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電機電子工程師學會

PS. IEEE, pronounced "Eye-triple-E"

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2019

Kurt E. Petersen

Contributions to and leadership in the development and commercialization of innovative technologies in the field of MEMS



2020

Chenming Hu

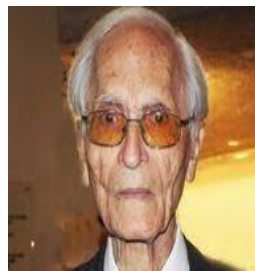
For a distinguished career of developing and putting into practice semiconductor models, particularly 3D device structures, reinforcing Moore's Law for decades



2021

Jacob Ziv

For fundamental contributions to information theory and data compression technology, and distinguished research leadership



2022

Asad M. Madni

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2023

Vinton G. Cerf

For co-creating the Internet architecture and providing sustained leadership in its phenomenal growth in becoming society's critical infrastructure.



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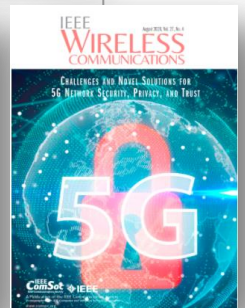
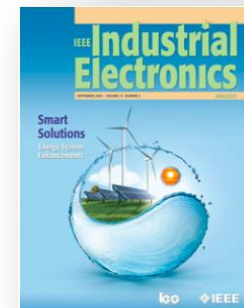
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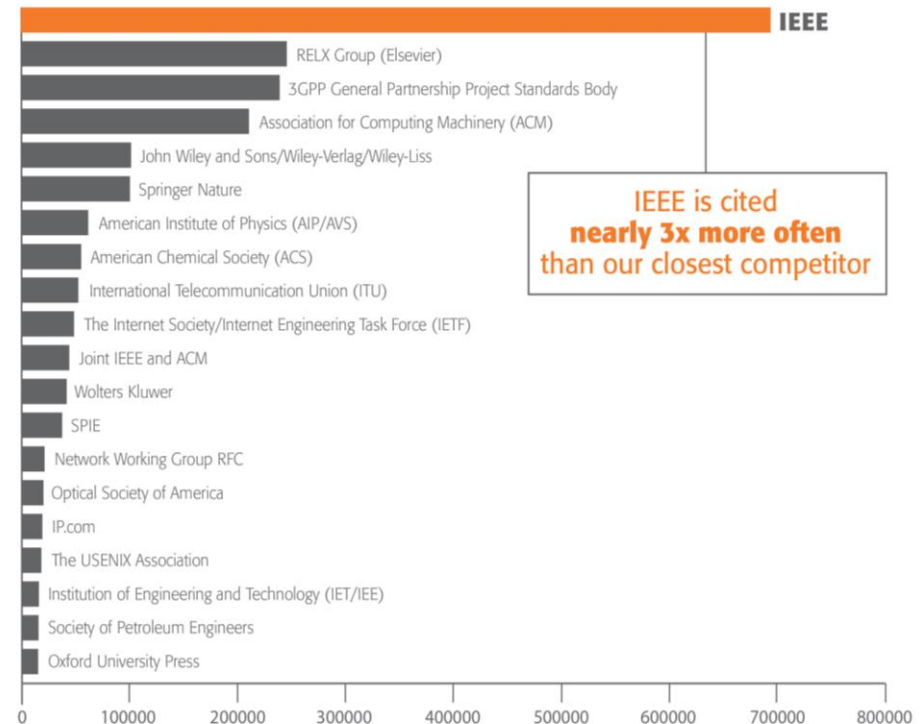
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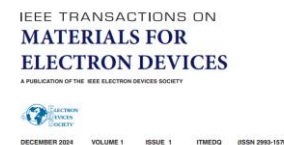
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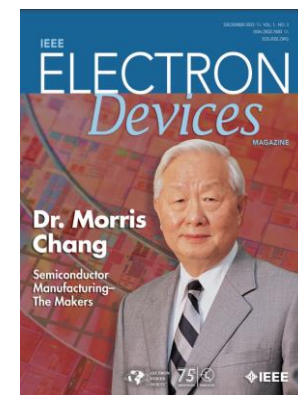


