

Date Submitted: 2024-10-10 13:48:50**Confirmation Number:** 1843244**Template:** NSERC_Researcher

Dr. Stephen William Makonin

Correspondence language: English

Contact Information

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Protected when completed

Dr. Stephen Makonin

Language Skills

Language	Read	Write	Speak	Understand	Peer Review
English	Yes	Yes	Yes	Yes	Yes

Degrees

- 2014/8 Doctorate, Computing Science, Simon Fraser University
Supervisors: Bajic, Ivan V, 2013/5 - 2014/8; Popowich, Fred, 2010/1 - 2014/8
- 2009/12 Certificate, Electronics, George Brown College
- 2009/12 Bachelor's, Computer Systems / Data Communications, British Columbia Institute of Technology
- 1996/5 Diploma, Computing, Selkirk College

User Profile

Research Specialization Keywords: Computational Sustainability, Data Engineering, Data Science, Disaggregation, Machine Learning, Metadata, Non-Intrusive Load Monitoring, Software Engineering

Employment

- 2019/7 Senior Research Scientist
SFU's Big Data Hub, Simon Fraser University
Full-time
Tenure Status: Non Tenure Track
- 2017/8 Adjunct Professor
Engineering Science, Simon Fraser University
Full-time, Adjunct, Professor
Tenure Status: Non Tenure Track
- 2014/9 - 2023/12 Co-Founder & Senior Research Scientist
SweetLightning
- 2017/6 - 2018/12 Senior Software Engineer
Knowledge Network
- 2014/9 - 2018/3 Postdoctoral Fellow & Research Associate
Engineering Science, Engineering Science, Simon Fraser University
Full-time
Tenure Status: Non Tenure Track

2016/8 - 2017/5	Postdoctoral Fellow Electrical and Computer Engineering, University of British Columbia Full-time Tenure Status: Non Tenure Track
2016/5 - 2016/10	Disaggregation/NILM Contract Scientist Green Running
2014/9 - 2015/9	Postdoctoral Fellow Computing Science, Computing Science, Simon Fraser University Full-time Tenure Status: Non Tenure Track
2014/8 - 2015/5	Sessional Instructor Computing Science, Computing Science, Simon Fraser University Part-time, Sessional Tenure Status: Non Tenure Track
2008/1 - 2015/2	Research Associate Technology Centre, British Columbia Institute of Technology Full-time Tenure Status: Tenure
2006/9 - 2008/1	Co-Founder & CTO Vvvroom.com
1996/5 - 2008/1	Principal & Senior Software Developer Makonin Consulting Corp.
2006/1 - 2006/9	Vancouver Office Software Development Manager ePrado Management, Inc.
1998/5 - 1999/5	Co-Founder & Applications Developer Levaly Software

Research Funding History

Awarded [n=1]

2018/4 - 2025/3	Non-Intrusive Load Monitoring (NILM), Grant
Principal Investigator	Funding Sources: Natural Sciences and Engineering Research Council of Canada (NSERC) Discovery Launch Supplement Award Total Funding - 12,500 Portion of Funding Received - 12,500 Funding Competitive?: Yes Natural Sciences and Engineering Research Council of Canada (NSERC) COVID19 Top-Up Supplement Award Total Funding - 8,480 Portion of Funding Received - 8,480 Funding Competitive?: Yes Natural Sciences and Engineering Research Council of Canada (NSERC) Discovery Grant Total Funding - 196,000 Portion of Funding Received - 196,000 Funding Competitive?: Yes

Completed [n=4]

2017/1 - 2022/6 Co-investigator	SENSors and Intelligence in BuLt Environment (SENSIBLE) project, Grant Funding Sources: European Commission (The) Horizon 2020 Total Funding - 1,300,000 Portion of Funding Received - 0 Funding Competitive?: Yes
2020/9 - 2021/4 Principal Investigator	Intelligent Systems Data Ingestion and Analytics, Grant Funding Sources: Mathematics of Information Technology and Complex Systems (MITACS) Accelerate Total Funding - 70,000 Portion of Funding Received - 70,000 Funding Competitive?: Yes Principal Applicant : Jiannan Wang
2020/1 - 2020/5 Principal Investigator	Inferring power grid transformer to meter association using inconsistent geospatial data, Grant Funding Sources: Natural Sciences and Engineering Research Council of Canada (NSERC) Engage Grants Program Total Funding - 25,000 Portion of Funding Received - 25,000 Funding Competitive?: Yes
2019/1 - 2019/12 Co-investigator	Tackling the Carbon Footprint of Streaming Media, Grant Funding Sources: Social Sciences and Humanities Research Council of Canada (SSHRC) Knowledge Synthesis Grants Total Funding - 50,000 Portion of Funding Received - 25,000 Funding Competitive?: Yes

