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Bringing The Blue Box to Shelves



From her 2020 Capstone Project to the global market, our MECPS alumni, Judit Giró Benet, now CEO and co-founder of The Blue Box, is working hard to have the first direct-to-consumer at home breast

cancer detection test on shelves by 2024.

Challenges surrounding the accessibility of breast cancer tests became clear in the midst of the COVID-19 pandemic as overwhelmed hospitals meant limited access to mammograms and annual check-ups. Motivated by this, Benet has set a goal of having The Blue Box on shelves in the U.S. by 2024 and in Europe by 2025.

The Blue Box team has rallied support from all around the world. They have participated in many programs, such as the UCI Beall Applied Innovation's Wayfinder Program and the Applied Innovation I-Corps Program, where they were able to network and seek mentors. In 2020, The Blue Box was even named the International Winner of the James Dyson Award.

Moving forward, Benet wants to maintain company growth and aims to enhance her technology to detect other cancers.

Dang's Student Team Wins Dean's Choice Award



CECS affiliated Assistant Professor, Quoc-Viet Dang, and team- Rashmi Sharma, Megha Kak, and Melinda Tran– participated in the 2022 Winter Design Review where they proposed a new method of farming that won them the Dean's Choice Award.

The team suggested hydroponics-growing plants in a nutrient-rich liquid rather than in the ground. For

the past three years, this student engineering team has been designing an indoor hydroponics system that could be used to grow fresh produce for UCI's campus food pantry.

AI Faruque Receives \$500k NSF Grant



Mohammad Al Faruque, Associate Professor of Electrical Engineering & Computer Science and CECS Affiliate, received a \$500,000 NSF Grant to fund research on Automation for Real-Time Computing. Al Faruque, alongside Co-PI, Marco Levorato, are working to develop highly adaptable deep-learning frameworks for real-time applications, such as autonomous vehicles and mobile health.

The proposed design-automation methodology will bridge runtime system optimization with advanced DL model architectures through leveraging the techniques of split computing and early exit computation. Their frameworks will build DL models specifically designed to adapt real-time data analysis to time-varying characteristics of the system and the information stream. Al Faruque's and Levorato's project will include an educational and outreach plan for undergraduate and graduate students to enhance education and diversity.

New Visitor Profile

Visitor Profile: YoungHwan Kim



YoungHwan Kim is a second-year Master's degree student at Kookmin University in South Korea. He obtained his Bachelor's degree in Computer Science at Kookmin University in 2020. Kim's previous work was mainly focused on using Mobile WIFI and AI to Recognize human activity and Telecommunication. His current research interests are machine learning. More specifically, recognizing human activity using WIFI, CSI and filtering as well as machine based learning to detect anomaly attacks in autonomous vehicles.

YoungHwan Kim's visit is hosted by Nikil Dutt- Professor of Computer Science, Cognitive Sciences and EECS. During his time at UCI, Kim will work with Prof. Dutt's organization, Dutt Research Group. He hopes to continue taking part of University collaboration between UCI and Kookmin University and hopes to contribute with good results to DRG research.

Visitor Profile: Hyejin Lee

Hyejin Lee received her Bachelor's Degree in Computer Science from Kookmin University in 2021. She is currently a second-year Master's student studying Computer Science. Her research interests include image synthesis, semantic segmentation, and generative models in computer vision.

Lee is working alongside Ph.D. students in the Dutt Research Group. The aim of the project she and her fellow classmates are working on is to achieve Multi Object Tracking (MOT) for Autonomous Driving systems by solving current MOT methods problems, which suffer from high latency, low throughput, and high energy consumption. She is working on developing a novel approach for MOT by applying Spiking Neural Networks (SNNs), which closely mimic biological neurons.



Visitor Profile: Myunghak Lee



Myunghak Lee is in the first year of his Master's Degree Program with Kookmin University where he is majoring in Computer Science with an emphasis in Artificial Intelligent. He has conducted studies in various areas, such as Image Classification, Object Detection, Style Transfer, Motion Prediction, Link Prediction, and Relation Extraction.

His most recent research interest is XAI. At UCI, he has discovered his interest for computing scheduling for AI models. He explains that AI models consume lots of computing power; thus, it demands lots of GPU and electronic energy. Lee suggests that if computing resources can be used efficiently, exponential amounts of time and money can be saved. Myunghak Lee believes that research surrounding this topic is both beneficial and meaningful from a variety of perspectives. Lee is looking forward to studying more of this topic during his UCI visit.

