Power System Academia 101 – v1.0

A public version of "UH RPG Lab Resources Version 1.6.2" - June 20, 2023

Contents

Log

- <u>This log file is for the full version that is only accessible for the members of UH RPG Lab</u>.
- <u>For non-UH RPG Lab members, you can skip this page</u>.

Version 1.0 is the first version of this document that was initially created on Jan 14, 2020.

Version 1.1 – 1.3: revisions undocumented.

Version 1.4: info for PES-12 is added; PSCAD is installed; info for Intel Fortran licenses is added; Visio info is updated.

Version 1.5: add group website link; add a section for group members and alumni; add some UH resources such as CACDS; add a subsection of Data/File Backup; add a list of journals and a list of conferences for power system researchers; add open license info and our open work plan; add instructions for pre-graduation material backup. Updated on December 7, 2021.

Version 1.5.2: Updated CACDS as it was renamed as RCDC and update college-level ECC. Updated on December 13, 2021.

Version 1.5.3: Introduced the IEEE policy about extending a conference paper to a journal paper. Updated on December 23, 2021.

Version 1.6.0: Included the information regarding thesis/dissertation relevant exams; added 'current members'; updated Section I's title to Group Information, added shared folder link, zoom meeting links and a QR code to our website; added a new section Group Policy and moved some relevant subsection and added 'facility use restriction', 'lab advertisement' and 'lab attendance' there; added a subsection 'figure design'; added NEOS server for AMPL; added building card access information.

Version 1.6.1: Added explanation about the Concur system used for travel (UH business trip); added instructions on Cross-Reference in MS-Word; added a few power system conferences and journals; added a new list of major ML conferences; highlighted journals that accept letter (short paper) submissions; updated list of lab members; updated how to download papers remotely; updated open license information; added instructions to add RPGLab experience on LinkedIn; added a disclaimer; updated the information about the computing servers and GPUs; updated the current member and alumni information; added the policy on the paper submission and copyright; added the policy on external papers by current members only; added the policy for research credit hours; added a list of recommended courses for RPGLab members.

Version 1.6.2: Adjusted the structure of this file such as creation of a new main chapter called "Research and Publications"; added a few conferences to the list; updated the available facilities; separated research classes/credits from thesis-related oral exams; added how to compare two clean versions in word.

1 Group Information - RPG Lab

RPG Lab: i.e. Renewable Power Grid Lab.
- **R**enewable energy-dominated future **P**ower **G**rids (RPG).

Group Website:
- https://rpglab.github.io

Permanent QR Code to our website:

2 Research and Publications

2.1 List of journals in the power system domain and relevant areas
- *IEEE Transactions on Power Systems (TPWRS)*
  - o 10-page limit for initial submission.
- *IEEE Power Engineering Letter*
  - o Only accept short paper (letter): 3-page limit initial submission; then 4-page.
- *IEEE Transactions on Smart Grid (TSG)*
  - o 10-page limit for initial submission.
- *IEEE Transactions on Sustainable Energy*
- *IEEE Transactions on Energy Conversion*
- *IEEE Transactions on Power Delivery*
- *IEEE Open Access Journal of Power and Energy*
  - o Open access only, $1350 up to 11.5 pages in the final accepted version.
  - o Review process is quick: ~4 weeks for first round decision.
  - o Accept short (letter) paper: 3-page limit initial submission; 4-page for revisions.
- *IEEE Transactions on Industry Applications (TIA, must be based on a conference paper)*
- *IEEE Transactions on Industrial Informatics*
- *IEEE Systems Journal*
  - o Accept short paper (letter): 4-page limit.
- *Proceedings of the IEEE*
- *IEEE Power and Energy Magazine*
- *IEEE Access*
  - o Open access only, expensive.

- *Nature Energy*
    - Nature series journals.
- *IET Generation, Transmission & Distribution (open access only - expensive)*
- *IET Renewable Power Generation*
- *International Journal of Electrical Power & Energy Systems*
- *International Transactions on Electrical Energy Systems (open access only - expensive)*
- *Energy*
- *Applied Energy*
- *Electric Power Systems Research (EPSR)*
- *Renewable & Sustainable Energy Reviews (RSER)*
    - For review papers only.
- *Journal of Modern Power Systems and Clean Energy (MPCE)*
    - Open access only, but currently is free.
    - Accept short paper (letter): 5-page limit.
- *CSEE Journal of Power & Energy Systems (JPES)*
- *Energies*
    - Open access only, expensive.
- *IEEE Control Systems Letters (L-CSS)*
    - Only accept short paper (letter): 6-page limit.