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2024 VOLUME 2 ISSUE 1 ITICCX (ISSN 2832-7004)



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- IEEE 2048.101-2023 IEEE Standard for **Augmented Reality on Mobile Devices--General Requirements for Software Framework, Components, and Integration**
- IEEE 2888.4-2023 IEEE Standard for **Architecture for Virtual Reality Disaster Response Training System with Six Degrees of Freedom (6 DoF)**
- IEEE C57.12.24-2023 IEEE Standard for **Submersible, Three-Phase Transformers, 3750 kVA and Smaller: High Voltage, 34 500 GrdY/19 920 V and Below; Low Voltage, 600 V and Below**
- IEEE C37.68-2023 IEEE Standard for **Design, Test, and Application Requirements for Microprocessor-Based Controls of Distribution Pad-mount, Dry Vault, Wet Vault, and Polemount Switchgear Rated Above 1 kV and Up to and Including 38 kV**

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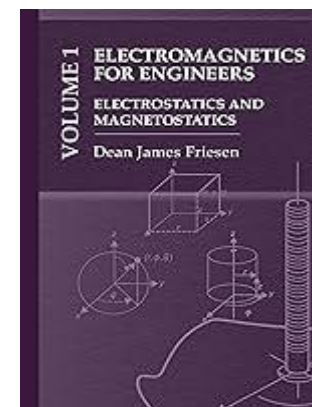
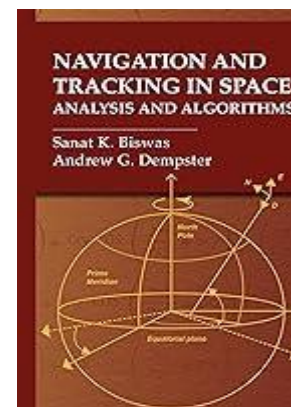
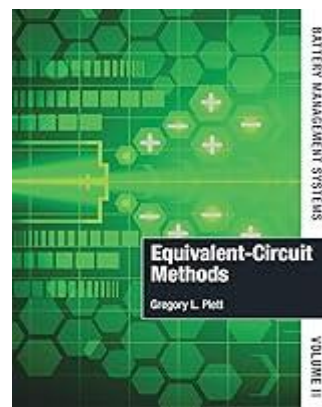
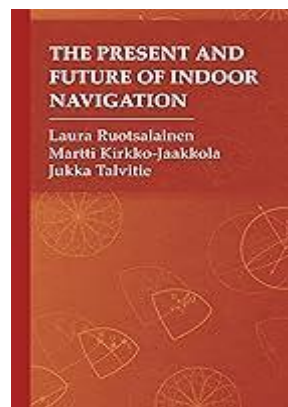
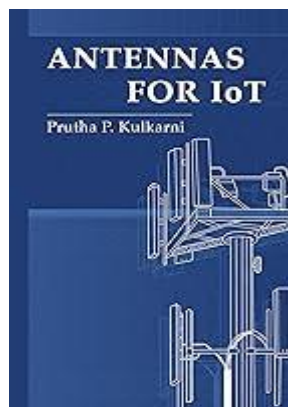
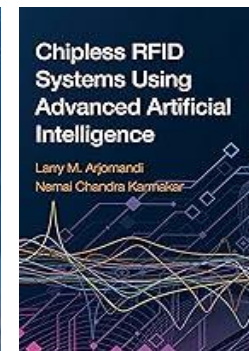
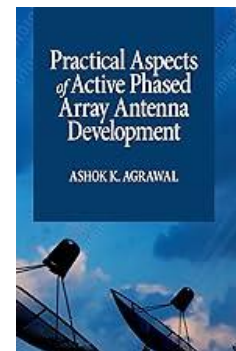
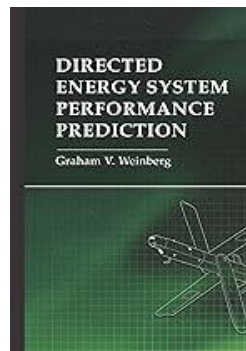
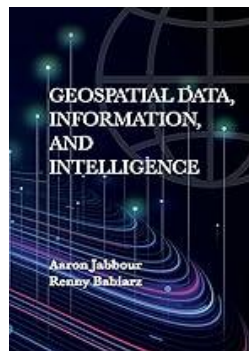