CECS Seminar Series

Younghyun Kim- “Anti-virus hardware: Applications in Embedded, Automotive and Power Systems Security”



Title: Beyond Approximate Computing: Quality-Scalability for Low-Power Embedded Systems and Machine Learning

Speaker: Younghyun Kim, Assistant Professor, Department of Electrical and Computer Engineering, University of Wisconsin, Madison

Date and Time: Tuesday, May 17, 2022 at 2:00 p.m.

Location: Zoom

Hosted By: Prof. Nikil Dutt

Borzoo Bonakdarpour- “Runtime Monitoring of Distributed Cyber-physical Systems”

Title: Runtime Monitoring of Distributed Cyber-physical Systems

Speaker: Borzoo Bonakdarpour, Professor, Department of Computer Science and Engineering, Michigan State University

Date and Time: Monday, May 23, 2022 at 2:00 pm

Location: DBH 3011

Hosted By: Prof. Eli Bozorgzadeh



Kanad Basu- “Anti-virus hardware: Applications in Embedded, Automotive and Power Systems Security”



Title: Anti-virus hardware: Applications in Embedded, Automotive and Power Systems Security

Speaker: Kanad Basu, Assistant Professor, Department of Electrical and Computer Engineering, University of Florida

Date and Time: Tuesday, June 7, 2:00 pm

Location: DBH 4011 or Zoom

Hosted By: Prof. Nikil Dutt

Publications

Publications

The following papers were published by CECS affiliates from April 2022 through June 2022 (and unreported papers from previous eNews).

Author, Title, Publication

Conference Proceedings

Sarvesh Thakur, Meghana Urs, Muhammad Twaha Ibrahim, Alexander Sidenko, Aditi Majumder: **Ambient Light Tolerant Laser-Pen Based Interaction with Curved Multi-projector Displays**. HCI (2) 2022: 180-194, June 26-30, 2022, Virtual

Yuxin (Myles) Liu, Yoshimichi Nakatsuka, Ardalan Amiri Sani, Sharad Agarwal, Gene Tsudik: **Vronicle: verifiable provenance for videos from mobile devices**. MobiSys 2022: 196-208, June 27-30, 2022, Portland, OR, USA

Yuxin (Myles) Liu, Yoshimichi Nakatsuka, Ardalan Amiri Sani, Sharad Agarwal, Gene Tsudik: **Vronicle: verifiable provenance for videos from mobile devices**. MobiSys 2022: 565-566, June 27-30, 2022, Portland, OR, USA

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Yuxin (Myles) Liu, Yoshimichi Nakatsuka, Ardalan Amiri Sani, Sharad Agarwal, Gene Tsudik: **Vronicle: verifiable provenance for videos from mobile devices**. MobiSys 2022: 628-629, June 27-30, 2022, Portland, OR, USA

Emily Ekaireb, Xiaofan Yu, Kazim Ergun, Quanling Zhao, Kai Lee, Muhammad Huzaifa, Tajana Rosing: **ns3-fl: Simulating Federated Learning with ns-3**. WNS3 2022: 97-104, June 22-24, 2022, Virtual

Haoran Ma, Shi Liu, Chenxi Wang, Yifan Qiao, Michael D. Bond, Stephen M. Blackburn, Miryung Kim, Guoqing Harry Xu: **Mako: a low-pause, high-throughput evacuating collector for memory-disaggregated data-centers**. PLDI 2022: 92-107, June 13-17, 2022, San Diego, CA, USA

Hamed Gorjara, Weiyu Luo, Alex Lee, Guoqing Harry Xu, Brian Demsky: **Checking robustness to weak persistency models**. PLDI 2022: 490-505, June 13-17, 2022, San Diego, CA, USA

Sina Shahhosseini, Yang Ni, Emad Kasaeyan Naeini, Mohsen Imani, Amir M. Rahmani, Nikil D. Dutt: **Flexible and Personalized Learning for Wearable Health Applications using HyperDimensional Computing**. ACM Great Lakes Symposium on VLSI 2022: 357-360, June 6-8, Irvine, CA, USA

Arpan Dutta, Saransh Gupta, Behnam Khaleghi, Rishikanth Chandrasekaran, Weihong Xu, Tajana Rosing: **HDnn-PIM: Efficient in Memory Design of Hyperdimensional Computing with Feature Extraction**. ACM Great Lakes Symposium on VLSI 2022: 281-286, June 6-8, Irvine, CA, USA