2.2 List of conferences in the power system domain and relevant areas

- *IEEE PES General Meeting (PESGM)*
    - Due around November.
    - Conference date: ~Mid-Late July.
- *IEEE PES Transmission and Distribution Conference & Exposition (T&D)*
    - Due around August.
    - Conference date: ~April/May.
    - Once every 2 years (2020, 2022, 2024 *et al*).
    - Many attendees are from the industry.
- *North American Power Symposium (NAPS)*
    - Student-focused conference, free hotel for students, student program/events.
    - Due around June/July.
    - Conference date: ~October.
- *Innovative Smart Grid Technologies Conference (ISGT) – North America*
    - Due around August.
    - Conference date: ~February.
- *IEEE PES Grid Edge Technologies Conference & Exposition*
    - Due around June.
    - Conference date: ~April/May.
- *IEEE SmartGridComm*
    - Due around June.
- *IEEE IAS Annual Meeting*
    - Papers presented in this conference can be possibly extended to journal TIA.
    - Due around March.

- o Conference date: ~Sept/Oct.
- *DISTRIBUTECH International*
  - o Many attendees are from the industry.
- *Texas Power and Energy Conference (TPEC)*
  - o Student focused, regional conference.
  - o Due around November.
  - o Conference date: ~February.
- *Power and Energy Conference at Illinois (PECI)*
  - o Student focused, regional conference.
- *Kansas Power and Energy Conference (KPEC)*
  - o Student focused, regional conference.
- *Hawaii International Conference on System Sciences (HICSS)*
  - o Due around June.
  - o Conference date: early January.
- *Power Systems Computation Conference (PSCC)*
  - o Due around May/June for Abstract (one-year in advance), and due around September for full paper.
  - o Conference date: ~June.
  - o In Europe, once every 2 years (2020, 2022, 2024 *et al*).
  - o Papers presented at PSCC will be published at journal EPSR.
  - o E.g. jointly included in both the conference proceedings and in this PSCC 2020 Special Issue of EPSR.
- *CIGRE Grid of the Future Symposium*
  - o Due around July.
  - o CIGRE conference in the U.S.
- *International Conference on Probabilistic Methods Applied to Power Systems (PMAPS)*
  - o Once every 2 years (2020, 2022, 2024, 2026 *et al*).
  - o Due around January.
- *ACM International Conference on Future Energy Systems (ACM e-Energy)*
  - o Two submissions per year: one in Fall & one in Spring.
  - o Due around January or September.
- *IEEE International Conference on Smart Energy Grid Engineering (SEGE)*
  - o Location: Oshawa, ON, Canada.
  - o Due around June.
- *Electrical Energy Storage Applications and Technologies (EESAT)*
  - o Due around June.
- *IEEE Sustainable Power and Energy Conference (iSPEC)*
  - o It was established by the Chinese Society for Electrical Engineering in 2019 to emulate the IEEE PES General Meeting in North America.
  - o Selected papers will be considered for publication in JPES.
  - o Due around July.
- *IEEE Green Technologies Conference (GreenTech)*
  - o Due around November.
- *Offshore Technology Conference (OTC)*
  - o It is held in early May in Houston, each year.

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A public version of UH RPG Lab's Internal Resource Document.
Author: Xingpeng Li, Department of Electrical and Computer Engineering (ECE), University of Houston.
Contact me: xplipower@gmail.com | xli83@central.uh.edu

- o (Oil & Gas & Offshore Wind Power) Industry-oriented conference.
- o A 1-page abstract is required for submission – The decision will be made on this 1-page abstract. If accepted, you can submit the full paper.
- *IEEE Conference on Decision and Control (CDC)*
  - o Due around early March.
  - o Possible paper submitted to L-CSS with CDC option.
  - o Flagship conference of the IEEE Control Systems Society.
- *American Control Conference (ACC)*
  - o Due around August.
  - o Possible joint submission/publication to L-CSS and ACC at given time windows.

2.3 List of conferences in the machine learning domain

- International Conference on Machine Learning (ICML)
  - o Due around January.
  - o Acceptance rate: 20% - 25%.
- International Conference on Learning Representations (ICLR)
  - o Due around September.
  - o Acceptance rate: 25% - 35%.
- Neural Information Processing Systems (NeurIPS)
  - o Due around May.
  - o Acceptance rate: 20% - 30%. Require LaTeX format submissions.
- AAAI Conference on Artificial Intelligence (AAAI)
  - o Due around August.
  - o Acceptance rate: 20% - 25%.
- International Conference on Data Mining (ICDM)
  - o Due around June.
  - o Acceptance rate: 10%.

