

# REN LI

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<https://liren2515.github.io/page/>

## EDUCATION

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### École polytechnique fédérale de Lausanne (EPFL)

PhD student in Computer Science  
EDIC Computer and Communication Sciences

*September 2021 - Present*

### Purdue University

MS in Electrical and Computer Engineering  
Department of Electrical and Computer Engineering

*August 2016 - May 2019*

Overall GPA: 3.94/4.0

### University of Science and Technology of China (USTC)

Bachelor of Electrical Engineering  
Department of Electrical Engineering and Information Science

*August 2012 - June 2016*

Overall GPA: 4.00/4.3

**Rank: 1/106**

## TECHNICAL STRENGTHS

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| <b>Computer Languages</b>   | Python, C/C++               |
| <b>Software &amp; Tools</b> | PyTorch, TensorFlow, MATLAB |

## WORKING EXPERIENCE

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### United Imaging Intelligence, Boston, MA

*Research Intern*

September 2019 - March 2021

- **Human Mesh Recovery:** Recovering human pose and shape from RGB-D or RGB input under daily or medical environment. Targeting at a contactless patient positioning system that can enable scanning patients in a completely remote and contactless fashion.

### SenseTime, Beijing

*Research Intern/Part-time Researcher*

May 2019 - February 2020

- **Face Forgery:** Building a large-scale dataset for face forgery. Implementing a GAN-based model to generate face swapping videos, and conducting a comprehensive study that evaluates representative detection baselines under different noise settings.

### Purdue University, West Lafayette, IN

*Research Assistant*

September 2016 - May 2019

- **EEG-Based Visual Classification:** Building a large dataset for the task of EEG-based visual classification, analyzing EEG signals by various models to do the image/video classification for the understanding of human perception, and visualizing the spatial, temporal and spatio-temporal activation maps of the human brain by novel methods. Also refuting some erroneous works which achieved high accuracy via wrong experimental settings.
- **Visual Relationship Detection Based Video Retrieval:** Building a CNN model to reason the visual relationship between two objects within a video frame, and assembling the frame-level visual relationship to obtain the video-level tags for each tracked object tube, which can be used for video retrieval.

### Gottfried Wilhelm Leibniz Universitt Hannover, Germany

*Research Assistant*

January 2016 - May 2016

- **Contact-Free Camera Measurements of Heart Rate:** Extracting the color traces of RGB channels within the tracked face region in the video and deriving the heart rate from the color traces by filtering and frequency analysis. Achieving more robust and accurate performance on heart-rate estimation than other state-of-the-art benchmarks.

USTC

June 2014 - May 2016

Research Assistant

- **Synthesis Distortion Estimation in 3D Video:** Analyzing the virtual view synthesis distortion induced by depth error for 3D video coding, and refining the distortion estimation model based on statistical information.

## PUBLICATIONS

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**Ren Li**, Benoît Guillard, Pascal Fua, "*ISP: Multi-Layered Garment Draping with Implicit Sewing Patterns*", NeurIPS, 2023.

Luca De Luigi\*, **Ren Li\***, Benoît Guillard, Mathieu Salzmann, Pascal Fua, "*DrapeNet: Garment Generation and Self-Supervised Draping*", CVPR, 2023.

**Ren Li**, Benoît Guillard, Edoardo Remelli, Pascal Fua, "*DIG: Draping Implicit Garment over the Human Body*", ACCV (Oral), 2022.

**Ren Li**, Meng Zheng, Srikrishna Karanam, Terrence Chen, Ziyang Wu, "*Everybody Is Unique: Towards Unbiased Human Mesh Recovery*", BMVC (Oral), 2021.

Runze Li, Srikrishna Karanam, **Ren Li**, Terrence Chen, Bir Bhanu, Ziyang Wu, "*Learning Local Recurrent Models for Human Mesh Recovery*", 3DV, 2021.

**Ren Li\***, Srikrishna Karanam\*, Fan Yang\*, Wei Hu, Terrence Chen, Ziyang Wu, "*Towards Contactless Patient Positioning*", Transactions on Medical Imaging (TMI), 2020.

**Ren Li**, Jared S. Johansen, Hamad Ahmed, Thomas V. Ilyevsky, Ronnie B Wilbur, Hari M Bharadwaj, Jeffrey Mark Siskind, "*The Perils and Pitfalls of Block Design for EEG Classification Experiments*", IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), 2020.

Georgios Georgakis\*, **Ren Li\***, Srikrishna Karanam, Terrence Chen, Jana Kosecka, Ziyang Wu, "*Hierarchical Kinematic Human Mesh Recovery*", ECCV, 2020.

Fan Yang\*, **Ren Li\***, Srikrishna Karanam, Terrence Chen, Haibin Ling, Ziyang Wu, "*Robust Multi-modal 3D Patient Body Modeling*", International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), 2020.

Liming Jiang, **Ren Li**, Wayne Wu, Chen Qian, Chen Change Loy, "*DeeperForensics-1.0: A Large-Scale Dataset for Real-World Face Forgery Detection*", CVPR, 2020.

Yijian Xiang, Lu Fang, **Ren Li**, N. M. Cheung, "*Depth Error Induced Virtual View Synthesis Distortion Estimation for 3D Video Coding*", IEEE Data Compression Conference (DCC), 2015.

\* equal contribution.

## AWARDS & HONORS

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Guo Moruo Scholarship\*, USTC, 2015

National Scholarship (Top 2%), MOE of China, 2014

The Talent Program Scholarship (Top 3%), USTC, 2014

\*Guo Moruo Scholarship is the first scholarship of P.R. China, and the most highly regarded honor by USTC students and alumni, in name of our first president Mr. Guo Moruo.