Yuxin (Myles) Liu, Yoshimichi Nakatsuka, Ardalan Amiri Sani, Sharad Agarwal, Gene Tsudik: **Vronicle: verifiable provenance for videos from mobile devices**. MobiSys 2022: 565-566, June 27-30, 2022, Portland, OR, USA

Yuxin (Myles) Liu, Yoshimichi Nakatsuka, Ardalan Amiri Sani, Sharad Agarwal, Gene Tsudik: **Vronicle: verifiable provenance for videos from mobile devices**. MobiSys 2022: 628-629, June 27-30, 2022, Portland, OR, USA

Zhuowen Zou, Hanning Chen, Prathyush Poduval, Yeseong Kim, Mahdi Imani, Elaheh Sadredini, Rosario Cammarota, Mohsen Imani: **BioHD: an efficient genome sequence search platform using HyperDimensional memorization**. ISCA 2022: 656-669, June 18-22, 2022, New York, NY, USA

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You-Ren Shen, Bo-Yan Huang, Chang-Lin Shih, Davy P. Y. Wong, Pai H. Chou: **Efficient sharing of linked DMA channels on multi-sensor devices by LDMA task scheduler.** SYSTOR 2022: 40-50, June 13-15, 2022, Haifa, Israel
 Radhit Dedania, Sang-Woo Jun: **Very Low Power High-Frequency Floating Point FPGA PID Controller.** HEART 2022: 102-107, June 9-10, 2022, New York, NY, USA

Kartik Patwari, Syed Mahbub Hafiz, Han Wang, Houman Homayoun, Zubair Shafiq, Chen-Nee Chuah: **DNN Model Architecture Fingerprinting Attack on CPU-GPU Edge Devices.** EuroS&P 2022: 337-355, June 6-10, 2022, Genoa, Italy

Amin Shafiee, Sanmitra Banerjee, Krishnendu Chakrabarty, Sudeep Pasricha, Mahdi Nikdast: **LoCI: An Analysis of the Impact of Optical Loss and Crosstalk Noise in Integrated Silicon-Photonic Neural Networks.** ACM Great Lakes Symposium on VLSI 2022: 351-355, June 6-8, 2022, Irvine, CA, USA

Febin Sunny, Mahdi Nikdast, Sudeep Pasricha: **A Silicon Photonic Accelerator for Convolutional Neural Networks with Heterogeneous Quantization.** ACM Great Lakes Symposium on VLSI 2022: 367-371, June 6-8, 2022, Irvine, CA, USA

Kamil Khan, Sudeep Pasricha, Ryan Gary Kim: **RACE: A Reinforcement Learning Framework for Improved Adaptive Control of NoC Channel Buffers.** ACM Great Lakes Symposium on VLSI 2022: 205-210, June 6-8, 2022, Irvine, CA, USA

Sudeep Pasricha: **Embedded Systems Education in the 2020s: Challenges, Reflections, and Future Directions.** ACM Great Lakes Symposium on VLSI 2022: 519-524, June 6-8, 2022, Irvine, CA, USA

Deliang Chang, Joann Qiongna Chen, Zhou Li, Xing Li: **Hide and Seek: Revisiting DNS-based User Tracking.** EuroS&P 2022: 188-205, June 6-10, 2022, Genoa, Italy

Zhangying He, Amin Rezaei, Houman Homayoun, Hossein Sayadi: **Deep Neural Network and Transfer Learning for Accurate Hardware-Based Zero-Day Malware Detection.** ACM Great Lakes Symposium on VLSI 2022: 27-32, June 6-8, 2022, Irvine, CA, USA

Sanket Shukla, Gaurav Kolhe, Houman Homayoun, Setareh Rafatirad, Sai Manoj P. D.: **RAFeL - Robust and Data-Aware Federated Learning-inspired Malware Detection in Internet-of-Things (IoT) Networks.** ACM Great Lakes Symposium on VLSI 2022: 153-157, June 6-8, 2022, Irvine, CA, USA

Tanmoy Chowdhury, Ashkan Vakil, Banafsheh Saber Latibari, Seyed Aresh Beheshti Shirazi, Ali Mirzaeian, Xiaojie Guo, Sai Manoj P. D., Houman Homayoun, Ioannis Savidis, Liang Zhao, Avesta Sasan: **RAPTA: A Hierarchical Representation Learning Solution For Real-Time Prediction of Path-Based Static Timing Analysis.** ACM Great Lakes Symposium on VLSI 2022: 493-500, June 6-8, 2022, Irvine, CA, USA

