# **2023 IEEE 32nd Microelectronics Design & Test Symposium** (MDTS 2023)

Albany, New York, USA 8-10 May 2023



IEEE Catalog Number: CFP23NAT-POD **ISBN:** 

979-8-3503-3899-7

# Copyright © 2023 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:	CFP23NAT-POD
ISBN (Print-On-Demand):	979-8-3503-3899-7
ISBN (Online):	979-8-3503-3898-0
ISSN:	2573-7589

#### 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 Web: www.proceedings.com



### **2023 IEEE Microelectronics Design and Test Symposium**

\* The following papers have been selected to be published through IEEExplore

"A Machine Learning Approach for Person Authentication from EEG Signals"......1

"Analog NVM Synapse for Hardware-Aware Neural Network Training Optimization on 65nm CMOS TaOx ReRAM Devices".......12

"Reconfigurable Self-Destructing Pre-Amplifier Physical Unclonable Function"......20

"Flow-Based Computing of NOR Logic Using ReRAM Devices"......25

"Application of machine learning methods for the diagnosis of Lyme disease with a fluorescent plasmonic biosensor"........41

"A Time-Frequency Deep Learning Classification Model for Metal Oxide Coated Particles".......46