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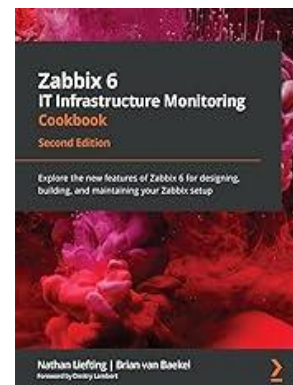
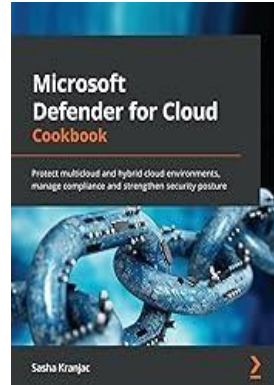
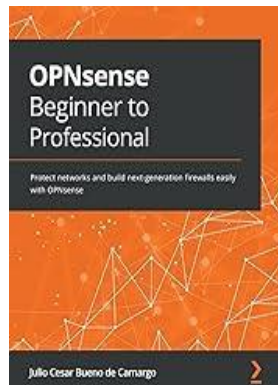
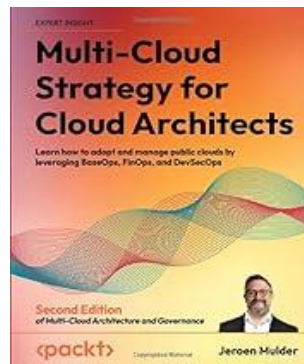
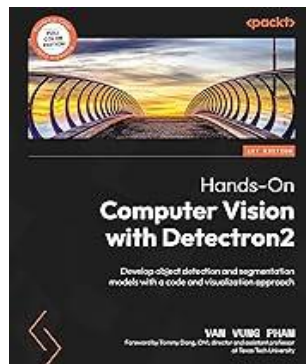


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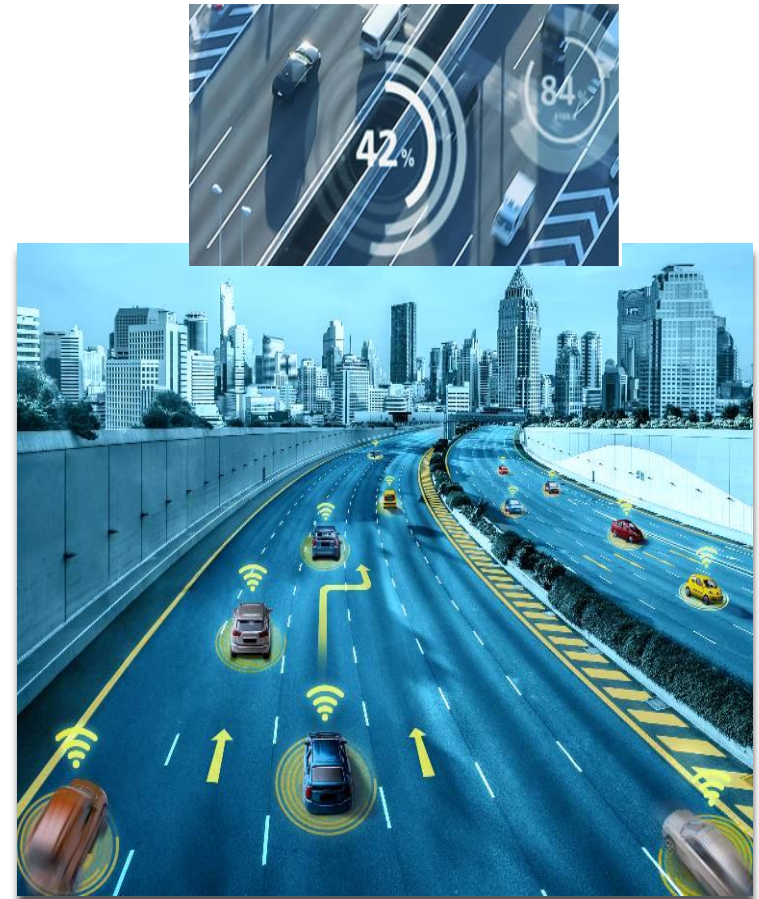
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2023