Student/Postdoctoral Supervision**Bachelor's [n=5]**

2022/7 - 2023/4 Principal Supervisor	Kim, Hyeonu (Completed) , Simon Fraser University Thesis/Project Title: Electric Vehicle Infrastructure Demonstration Program NRCAN Project Present Position: Software Engineer
2021/12 - 2022/9 Principal Supervisor	ElMallah, Ramy (Completed) , Simon Fraser University Thesis/Project Title: Carbon Footprint Of Streaming Media SSHRC Project Present Position: PhD Candidate, University of Toronto
2021/6 - 2021/9 Principal Supervisor	Fletcher, Zachary (Completed) , Simon Fraser University Thesis/Project Title: NILM Toolkit Project Present Position: Artificial Intelligence Research Assistant, Simon Fraser University

2021/6 - 2021/9 Principal Supervisor	Cao, Xing Chen (Completed) , Simon Fraser University Thesis/Project Title: NILM Toolkit Project Present Position: UI / UX designer
2020/9 - 2021/9 Principal Supervisor	Chen, Yanzhen (Completed) , Simon Fraser University Thesis/Project Title: NILMTK survey Project and NILM Toolkit Project Present Position: Founder, GreenLink

Master's non-Thesis [n=3]

2023/4 - 2023/12 Principal Supervisor	An, Siyu (Completed) , Simon Fraser University Thesis/Project Title: Electric Vehicle Infrastructure Demonstration Program NRCAN Project Present Position: Software Engineer, Infoblox
2022/6 - 2022/9 Principal Supervisor	Wang, Jie (Completed) , Simon Fraser University Thesis/Project Title: Data Wrangling for Power and Energy Datasets Present Position: Software Engineer
2021/5 - 2021/12 Principal Supervisor	Huh, Kyoun (Completed) , Simon Fraser University Thesis/Project Title: Intelligent Systems Data Ingestion and Analytics Mitacs Accelerate Present Position: Data Engineer, FuseForward

Master's Thesis [n=7]

2023/6 - 2023/12 Co-Supervisor	Sampson, Rylen (Completed) , Simon Fraser University Thesis/Project Title: Electric Vehicle Infrastructure Demonstration Program NRCAN Project Present Position: Data Analyst, Limestone Analytics
2021/11 - 2022/3 Principal Supervisor	Hughson, Emma (Completed) , Simon Fraser University Thesis/Project Title: Software Hardening AI Tech Report Present Position: Senior Affective Computing Engineer, Cambridge Consultants
2021/9 - 2024/4 Principal Supervisor	Tu, Maria (Completed) , Simon Fraser University Thesis/Project Title: Data Persistence and Access Architecture for Open and Reproducible Science Present Position: Junior Software Engineer
2021/1 - 2021/6 Principal Supervisor	Irani, Peshotan (Completed) , Simon Fraser University Thesis/Project Title: Intelligent Systems Data Ingestion and Analytics Mitacs Accelerate Present Position: Software Development Engineer 2, Amazon Web Services (AWS)
2019/1 - 2020/12 Principal Supervisor	Jones, Richard (Completed) , Simon Fraser University Thesis/Project Title: Non-Parametric Modeling in Non-Intrusive Load Monitoring Present Position: Senior Data Scientist, Boeing
2018/9 - 2020/5 Co-Supervisor	Harell, Alon (Completed) , Simon Fraser University Thesis/Project Title: Deep Learning Applications in Non-Intrusive Load Monitoring Present Position: PhD Candidate, Simon Fraser University
2018/1 - 2021/12 Principal Supervisor	Rodriguez-Silva, Alejandro (Completed) , Simon Fraser University Thesis/Project Title: Filtering in Non-Intrusive Load Monitoring Present Position: Intermediate Software Developer, MDA Space

Doctorate [n=7]