Paper submissions and acceptance rates for major ML conferences:
- https://github.com/lixin4ever/Conference-Acceptance-Rate
- https://github.com/yzhao062/data-mining-conferences

3 Miscellaneous

3.1 The Power Globe E-mail Forum

http://www.ece.mtu.edu/faculty/ljbohman/peec/globe/

Power Globe is an internet e-mail forum for persons having an interest in electric power engineering, especially the power system engineering. This email list is widely used by power system researchers throughout the entire world.

It is free to register; everyone in our group should register (though you may receive many emails every day).

3.2 Free CIGRE Student Membership

CIGRE is an IEEE-like institute. The student membership for CIGRE is free for full time tertiary students.

https://www.cigre.org/GB/join/how-to-join

3.3 How to remotely connect the university network (using UH as example)?

You can use VPN - Cisco AnyConnect Secure Mobility Client.

- Type in: vpn.uh.edu
- Enter your CougarNet username and password
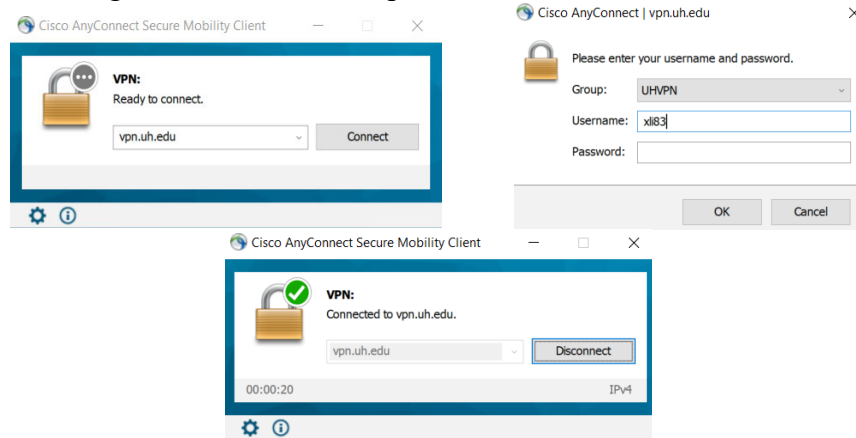
3.4 How to remotely connect the server from a Windows machine?

- Click Windows "Start"
- Open Remote Desktop Connection
- Type the IP address (or full name such as "xxxx.xxx.uh.edu") of the computer you want to connect
- Enter university username and password
- Connect

There are a few setting we can change after you click "Show Options".

If you are connected to a non-UH internet, you can still do the remote connection with a VPN such as Cisco AnyConnect Secure Mobility Client.

Note that you are use this method to connect both Windows servers and Linux servers.

3.5 How to download papers remotely (using UH as example)?

When you are connected to a non-UH internet, you can still download papers with UH Library. You may need to log in with your CougarNet account before you can download it.

https://libraries.uh.edu/

3.6 Data/File Backup

It is important to back up the data and files on a regular basis, since there are possibilities that the computer that you use to store important codes, papers, reports, thesis draft, and data may be

stolen, lost or damaged. When that happens, it would be a disaster if you do not have a backup. So regular file backup is a resilience enhancement towards your degree and career…

Options to regularly backup data/files include external hard drives and cloud storage. Popular products of cloud storage include Dropbox, One Drive, Box, and Google Drive. They support cloud storage as well as file synchronization that allows you to work on multiple machines without manually updating your files. They provide some free services for personal use, which is sufficient unless you have many Gigabytes data to store. UH also provides some free storage space via One Drive.

I heard a case that a student who was going to take the thesis defense got robbed and the only laptop that contained his codes/data and thesis draft was gone…

3.7   Figure design

It is better to create figures to be compatible in both color print and colorless print.

For example, in the same figure, you may use two different colors to represent two different curves or represent two different bars/columns. However, it may lead to a problem when it is print colorlessly. Some solutions are available to address this issue, for example, add different markers for different curves.

3.8   Cross-Reference function in MS-Word

With a list of references (See a sample below)
- Place the cursor in the place for reference citation,
- Go to tab "References" in word, click "Cross-reference",
- select the reference to cite, and then click "Insert".
- If the reference list changes (e.g., add new references, or delete existing references), the order/number of the references cited in the text can be updated automatically by simply Pressing "Ctrl+P" for print in Windows (but do not need to actually print anything).
- Note that, when you add a new reference as the very first reference in the list, error may occur – double check.