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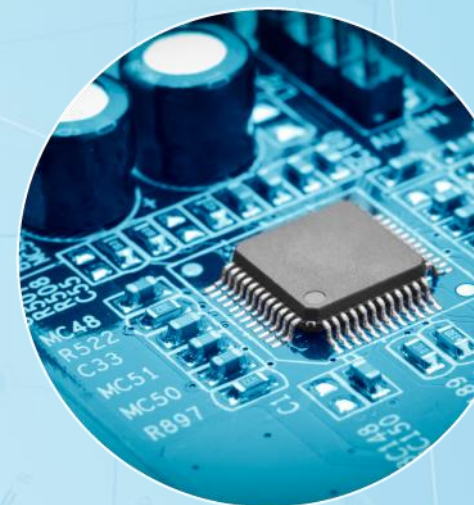
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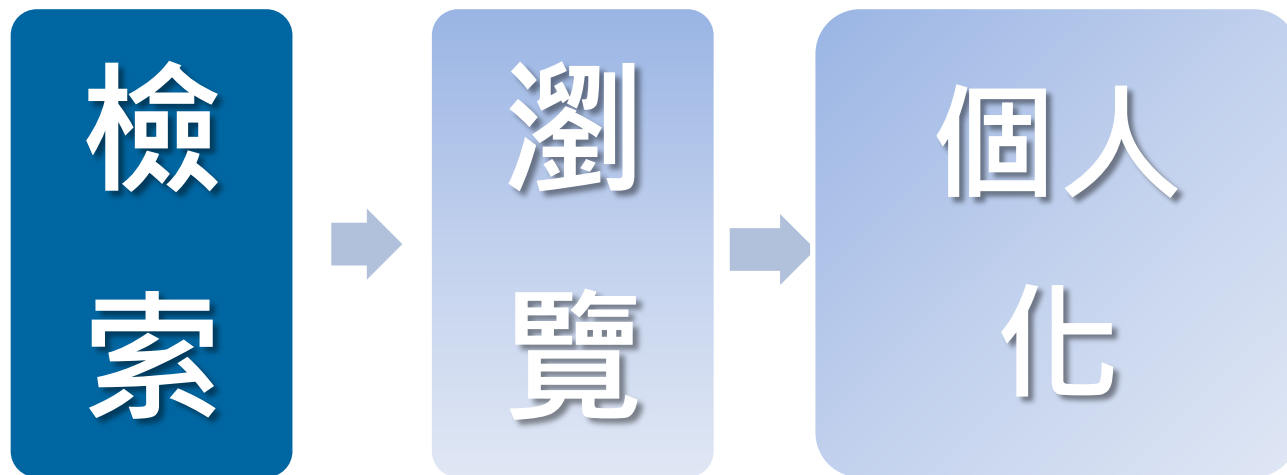
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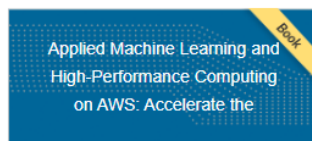
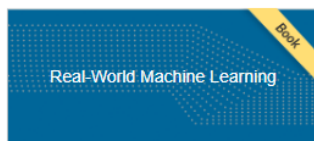
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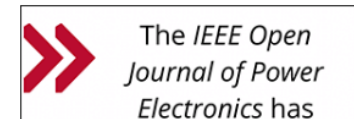
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Priya Goyal
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Priya Goyal received the master's degree in mathematics at UC Berkeley in 2015. She is currently a research engineer with Facebook AI Research, where she focuses on object detection and object segmentation, high performance deep learning for accelerating neural networks. She co-recipient of the Student Paper Award at ICCV 2017.



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Biography

Piotr Dollár received the PhD degree from UCSD under the guidance of Serge Belongie, in 2007 and has continued doing research in vision and learning since. He is a research scientist with Facebook AI Research (FAIR) with a focus on computer vision and machine learning. Prior, he spent three years with Microsoft Research (MSR). He helped cofound Anchovi Labs (acquired by Dropbox in 2012) and before that was a postdoc with the Computation Vision Lab at Caltech until 2011. (Based on document published on 23 July 2018).