Sreenitha Kasarapu, Sanket Shukla, Rakibul Hassan, Avesta Sasan, Houman Homayoun, Sai Manoj P. D.: **CAD-FSL: Code-Aware Data Generation based Few-Shot Learning for Efficient Malware Detection.** ACM Great Lakes Symposium on VLSI 2022: 507-512, June 6-8, 2022, Irvine, CA, USA

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Sina Shahhosseini, Yang Ni, Emad Kasaeyan Naeini, Mohsen Imani, Amir M. Rahmani, Nikil D. Dutt: Flexible and Personalized Learning for Wearable Health Applications using HyperDimensional Computing . ACM Great Lakes Symposium on VLSI 2022: 357-360, June 6-8, 2022, Irvine, CA, USA	
Sina Shahhosseini, Yang Ni, Emad Kasaeyan Naeini, Mohsen Imani, Amir M. Rahmani, Nikil D. Dutt: Flexible and Personalized Learning for Wearable Health Applications using HyperDimensional Computing . ACM Great Lakes Symposium on VLSI 2022: 357-360, June 6-8, 2022, Irvine, CA, USA	
P. V. Sai Charan, P. Mohan Anand, Sandeep K. Shukla, Naveen Selvan, Hrushikesh Chunduri: DOTMUG: A Threat Model for Target Specific APT Attacks-Misusing Google Teachable Machine . ISDFS 2022: 1-8, June 6-7, 2022, Istanbul, Turkey	
Nitesh Kumar, Anand Handa, Sandeep K. Shukla: RBMon: Real Time System Behavior Monitoring Tool . AsiaCCS 2022: 1228-1230, May 30- June 3, 2022, Nagasaki, Japan	
Yu Hao, Hang Zhang, Guoren Li, Xingyun Du, Zhiyun Qian, Ardalan Amiri Sani: Demystifying the Dependency Challenge in Kernel Fuzzing . ICSE 2022: 659-671, May 25-27, 2022, Pittsburgh, PA, USA	
Saurabh Kumar, Debadatta Mishra, Biswabandan Panda, Sandeep Kumar Shukla: AndroOBFS: Time-tagged Obfuscated Android Malware Dataset with Family Information . MSR 2022: 454-458, May 23-24, 2022, Pittsburgh, PA, USA	
Ulices Santa Cruz, Yasser Shoukry: NNLander-VeriF: A Neural Network Formal Verification Framework for Vision-Based Autonomous Aircraft Landing . NFM 2022: 213-230, May 24-27, 2022, Pasadena, CA, USA	
Khuong Vo, Manoj Vishwanath, Ramesh Srinivasan, Nikil D. Dutt, Hung Cao: Composing Graphical Models with Generative Adversarial Networks for EEG Signal Modeling . ICASSP 2022: 1231-1235, May 23-27, 2022, Virtual and Singapore	
Hanning Chen, Mohsen Imani: Density-Aware Parallel Hyperdimensional Genome Sequence Matching . FCCM 2022: 1-4, May 15-18, 2022, New York, NY, USA	
Hsin-Yu Liu, Bharathan Balaji, Sicun Gao, Rajesh K. Gupta, Dezhi Hong: Safe HVAC Control via Batch Reinforcement Learning . ICCPS 2022: 181-192, May 4-6, 2022, Milano, Italy	
James Ferlez, Haitham Khedr, Yasser Shoukry: Fast BATLLNN: Fast Box Analysis of Two-Level Lattice Neural Networks . HSCC 2022: 23:1-23:11, May 4-6, 2022, Milano, Italy	
Fabien Bouquillon, Giuseppe Lipari, Smail Niar: Improving CRPD analysis for EDF scheduling: trading speed for precision . SAC 2022: 481-490, April 25-29, 2022, Virtual	

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Leila Tlebaldiyeva, Galymzhan Nauryzbayev, Sultangali Arzykulov, Ahmed M. Eltawil, Theodoros Tsiftsis: **Enhancing QoS Through Fluid Antenna Systems over Correlated Nakagami-m Fading Channels**. WCNC 2022: 78-83, April 10-13, 2022, Austin, TX, USA

