horeman, "Design of an affordable, modular implant device for soft tissue tension assessment and range of motion tracking during total hip arthroplasty", IEEE Journal of Translational Engineering in Health and Medicine.

[5] **Chun-Feng Lai**, Fabian Trauzettel, Paul Breedveld, Elena De Momi, Giancarlo Ferrigno, and Jenny Dankelman, Modularization of medical robotic manipulator for adapting soft robotic arms with varying numbers of DOFs, Proc. of the 10th Conference on New Technologies for Computer and Robot Assisted Surgery (CRAS), 2020.