Yulong Liu | Curriculum Vitae

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Brisk, Hardy and Avoid Boring

RESEARCH INTERESTS

Internet of Things, RFID, Wearable Electronics, Antenna Design, E-Textile, Embedded Systems and Engineering Optimization.

EDUCATION

Southern University of Science and Technology **Shenzhen, China**
Bachelor of Communication Engineering *August 2015 - July 2019*

EXPERIENCE

Southern University of Science and Technology **Shenzhen, China**
Research Assistant *July 2019 - now*

- Working on design and fabricate conductive-yarn-related embroidered electronics for wearable applications, including sensors, transmission line, antennas and etc.
- Incorporating the RFID technology with exsting sensors to achieve wireless and battery-less sensing within the human body area.

Laxcen Technology Limited **Shenzhen, China**
Trainee Engineer *June 2018 - December 2018*

- Modeling a near field UHF RFID reader antenna with HFSS. This antenna (reffered to "Zero-Phase-Shift-Loop", or "ZPSL" antenna) overcame the problem of unwanted read range and increased the interrogation area.
- Designed and prototyped several types of UHF RFID tag antennas, and tested their performance under pratical enviroment, which exhibits good potential to be commercialized.

SERVICE

- Reviewer for IEEE Journal of Radio Frequency Indentification 2019
- Member of Shenzhen Volunteer Association 2018
- Publicity Director of the Student Union 2016 - 2017

AWARDS AND ACHIEVEMENTS

- Third Prize Scholarship (SUSTech) 2018
- National Encouragement Scholarship (Ministry of Education of the People's Republic of China) 2017
- Shude College Scholarship (SUSTech) 2017
- Fresh Man Scholarship (SUSTech) 2015

PUBLISHMENTS

Journal Publications

1. **Exploiting Embroidered UHF RFID Antennas as Deformation Sensors**
   Mengxia Yu, Xuanyu Shang, Miao Wang, **Yulong Liu** and Terry Tao Ye
   IEEE Journal of Radio Frequency Identification, doi: 10.1109/JRFID.2020.3030790. (Early Access)

2. **Characterizations and Optimization Techniques of Embroidered RFID Antenna for Wearable Applications**
   Yulong Liu, Mengxia Yu, Lulu Xu, Yi Li and Terry Tao Ye
   IEEE Journal of Radio Frequency Identification, vol. 4, no. 1, pp. 38-45, March 2020, doi: 10.1109/JRFID.2019.2961189.

Conference Publications

1. **Coupled Planar Coil (CPC) Antenna as a Displacement Sensor for NFC or HF RFID Tags**
   Yulong Liu and Terry Tao Ye
   2020 IEEE International Conference on RFID (RFID), Orlando, FL, USA, 2020.

2. **Textile Based Embroidery-Friendly RFID Antenna Design Techniques**
   Yulong Liu, Lulu Xu, Yi Li and Terry Tao Ye
   2019 IEEE International Conference on RFID (RFID), Phoenix, AZ, USA, 2019, pp. 1-6.

3. **Deformation Sensitivity Study of Embroidered UHF RFID Antennas**
   Mengxia Yu, Xuanyu Shang, Miao Wang, **Yulong Liu** and Terry Tao Ye
   2019 IEEE International Conference on RFID Technology and Applications (RFID-TA), Pisa, Italy, 2019, pp. 322-326, doi: 10.1109/RFID-TA.2019.8891966.

4. **Passive Embroidered Stretch Sensor Utilizing UHF RFID Antennas**
   Mengxia Yu, Silong Wang, **Yulong Liu** and Terry Tao Ye
   2019 IEEE International Conference on Ubiquitous Intelligence and Computing (UIC), August 2019, Leicester, UK.

5. **Design and fabrication of embroidered RFID antennas for wearable applications**
   Lulu Xu, **Yulong Liu**, Pui Yi Lau, Haitao Si and Terry Tao Ye
   2018 IEEE International Conference on Service Operations and Logistics, and Informatics (SOLI), July 2018, Singapore, pp. 118–122.

Workshop Publications

1. **Embroidered Inductive Strain Sensor for Wearable Applications**
   Yulong Liu, Miao Wang, Mengxia Yu, Bingyi Xia and Terry Tao Ye
   2020 IEEE International Conference on Pervasive Computing and Communications (PerCom 2020) workshop on PerLS, March 2020, Austin, USA.

2. **Fabrics-Based Embroidered Passive Displacement Sensors for On-Body Applications**
   Yulong Liu, Miao Wang, Bingyi Xia and Terry Tao Ye
   International Conference on Embedded Wireless Systems and Networks (EWSN) 2020 workshop on OBSN, 17–19 February 2020, Lyon, France.