David Shur, Giovanni Di Crescenzo, Qinqing Zhang, Ta Chen, Rajesh Krishnan, Yow-Jian Lin, Zahir Patni, Scott Alexander, Gene Tsudik: **SEDIMENT: An IoT-device-centric Methodology for Scalable 5G Network Security**. WCNC 2022: 49-54, April 10-13, 2022, Austin, TX, USA

Mihnea Chirila, Paolo D'Alberto, Hsin-Yu Ting, Alexander V. Veidenbaum, Alexandru Nicolau: **A Heterogeneous Solution to the All-pairs Shortest Path Problem using FPGAs**. ISQED 2022: 108-113, April 6-7, 2022, Santa Clara, CA, USA

Paul Kirth, Mitchel Dickerson, Stephen Crane, Per Larsen, Adrian Dabrowski, David Gens, Yeoul Na, Stijn Volckaert, Michael Franz: **PKRU-safe: automatically locking down the heap between safe and unsafe languages**. EuroSys 2022: 132-148, April 5-8, 2022, Rennes, France

Hadjer Benmeziane, Hamza Ouarnoughi, Kaoutar El Maghraoui, Smaïl Niar: **Real-time style transfer with efficient vision transformers**. EdgeSys@EuroSys 2022: 31-36, April 5-8, Rennes, France

Minxuan Zhou, Weihong Xu, Jaeyoung Kang, Tajana Rosing: **TransPIM: A Memory-based Acceleration via Software-Hardware Co-Design for Transformer**. HPCA 2022: 1071-1085, April 2-6, 2022, Seoul, South Korea

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Arnav Vaibhav Malawade, Shih-Yuan Yu, Brandon Hsu, Deepan Muthirayan, Pramod P. Khargonekar, Mohammad Abdullah Al Faruque: **Spatiotemporal Scene-Graph Embedding for Autonomous Vehicle Collision Prediction**. IEEE Internet Things J. 9(12): 9379-9388, June, 2022

Haoran Pu, Omid Malekzadeh-Arasteh, Ahmad Reza Danesh, Zoran Nenadic, An H. Do, Payam Heydari: **A CMOS Dual-Mode Brain-Computer Interface Chipset With 2-mV Precision Time-Based Charge Balancing and Stimulation-Side Artifact Suppression**. IEEE J. Solid State Circuits 57(6): 1824-1840, June, 2022

Anomadharshi Barua, Deepan Muthirayan, Pramod P. Khargonekar, Mohammad Abdullah Al Faruque: **Hierarchical Temporal Memory-Based One-Pass Learning for Real-Time Anomaly Detection and Simultaneous Data Prediction in Smart Grids**. IEEE Trans. Dependable Secur. Comput. 19(3): 1770-1782, May, 2022

Jeffrey L. Krichmar, Tiffany Hwu: **Design Principles for Neurorobotics**. Frontiers Neurobotics 16: 882518, May, 2022

Amlan Ganguly, Sergi Abadal, Ishan G. Thakkar, Natalie Enright Jerger, Marc D. Riedel, Masoud Babaie, Rajeev Balasubramonian, Abu Sebastian, Sudeep Pasricha, Baris Taskin: **Interconnects for DNA, Quantum, In-Memory, and Optical Computing: Insights From a Panel Discussion**. IEEE Micro 42(3): 40-49, May, 2022

Augusto Vega, Alper Buyuktosunoglu, Davide Callegaro, Marco Levorato, Pradip Bose: **Cloud-backed mobile cognition**. Computing 104(3): 461-479, May, 2022

Alice Sokolova, Dhiman Sengupta, Martin Hunt, Rajesh K. Gupta, Baris Aksanli, Fredric J. Harris, Harinath Garudadri: **Real-Time Multirate Multiband Amplification for Hearing Aids**. IEEE Access 10: 54301-54312, May, 2022

Min Soo Kim, Alberto A. Del Barrio, Hyun Jin Kim, Nader Bagherzadeh: **The Effects of Approximate Multiplication on Convolutional Neural Networks**. IEEE Trans. Emerg. Top. Comput. 10(2): 904-916, April, 2022

Arnav Vaibhav Malawade, Shih-Yuan Yu, Brandon Hsu, Harsimrat Kaeley, Anurag Karra, Mohammad Abdullah Al Faruque: **roadscene2vec: A tool for extracting and embedding road scene-graphs**. Knowl. Based Syst. 242: 108245, April, 2022

Ninad Hogade, Sudeep Pasricha, Howard Jay Siegel: **Energy and Network Aware Workload Management for Geographically Distributed Data Centers**. IEEE Trans. Sustain. Comput. 7(2): 400-413, April, 2022