2023/1 - 2024/6 Co-Supervisor	Ziyat, Isla (Completed) , Simon Fraser University Thesis/Project Title: Electric Vehicle Infrastructure Demonstration Program NRCAN Project Present Position: Power Engineer, Siemens Europe
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2019/3 - 2019/6 Principal Supervisor	Murray, David (Completed) , University of Strathclyde Thesis/Project Title: SENSors and Intelligence in BuLt Environment (SENSIBLE) project Present Position: Research Associate, University of Strathclyde
2019/1 - 2019/7 Principal Supervisor	Klemenjak, Christoph (Completed) , University of Klagenfurt Thesis/Project Title: Non--Intrusive Load Monitoring (NILM) Research Present Position: Senior Research Associate, iHomeLab
2019/1 - 2019/12 Principal Supervisor	Buddhahai, Bundit (Completed) , KMUTT Thesis/Project Title: Non--Intrusive Load Monitoring (NILM) Research Present Position: Assistant Teaching Professor, Walailuk University
2018/6 - 2018/12 Principal Supervisor	Singh, Shikha (Completed) , IIIT Delhi Thesis/Project Title: Non--Intrusive Load Monitoring (NILM) Research Present Position: AI Researcher, American Express
2017/9 - 2018/2 Co-Supervisor	Gaur, Megha (Completed) , IIIT Delhi Thesis/Project Title: Anomaly Detection in Power Signals Present Position: Assistant Professor, K.R Mangalam University
2017/1 - 2020/12 Co-Supervisor	Dinesh, Herath Gedara (Completed) , Simon Fraser University Thesis/Project Title: Non--Intrusive Load Monitoring (NILM) Research Present Position: Assistant Teaching Professor, Northeastern Univeristy

Post-doctorate [n=1]

2015/10 - 2021/12 Co-Supervisor	Bhotto, Md. Zulfiquar Ali (Completed) , Simon Fraser University Thesis/Project Title: Non--Intrusive Load Monitoring (NILM) Research Present Position: Senior Research Investigator
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Event Administration

2021/9 - 2022/11	Co-chair, 6th International Workshop on Non-Intrusive Load Monitoring (NILM), Workshop, 2022/11 - 2022/11
2020/6 - 2021/6	TPC Member, eSim 2020, International Building Performance Simulation Association (IBPSA-Canada), Conference, 2021/6 - 2021/6
2020/12 - 2021/4	TPC Member, IEEE Day-Ahead Electricity Demand Forecasting: Post-COVID Paradigm Competition, Workshop, 2020/12 - 2021/4
2019/9 - 2020/11	Co-chair, 5th International Workshop on Non-Intrusive Load Monitoring (NILM), Workshop, 2020/11 - 2020/11
2019/5 - 2019/12	TPC Member, 11th IEEE PES Asia-Pacific Power and Energy Engineering Conference (APPEEC), Conference, 2019/12 - 2019/12
2018/9 - 2019/5	Chair, Advanced Signal Processing for Non-intrusive Load Monitoring Special Session, 44th International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Conference, 2019/5 - 2019/5
2017/9 - 2018/3	Co-chair, 4th International Workshop on Non-Intrusive Load Monitoring (NILM), Workshop, 2018/3 - 2018/3

Editorial Activities

2024/1 - 2029/12	Founding Editor-in-Chief, IEEE Data Descriptions, Journal
2019/1 - 2024/4	Editorial Board Member, Scientific Data, Journal

2021/1 - 2022/12 Guest Editorial Board Member, IEEE Open Access Journal of Power and Energy, Journal

Committee Memberships

2024/1 Committee Member, RAAB (Sector): Energy IEC TC 85/WG 20 (Appointed by Canada as Member) IEC 63297 EDI: Sensing devices for non-intrusive load monitoring (NILM) systems, Standards Council of Canada (SCC)

2023/11 Committee Member, IEEE Data Reporting Best Practices Task Force, Institute of Electrical and Electronics Engineers (IEEE)

2021/1 Co-chair, Big Data Governance and Metadata Management (IEEE P2957), IEEE Standards Association

2020/4 Committee Member, IEEE DataPort Steering Committee, Institute of Electrical and Electronics Engineers (IEEE)

2016/6 Co-chair, IEEE Signal Processing Society Vancouver Chapter, Institute of Electrical and Electronics Engineers (IEEE)

Other Memberships

2024/9 Full Member, Sigma Xi

2018/6 Professional Engineer (PEng), Engineers and Geoscientists BC (EGBC)

2013/1 Senior Member, Institute of Electrical and Electronics Engineers (IEEE)

