Electrical and Computer Engineering (ECpE) Work by L. Tesfatsion

https://www2.econ.iastate.edu/ECpEWork.LTesfatsion.pdf

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Latest Revision: 8 January 2024

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ITD PROJECT SITE:

Integrated Transmission and Distribution (ITD) Project: ISU Homepage
https://www2.econ.iastate.edu/tesfatsi/ITDProjectHome.htm

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WILEY/IEEE PRESS BOOK:


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IEEE JOURNAL PUBLICATIONS:


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OTHER ECpE PUBLICATIONS:


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**FERC/NATIONAL LAB REPORTS:**

https://www2.econ.iastate.edu/tesfatsi/LeighTesfatsion.EFiledComments.FERC.AD21-10-000.pdf


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**ECpE WORKING PAPERS:**

https://www2.econ.iastate.edu/tesfatsi/LMPWhenAndWhyNot.LTesfatsion.pdf


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ECpE PRESENTATIONS:

Leigh Tesfatsion (2023), "Economics of Grid-Supported Electric Power Markets: A Fundamental Reconsideration" (HandOut.pdf), (SlideSetShort.pdf,985KB), [YouTube,Day 2,7:34:00], Virtual (Zoom) Presentation to the FERC Technical Conference 2023, Docket No. AD10-12-014 (Increasing Real-Time and Day-Ahead Market Planning Efficiency Through Improved Software), Washington, D.C., June 27-29.


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**ECpE OPEN-SOURCE SOFTWARE (OSS) TEST-SYSTEM PLATFORM RELEASES:**
(With Documentation & Illustrative Applications)

AMES Market Package (Java/Python): Homepage
Agent-Based *M*odeling of *E*lectricity *S*ystems (**AMES**)
https://www2.econ.iastate.edu/tesfatsi/AMESMarketHome.htm

AMES V5.0 (Java/Python) -- Latest AMES release (2020): GitHub Repository
https://github.com/ames-market/AMES-V5.0
https://www2.econ.iastate.edu/tesfatsi/FERC.AD21-10-000.LTesfatsion.30Jan2023.pdf


https://www2.econ.iastate.edu/tesfatsi/ArgonneTalkSlideSet.LTesfatsion.5Oc2022.pdf


L. Tesfatsion (2021), Keynote Address, “Agent-Based Modeling: The Right Mathematics for Social Science?,” Social Simulation Conference 2021 (Virtual), sponsored by European Social Simulation Association (ESSA), hosted by the Cracow University of Economics, Poland, Sept. 20-24. 
https://www2.econ.iastate.edu/tesfatsi/CompleteABM.SSC2021Keynote.LTesfatsion.pdf


DCOPFJ (Java) -- A DC Optimal Power Flow solver for AMES V2.06: Homepage
https://www2.econ.iastate.edu/tesfatsi/DCOPFJHome.htm


Eight-Zone ISO-NE Test System (Java/Python): BitBucket Repository
An eight-zone test system for an ISO-managed wholesale electric power market based on ISO New England data, implemented via AMES V4.0.  https://bitbucket.org/kdheepak/eightbustestbedrepo


ERCOT Test System (Java/Python): GitHub Repository
An agent-based test system modeling wholesale power market operations in the Electric Reliability Council of Texas (ERCOT), using AMES V5.0. https://github.com/ITDProject/ERCOTTestSystem


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FLS (Fortran): Flexible Least Squares (FLS) for time-varying linear regression.
Homepage: https://www2.econ.iastate.edu/tesfatsi/FLSHome.htm


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ITD Project/Household Formulation (Python): GitHub Repository
https://github.com/ITDProject/HouseholdFormulationRepository

ITD TES Platform V2 (Co-Simulated, Java/Python/C++/C): GitHub Repository:
https://github.com/ITDProject/ITDTESPlatform


