## Dongdong Shu (Email: shudd@shanghaitech.edu.cn)

[<a href="https://scholar.google.com/citations?user=oxEYf0MAAAAJ&hl=zh-CN&oi=ao" target="\_blank">Google scholar</a>], [<a href="https://www.researchgate.net/scientific-contributions/Dongdong-Shu-2157948095?\_sg=S5t9PdhSz6SdbKdLjbKQ6kyRdaY75s1dTfqWfMDJWw4ZKw5YVjAyTCaUMDzP1E6dW29apg5jiUw9MWs" target="\_blank">Researchgate</a>], [<a href="https://www.linkedin.com/in/%E5%86%AC%E5%86%AC-%E6%9D%9F-1a4988167/" target="\_blank">Linkedin</a>]<br/>

<a href="https://pearl.shanghaitech.edu.cn/" target="\_blank">Power Electronics And Renewable energies Laboratory</a><br />

<a href="http://www.shanghaitech.edu.cn/" target="\_blank">ShanghaiTech University</a><br />

<a href="https://www.ucas.ac.cn/" target="\_blank">University of Chinese Academy of Sciences</a><br />

<a href="http://sim.cas.cn/">Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences</a><br />

### About me

I am now a Ph.D. candidate at Power Electronics And Renewable energies Laboratory. I am also with the Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences, and University of Chinese Academy of Sciences. My research advisor is Prof. Haoyu Wang. The research in our laboratory is revolved around modeling, simulating, prototyping, and validating power electronics systems in the applications of electrified transportation, renewable energies harvesting, smart home, power management of wearable devices and many more. My research interest is in GaN power semiconductor and its applications in high frequency bidirectional dc/dc converters.

### Education

Ph.D. in Electronic Science and Technology, ShanghaiTech University/University of Chinese Academy of Sciences, Sept. 2018 - Present

B.E. in Automation, Northwestern Polytechnical University, Sept. 2012- Jun. 2016

### Research Interest

AC/DC converter

Resonant converter

Bidirectional DC/DC converter

GaN power semiconductor

High power density and high efficiency

### Awards

Outstanding Student Scholarship of ShanghaiTech University in 2018, 2019, 2020 and 2021.

Outstanding Student Scholarship of Northwestern Polytechnical University in 2013.

### Publication

#### Journal Papers

[J5] M. Zhou, D. Shu, and H. Wang\*, "An H5-bridge based laddered CLLC DCX with variable DC-link for PEV charging applications," <em>IEEE Trans. Power Electron.</em>, in press. <a href="https://ieeexplore.ieee.org/document/9591480" target="\_blank"> [URL]</a>

[J4] D. Shu, H. Wang\*, and M. Zhou, "Universal control scheme to achieve seamless dynamic transition of dual-active-bridge converters using zero-current prediction," <em>IEEE Trans. Ind. Electron.</em>, in press. <a href="https://ieeexplore.ieee.org/document/9464635" target="\_blank"> [URL]</a>

[J3] D. Shu and H. Wang\*, "Light load performance enhancement technique for LLC-based PEV charger through circuit reconfiguration," <em>IEEE Trans. Transp. Electrif.</em>, vol. 7, no. 4, pp. 2104-2113, Dec. 2021. <a href="https://ieeexplore.ieee.org/abstract/document/9427258" target="\_blank"> [URL]</a>

[J2] D. Shu and H. Wang\*, "An ultra-wide output range <em>LLC</em> resonant converter based on adjustable turns ratio transformer and reconfigurable bridge," <em>IEEE Trans. Ind. Electron.</em>, vol. 68, no. 8, pp. 7115-7124, Aug. 2021. <a href="https://ieeexplore.ieee.org/document/9145821/" target="\_blank"> [URL]</a>

[J1] H. Wang\*, M. Shang, and D. Shu, "Design considerations of efficiency enhanced <em>LLC</em> PEV charger using reconfigurable transformer," <em>IEEE Trans. Veh. Technol.</em>, vol. 68, no. 9, pp. 8642-8651, Sept. 2019. <a href="https://ieeexplore.ieee.org/document/8770130" target="\_blank"> [URL]</a>

#### Conference Papers

[C3] M. Zhou, H. Wang\*, and D. Shu, "Design methodology to reduce the lumped winding capacitance of spiral winding transformer in LLC converters," in <em>Proc. IEEE Energy Convers. Congr. Expo. (ECCE)</em>, Vancouver, BC, Oct. 2021. <a href="" target="\_blank"> [URL]</a>

[C2] D. Shu, and H. Wang\*, "An Adjustable Turns Ratio Transformer Based LLC Converter for Deeply-depleted PEV Charging Applications," in <em>Proc. IEEE Appl. Power Electron. Conf. Expo. (APEC)</em>, New Orleans, LA, Mar. 2020, pp. 860-864. <a href="https://ieeexplore.ieee.org/abstract/document/9124450" target="\_blank"> [URL]</a>

[C1] U. Khalid, D. Shu, and H. Wang\*, "Hybrid modulated reconfigurable bidirectional <em>CLLC</em> converter for V2G enabled PEV charging applications," in <em>Proc. IEEE Appl. Power Electron. Conf. Expo. (APEC)</em>, Anaheim, CA, Mar. 2019, pp. 3232-3238.<a href="https://ieeexplore.ieee.org/document/8721807" target="\_blank"> [URL]</a>

#### Patents

[P2] 束冬冬, 王浩宇, "一种轻载性能提升的LLC谐振变换器," 中国, 专利申请号202110365380.9, 2021年4月6日. <a href="http://pss-system.cnipa.gov.cn/sipopublicsearch/patentsearch/showViewList-jumpToView.shtml" target="\_blank"> [URL]</a><br/>

[P1] 束冬冬, 王浩宇, "一种改善双有源桥动态性能的新型通用四移相调制方法," 中国, 专利申请号202011526153.1, 2020年12月22日. <a href="http://pss-system.cnipa.gov.cn/sipopublicsearch/patentsearch/showViewList-jumpToView.shtml" target="\_blank"> [URL]</a><br/>

### Teaching Assistant Experiences

-EE270: Modeling and control of power electronic converters, Fall 2020.

-SI200: Graduate thesis writing, Spring 2021

### Professional Services

#### Membership

Student Member, IEEE, 2019.6-present.

Student Member, CPSS, 2020.1-present.

#### Peer-reviewing Activities

<a href="https://ieeexplore.ieee.org/xpl/tocresult.jsp?isnumber=4359240" target="\_blank">IEEE Transactions on Power Electronics</a><br />

<a href="https://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=41" target="\_blank">IEEE Transactions on Industrial Electronics</a><br />

<a href="https://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=6687316" target="\_blank">IEEE Transactions on Transportation Electrification</a><br />

<a href="http://www.apec-conf.org/" target="\_blank">IEEE Appl. Power Electron. Conf. Expo. (APEC)</a><br />