Example:
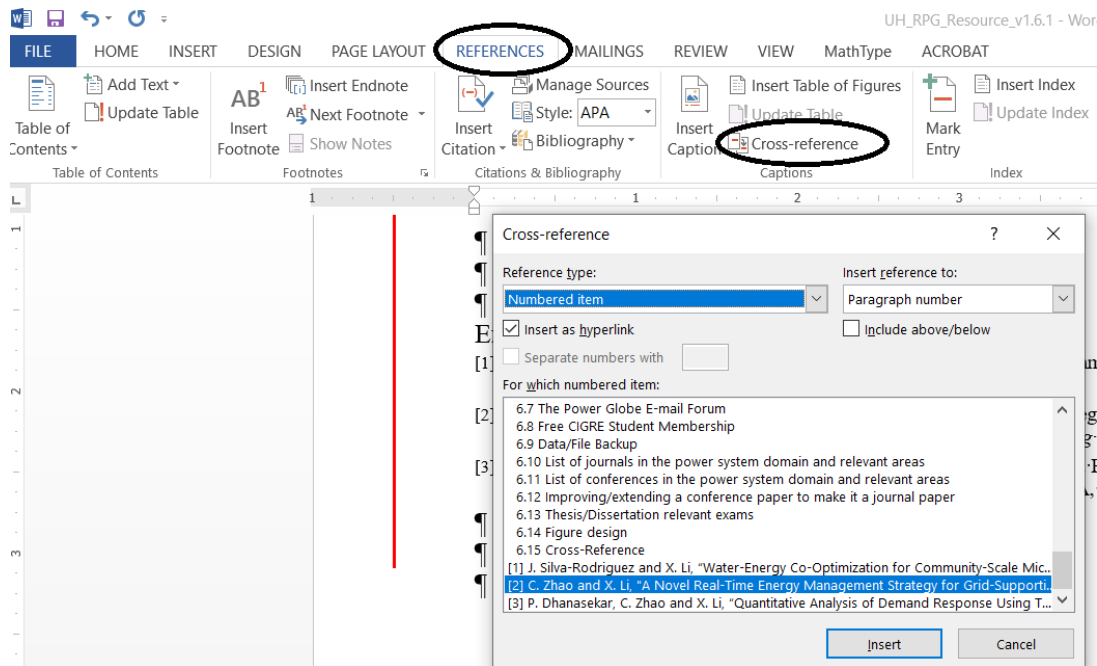
Example list of references:

[1] J. Silva-Rodriguez and X. Li, "Water-Energy Co-Optimization for Community-Scale Microgrids," *IEEE 53rd North American Power Symposium*, College Station, TX, USA, Nov. 2021.

[2] C. Zhao and X. Li, "A Novel Real-Time Energy Management Strategy for Grid-Supporting Microgrid: Enabling Flexible Trading Power," 2021 *IEEE Power & Energy Society General Meeting (PESGM)*, 2021, pp. 1-5.

[3] P. Dhanasekar, C. Zhao and X. Li, "Quantitative Analysis of Demand Response Using Thermostatically Controlled Loads", *IEEE PES Innovative Smart Grid Technology*, New Orleans, LA, USA, Apr. 2022.

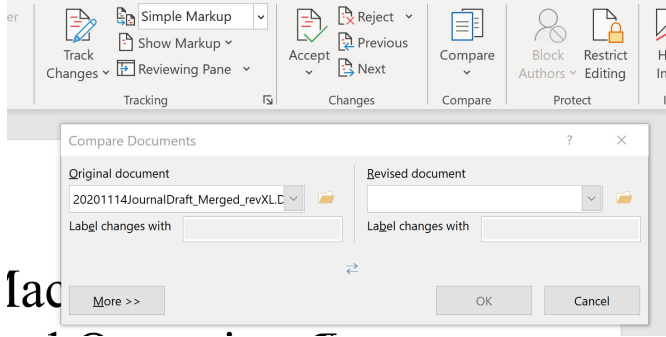Note that this cross-reference may also be used for citing figures and tables.