Nicholas Wei, Ardalan Amiri Sani: **SchrodinText: Strong Protection of Sensitive Textual Content of Mobile Applications**. IEEE Trans. Mob. Comput. 21(4): 1402-1419, April, 2022

Zhenyu Zhang, Caleb Johnson, Nalini Venkatasubramanian, Shangping Ren: **Process scenario discovery from event logs based on activity and timing information**. J. Syst. Archit. 125: 102435, April, 2022

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Xiaofan Zhang, Yao Chen, Cong Hao, Sitao Huang, Yuhong Li, Deming Chen: **Efficient Machine Learning, Compilers, and Optimizations for Embedded Systems**. CoRR abs/2206.03326, June, 2022

Wei Xu, Zhaohui Yang, Derrick Wing Kwan Ng, Marco Levorato, Yonina C. Eldar, Mérouane Debbah: **Edge Learning for B5G Networks with Distributed Signal Processing: Semantic Communication, Edge Computing, and Wireless Sensing**. CoRR abs/2206.00422, June, 2022

Nick Alonso, Beren Millidge, Jeff Krichmar, Emre Neftci: **A Theoretical Framework for Inference Learning**. CoRR abs/2206.00164, June, 2022

Zhiyuan Guo, Zachary Blanco, Mohammad Shahrad, Zerui Wei, Bili Dong, Jinmou Li, Ishaan Pota, Harry Xu, Yiyang Zhang: **Resource-Centric Serverless Computing**. CoRR abs/2206.13444, June, 2022

Sudeep Pasricha: **Embedded Systems Education in the 2020s: Challenges, Reflections, and Future Directions**. CoRR abs/2206.03263, June, 2022

Ruo Chen Jiao, Xiangguo Liu, Takami Sato, Qi Alfred Chen, Qi Zhu: **Semi-supervised Semantics-guided Adversarial Training for Trajectory Prediction**. CoRR abs/2205.14230, May, 2022

Igor Nunes, Mike Heddes, Tony Givargis, Alexandru Nicolau, Alexander V. Veidenbaum: **GraphHD: Efficient graph classification using hyperdimensional computing**. CoRR abs/2205.07826, May, 2022

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Mike Heddes, Igor Nunes, Pere Vergés, Dheyay Desai, Tony Givargis, Alexandru Nicolau: **Torchhd: An Open-Source Python Library to Support Hyperdimensional Computing Research**. CoRR abs/2205.09208, May, 2022

Yang Ni, Danny Abraham, Mariam Issa, Yeseong Kim, Pietro Mercati, Mohsen Imani: **QHD: A brain-inspired hyperdimensional reinforcement learning algorithm**. CoRR abs/2205.06978, May, 2022

Jinwei Xing, Takashi Nagata, Xinyun Zou, Emre Neftci, Jeffrey L. Krichmar: **Policy Distillation with Selective Input Gradient Regularization for Efficient Interpretability**. CoRR abs/2205.08685, May, 2022

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Wenzhe Guo, Mohammed E. Fouda, Ahmed M. Eltawil, Khaled N. Salama: **BackLink: Supervised Local Training with Backward Links**. CoRR abs/2205.07141, May, 2022

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Ivan De Oliveira Nunes, Seoyeon Hwang, Sashidhar Jakkamsetti, Gene Tsudik: **Privacy-from-Birth: Protecting Sensed Data from Malicious Sensors with ERSA**. CoRR abs/2205.02963, May, 2022

David Koisser, Patrick Jauernig, Gene Tsudik, Ahmad-Reza Sadeghi: **V'CER: Efficient Certificate Validation in Constrained Networks**. CoRR abs/2205.01973, May, 2022

Saideep Tiku, Danish Gufran, Sudeep Pasricha: **Multi-Head Attention Neural Network for Smartphone Invariant Indoor Localization**. CoRR abs/2205.08069, May, 2022

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Kamil Khan, Sudeep Pasricha, Ryan Gary Kim: **RACE: A Reinforcement Learning Framework for Improved Adaptive Control of NoC Channel Buffers**. CoRR abs/2205.13130, May, 2022

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Rozhin Yasaei, Luke Chen, Shih-Yuan Yu, Mohammad Abdullah Al Faruque: **Hardware Trojan Detection using Graph Neural Networks**. CoRR abs/2204.11431, April, 2022

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