Presentations

1. (2022). Learning & Thoughts After 10 Years of NILM Research. Tianjin University Virtual Guest Lecture, Tianjin, China
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes
2. Marks, Laura U. (2021). Let's get together with a small carbon footprint. Pacific AIDS Network (Vancouver, Canada), Webinar, Vancouver, Canada
Main Audience: General Public
Invited?: Yes, Keynote?: Yes
3. (2018). Data, Datasets, and Data Engineering. The 5th EU NILM Workshop, Duisburg, Germany
Main Audience: Knowledge User
Invited?: Yes, Keynote?: No

Broadcast Interviews

2019/10/02 - CarbonKit and Personal Carbon Tracking, The Danielle Smith Show, CKMX 1060AM
2019/10/02 Calgary, Alberta

2013/07/25 - Lightning Talks: Sustainability, Sustainable Futures Program, CJSF 90.1 FM
2013/07/25

Text Interviews

2020/08/14

Streaming video is overheating the planet: We can no longer ignore the carbon footprint resulting from the glut of streaming video, Vancouver Sun Op-Ed

Publications

Journal Articles

1. Makonin, Stephen; *Ziyat, Isla; *Sampson, Rylen; *An, Siyu; Popowich, Fred; Palmer, Patrick; Agosti, David. (2024). Descriptor: Simon Fraser University Electric Vehicle Parking Dataset (SFU-EVP). IEEE Data Descriptions. 1: 1--9.
Published
Refereed?: Yes, Open Access?: Yes
2. Zhang, Yuhang; Li, Yongfu; Makonin, Stephen; Kumar, Rakesh. (2024). Descriptor: Comprehensive IEEE Research Data Collections (CIRDC). IEEE Data Descriptions. 1: 1-6.
Published
Refereed?: Yes, Open Access?: Yes
3. *Noh, Kyeongmi; Hong, Seul Ki; Makonin, Stephen; Lee, Yongkeun. (2024). Enhancing Object Detection in Dense Images: Adjustable Non-Maximum Suppression for Single-Class Detection. IEEE Access. 12: 130253-130263.
Published
Refereed?: Yes, Open Access?: Yes
4. Zhang, Yuhang; Li, Yongfu; Makonin, Stephen; Kumar, Rakesh. (2024). Descriptor: Comprehensive IEEE Research Data Collections (CIRDC). IEEE Data Descriptions. 1: 1-8.
Published
Refereed?: Yes, Open Access?: Yes
5. Makonin, Stephen. (2024). Editorial: Enhancing Reproducibility Through Understanding Datasets. IEEE Data Descriptions. 1: 1--1.
Published
Refereed?: No, Open Access?: Yes
6. Makonin, Stephen; *Rodriguez-Silva, Alejandro. (2024). Meta: Defining the Disaggregated Component Assignment Error Metric for Complex Time-Series Signal Data. IEEE Data Descriptions. 1: 1-9.
Published
Refereed?: Yes, Open Access?: Yes
7. Buddhahai, Bundit; Korkua, Suratsavadee Koonlaboon; Rakkwamsuk, Pattana; Makonin, Stephen. (2023). A Design and Comparative Analysis of a Home Energy Disaggregation System Based on a Multi-Target Learning Framework. Buildings. 13(4): 911.
Published
Refereed?: Yes, Open Access?: Yes
8. *Ziyat, Isla; *Gola, Alia; Palmer, Patrick R; Makonin, Stephen; Popowich, Fred. (2023). EV Charging Profiles and Waveforms Dataset (EV-CPW) and Associated Power Quality Analysis. IEEE Access. 11: 138445-138456.
Published
Refereed?: Yes, Open Access?: Yes
9. Farrokhhabadi, Mostafa; Browell, Jethro; Wang, Yi; Makonin, Stephen; Su, Wencong; Zareipour, Hamidreza. (2022). Day-ahead electricity demand forecasting competition: Post-covid paradigm. IEEE Open Access Journal of Power and Energy. 9: 185--191.
Published
Refereed?: Yes, Open Access?: Yes

