

# **2024 IEEE 3rd Workshop on Machine Learning on Edge in Sensor Systems (SenSys-ML 2024)**

**Hong Kong  
13 – 16 May 2024**



**IEEE Catalog Number: CFP24Y15-POD  
ISBN: 979-8-3503-6337-1**

**Copyright © 2024 by the Institute of Electrical and Electronics Engineers, Inc.  
All Rights Reserved**

*Copyright and Reprint Permissions:* Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

***\*\*\* This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP24Y15-POD
ISBN (Print-On-Demand):	979-8-3503-6337-1
ISBN (Online):	979-8-3503-6336-4

**Additional Copies of This Publication Are Available From:**

Curran Associates, Inc  
57 Morehouse Lane  
Red Hook, NY 12571 USA  
Phone: (845) 758-0400  
Fax: (845) 758-2633  
E-mail: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

CURRAN ASSOCIATES INC.  
**proceedings**  
.com

# 2024 IEEE 3rd Workshop on Machine Learning on Edge in Sensor Systems (SenSys-ML) **SenSys-ML 2024**

## Table of Contents

### 2024 IEEE 3rd Workshop on Machine Learning on Edge in Sensor Systems (SenSys-ML)

Preface to Machine Learning on Edge in Sensor Systems (SenSys-ML 2024) .....	1
<i>Poonam Yadav (University of York, UK), Edith C.H. Ngai (University of Hong Kong, Hong Kong), Manik Gupta (BITS, Pilani, India), Shaswot Shresthamali (Keio University, Tokyo, Japan), and Alok Ranjan (Bosch, India)</i>	
FACC: A Flexible and Asynchronous Updating Strategy for Cooperative Edge Caching .....	3
<i>Zeming Gao (Beijing University of Posts and Telecommunications), Tian Ye (Beijing University of Posts and Telecommunications), Mengyu Yang (Beijing University of Posts and Telecommunications), Edith C.H. Ngai (The University of Hong Kong), Lanshan Zhang (Beijing University of Posts and Telecommunications), and Wendong Wang (Beijing University of Posts and Telecommunications)</i>	
LLMSense: Harnessing LLMs for High-level Reasoning Over Spatiotemporal Sensor Traces .....	9
<i>Xiaomin Ouyang (University of California, Los Angeles) and Mani Srivastava (University of California, Los Angeles)</i>	
Resource-Aware Split Federated Learning for Edge Intelligence .....	15
<i>Amna Arouj (Queen Mary University of London), Ahmed M. Abdelmoniem (Queen Mary University of London), Ahmad Alhilal (Hong Kong University of Science and Technology), Linlin You (Sun Yat-Sen University), and Chen Wang (Huazhong University of Science and Technology)</i>	
Advancements in Machine Learning in Sensor Systems: Insights from Sensys-ML and TinyML Communities .....	21
<i>Poonam Yadav (University of York, UK)</i>	
<b>Author Index</b> .....	<b>27</b>