3.9   **How to find untracked changes among two versions in MS-Word**

Using the "Compare" feature of word, you can identify the changes made among two word files even if "Track Changes" are disabled.
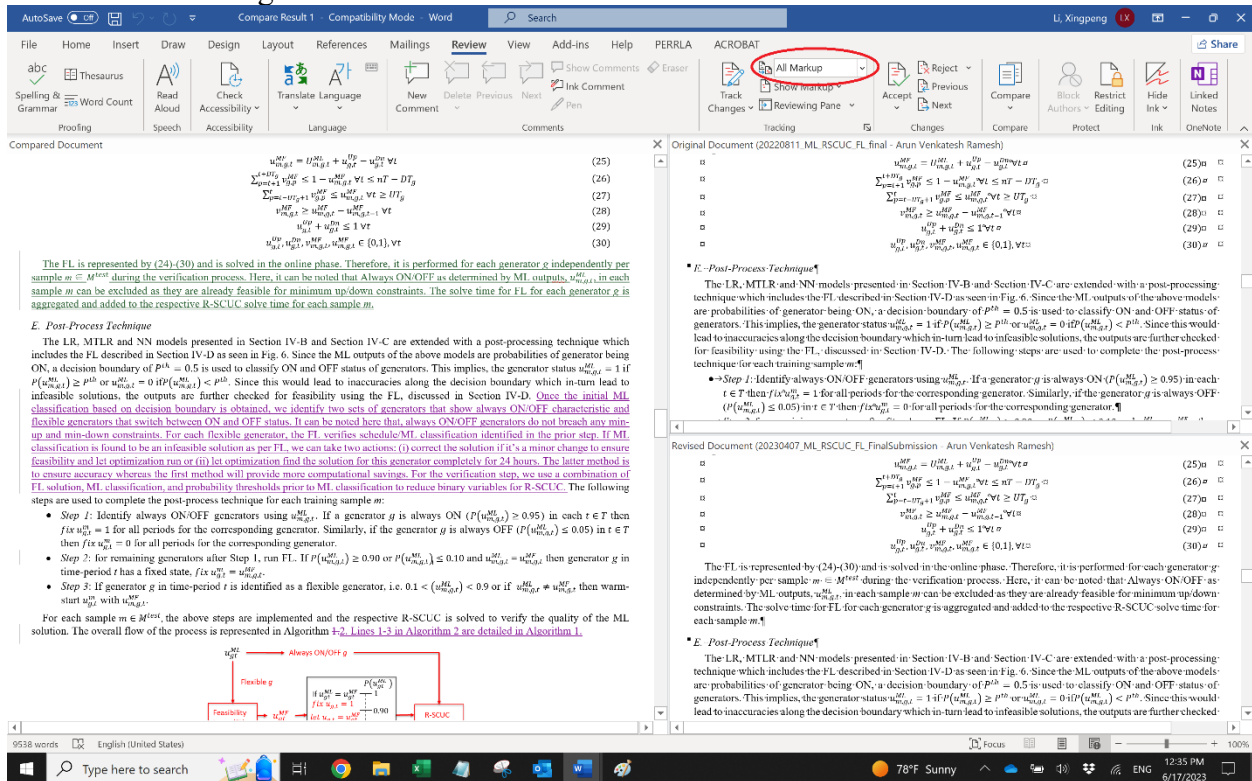
Click "Compare" under "Review"
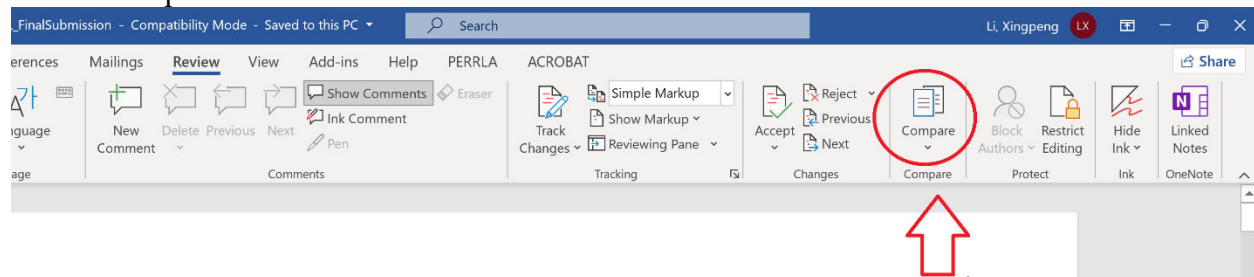
Then, select two files to be compared.

Last, make sure "All Markup" is selected under "Review" to see the changes in a similar way like "Tracked Changes" was enabled.

4 Disclaimer

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