10. Kang, Chongqing and Browell, Jethro and Farrokhabadi, Mostafa and Huang, Can and Makonin, Stephen and Nasr, Ehsan and Su, Wencong and Wang, Yi and Xie, Jingrui Rain. (2022). Editorial Special Section on COVID-19 Impact on Electrical Grid Operation: Analysis and Mitigation. IEEE Open Access Journal of Power and Energy. 9: 183--184.
Published
Refereed?: Yes, Open Access?: Yes
11. *Klemenjak, Christoph; Makonin, Stephen; Elmenreich, Wilfried. (2021). Investigating the performance gap between testing on real and denoised aggregates in non-intrusive load monitoring. Energy Informatics. 4: 1--15.
Published
Refereed?: Yes, Open Access?: Yes
12. Buddhahai, Bundit; Makonin, Stephen. (2021). A nonintrusive load monitoring based on multi-target regression approach. IEEE Access. 9: 163033--163042.
Published
Refereed?: Yes, Open Access?: Yes
13. *Bhotto, Zulfiquar Ali; *Jones, Richard; Makonin, Stephen; Bajic, Ivan V. (2021). Short-Term Demand Prediction Using an Ensemble of Linearly-Constrained Estimators. IEEE Transactions on Power Systems. 36(4): 3163--3175.
Published
Refereed?: Yes, Open Access?: No
14. *Harell, Alon; *Jones, Richard; Makonin, Stephen; Bajic, Ivan V. (2021). TraceGAN: synthesizing appliance power signatures using generative adversarial networks. IEEE Transactions on Smart Grid. 12(5): 4553--4563.
Published
Refereed?: Yes, Open Access?: No
15. *Dinesh, Chinthaka; Makonin, Stephen; Bajic, Ivan V. (2020). Residential Power Forecasting Based on Affinity Aggregation Spectral Clustering. IEEE Access. 8: 99431--99444.
Published
Refereed?: Yes, Open Access?: Yes
16. *Gaur, Megha; Makonin, Stephen; Bajic, Ivan V; Majumdar, Angshul. (2019). Performance evaluation of techniques for identifying abnormal energy consumption in buildings. IEEE Access. 7: 62721--62733.
Published
Refereed?: Yes, Open Access?: Yes
17. *Dinesh, Chinthaka; Makonin, Stephen; Bajic, Ivan V. (2019). Residential power forecasting using load identification and graph spectral clustering. IEEE Transactions on Circuits and Systems II: Express Briefs. 66(11): 1900--1904.
Published
Refereed?: Yes, Open Access?: No
18. Makonin, Stephen. (2019). HUE: The Hourly Usage of Energy Dataset for Buildings in British Columbia. Data in Brief. 23: 1--4.
Published
Refereed?: Yes, Open Access?: Yes
19. *Makonin, Stephen; Wang, Z Jane; Tumpach, Chris. (2018). RAE: The Rainforest Automation Energy Dataset for Smart Grid Meter Data Analysis. Data. 3(1): 1--9.
Published
Refereed?: Yes, Open Access?: Yes

Journal Issues

1. et al. (2022). COVID-19 Impact on Electrical Grid Operation: Analysis and Mitigation. IEEE Open Access Journal of Power and Energy. 9: 71.
Published
Refereed?: Yes, Open Access?: Yes
Editors: Kang, Chongqing; Browell, Jethro; Farrokhhabadi, Mostafa; Huang, Can; Makonin, Stephen; Nasr, Ehsan; Su, Wencong; Wang, Yi; Xie, Jingrui Rain

Books

1. Pacheco-Torgal F, Rasmussen E, Granqvist C-G, Ivanov V, Kaklauskas HA, Makonin, S. (2020). Start-Up Creation: The Smart Eco-Efficient Built Environment. 2: 433. Pacheco-Torgal F, Rasmussen E, Granqvist C-G, Ivanov V, Kaklauskas HA, Makonin, S.
Published, Woodhead Publishing
Refereed?: No

Reports

1. Makonin, Stephen; *Hughson, Emma. (2021). The Role of AI in Software Hardening. 20. Seoul National University of Science and Technology.
2. Marks , Laura U; Makonin, Stephen; *Rodriguez-Silva, Alejandro; *Przedpełski, Radek. (2021). Tackling the Carbon Footprint of Streaming Media: Final Report. 54. Social Sciences and Humanities Research Council of Canada (SSHRC)

