# Liang Li

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## Summary

- Experience with circuit & EM wave simulation tool HFSS, CST, EMCStudio, ADS, Altium Designer, Cadence Allegro and Virtuoso
- Adept at RF measurement instruments like VNA, SA, TDR, Near-field Scanning, as well as chamber measurement
- Dedicated in IC noise modeling, RFI analysis for PCB layout pre-design

## Education

**Missouri University of Science and Technology** 2013.08—Present

M.S. Research assistant in EMC laboratory, GPA 4.0/4.0

Advisor: Dr. Jun Fan

**Huazhong University of Science and Technology** 2009.09—2013.05

B.S. in Electronics and information engineering

GPA 3.7/4.0, Ranking 2/20 (Special Class)

## Projects

### 1. IC Noise Source Modeling (Huawei)

The project goal is to estimate the radiation from the noise IC in the far-field and noise coupled to peripheral RF device or components in the near-field. The noise source can be modeled by using Huygens's principal or equivalent dipole moment model.

### 2. Radio Frequency Interference Analysis (Samsung)

For cellphone system, ESD and RFI issues are critical to the reliability and robustness performance. Before PCB layout is done, an evaluation of RFI in mixed RF and digital circuits are necessary to improve the performance of cellphone system. By reciprocity method, the coupled noise power from radiation source (IC etc.) to neighboring sensitive RF antenna can be estimated by near-field scanning technique.

3. **Radio Frequency Interference for IC radiation (Microsoft Mobile)**

   This is an ongoing project whose objective is similar to the Samsung's. The interference source is specified and the source is expected to be modelled in simulation tool. Finally, the simulated noise/signal power on RF antennas is compared with the measured power.

4. **Emission Test for Different IC Shielding Processes (Amkor)**

   Far-field radiation pattern and near-field pattern are measured for different shielded dummy IC to test the shielding performance. The measurement requires very good SNR since the radiation from the IC die is very weak (around -80dBm in the far-field). A few actions to improve the SNR are taken to ensure the final results are reasonable.

## Publications

i. "Near-field Coupling Estimation by Source Reconstruction and Huygens's Equivalence Principle", to be appeared 2015 IEEE symposium on EMC & SI
ii. "Measurement Validation for Radio-Frequency Interference Estimation by Reciprocity Theorem", to be submitted to International Symposium on EMC in Germany 2015

## Awards & Honors

National Scholarship for Encouragement

Outstanding Academic Performance Scholarship

National Student Stipend

National Undergraduate Innovative Training Program Funding

Excellent Graduate in Year 2013

3rd Prize in Huazhong Wendingchuang Cup of Mathematical Modeling

## Skills

RFI, SI, Antenna, C/C++, Python, Matlab, Verilog, VLSI

## Website

http://leeo1116.github.io/

http://liangli.uni.me/Moments