Conference Publications

1. *Ziyat, Isla; *Gola, Alia; Palmer, Patrick R; Makonin, Stephen; Popowich, Fred. (2024). Impact of Level 2 EV Charging on Phase Unbalance in Distribution Networks. IEEE Xplore Digital Library. 2024 IEEE Power & Energy Society Innovative Smart Grid Technologies Conference (ISGT), Washington DC, United States of America (1--5)
Conference Date: 2024/2
Paper
Published
Refereed?: Yes, Invited?: No
2. *Tu, Wen Ting Maria; Makonin, Stephen. (2023). Designing PIDs for Reproducible Science Using Time-Series Data. Metadata and Semantic Research. 16th Research Conference on Metadata and Semantic Research, MTSR, (295–301)
Paper
Published
Refereed?: Yes, Invited?: No
3. Makonin, Stephen; Marks, Laura; *Przedpelski, Radek; *Rodriguez-Silva, Alejandro; *ElMallah, Ramy. (2022). Calculating the Carbon Footprint of Streaming Media: Beyond the Myth of Efficiency. LIMITS Online Proceedings. 8th Workshop on Computing within Limits 2022, LIMITS, (1-11)
Paper
Published
Refereed?: Yes, Invited?: No

4. *Klemenjak, Christoph; Makonin, Stephen; Elmenreich, Wilfried. (2020). Towards Comparability in Non-Intrusive Load Monitoring: On Data and Performance Evaluation. IEEE Xplore Digital Library. 11th Conference on Innovative Smart Grid Technologies (ISGT), (5)
Paper
Published
Refereed?: Yes, Invited?: No
5. *Singh, Shikha; Majumdar, Angshul; Makonin, Stephen. (2020). Compressive Non-Intrusive Load Monitoring. ACM Digital Library. 7th ACM International Conference on Systems for Energy-Efficient Built Environments (BuildSys), (290--293)
Paper
Published
Refereed?: Yes, Invited?: No
6. *Jones, Richard; *Rodriguez-Silva, Alejandro; Makonin, Stephen. (2020). Increasing the Accuracy and Speed of Universal Non-Intrusive Load Monitoring (UNILM) Using a Novel Real-Time Steady-State Block Filter. IEEE Xplore Digital Library. 11th Conference on Innovative Smart Grid Technologies (ISGT), (5)
Paper
Published
Refereed?: Yes, Invited?: No
7. *Jones, Richard; *Klemenjak, Christoph; Makonin, Stephen; Bajic, Ivan V. (2020). Stop: Exploring Bayesian Surprise to Better Train NILM. ACM Digital Library. 5th International Workshop on Non-Intrusive Load Monitoring, (39--43)
Paper
Published
Refereed?: Yes, Invited?: No
8. *Klemenjak, Christoph; Reinhardt, Andreas; Pereira, Lucas; Makonin, Stephen; Berges, Mario; Elmenreich, Wilfried. (2019). Electricity consumption data sets: Pitfalls and opportunities. ACM Digital Library. 6th ACM International Conference on Systems for Energy-Efficient Built Environments, Cities, and Transportation (BuildSys), (159--162)
Paper
Published
Refereed?: Yes, Invited?: No
9. *Guzman, Laura; Makonin, Stephen; Clapp, Roger Alex. (2019). CarbonKit: Designing A Personal Carbon Tracking Platform. ACM Digital Library. SocialSense '19: Fourth International Workshop on Social Sensing, (24--29)
Paper
Published
Refereed?: Yes, Invited?: No
10. *Harell, Alon; Makonin, Stephen; Bajic, Ivan V. (2019). WaveNILM: A Causal Neural Network for Power Disaggregation from the Complex Power Signal. IEEE Xplore Digital Library. 44th International Conference on Acoustics, Speech, and Signal Processing (ICASSP), (8335-8339)
Paper
Published
Refereed?: Yes, Invited?: No
11. *Rodriguez-Silva, Alejandro; Makonin, Stephen. (2019). Universal Non-Intrusive Load Monitoring (UNILM) Using Filter Pipelines, Probabilistic Knapsack, and Labelled Partition Maps. IEEE Xplore Digital Library. 11th IEEE PES Asia- Pacific Power and Energy Engineering Conference 2019 (APPEEC), (1-6)
Paper
Published
Refereed?: Yes, Invited?: No

12. *Harell, Alon; Makonin, Stephen; Bajic, Ivan V. (2018). A Recurrent Neural Network for Multisensory Non-Intrusive Load Monitoring on a Raspberry Pi. IEEE Xplore Digital Library. 20th International Workshop on Multimedia Signal Processing (MMSP), (1-1)
Poster
Published
Refereed?: Yes, Invited?: No

Intellectual Property

Patents

1. Dynamic Energy Management and Cost Optimization in Local Grids. United States of America.
US20220115872A1. 2021/10/05.
Patent Status: Pending
Inventors: Richard Thomas Jones, Christopher Stanley James Tumpach, Md. Zulfiquar Ali Bhotto, Ivan Bajic, Stephen William Makonin