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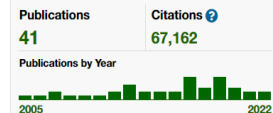
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9. SSD: Single shot multibox detector

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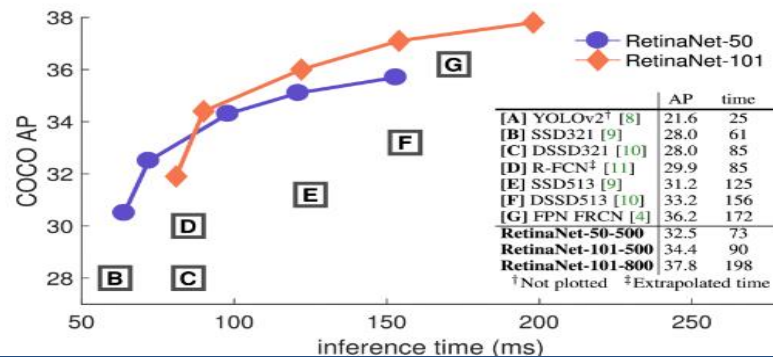


Fig. 2.

Speed (ms) versus detector output performance (COCO AP) for the [3] system from [4]. We show variants of RetinaNet with ResNet-50-FPN (blue circles) and ResNet-101-FPN (orange diamonds). RetinaNet forms an upper envelope of all current detectors, and an improved variant (not shown) achieves 40.8 AP. Details are given in Section 5.

[3] system from [4]. We show variants of RetinaNet with ResNet-50-FPN (blue circles) and ResNet-101-FPN

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☐ A Comprehensive Survey on Graph Neural Networks

Zonghan Wu; Shirui Pan; Fengwen Chen; Guodong Long; Chengqi Zhang; Philip S. Yu

IEEE Transactions on Neural Networks and Learning Systems

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☐ 5G mmWave Cooperative Positioning and Mapping Using Multi-Model PHD Filter and Map Fusion

Hyowon Kim; Karl Granström; Lin Gao; Giorgio Battistelli; Sunwoo Kim; Henk Wymeersch

IEEE Transactions on Wireless Communications

Year: 2020 | Volume: 19, Issue: 6 | Journal Article

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Hyowon Kim @ Hanyang University
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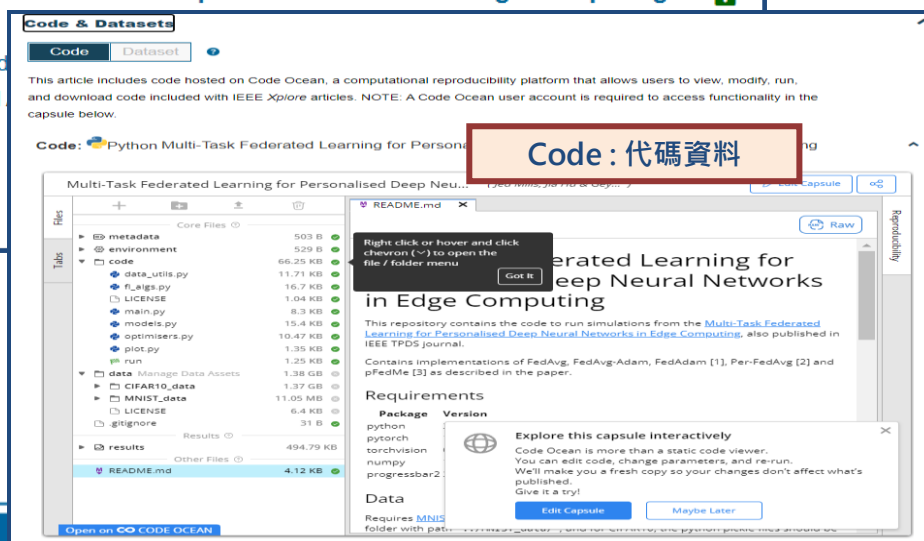
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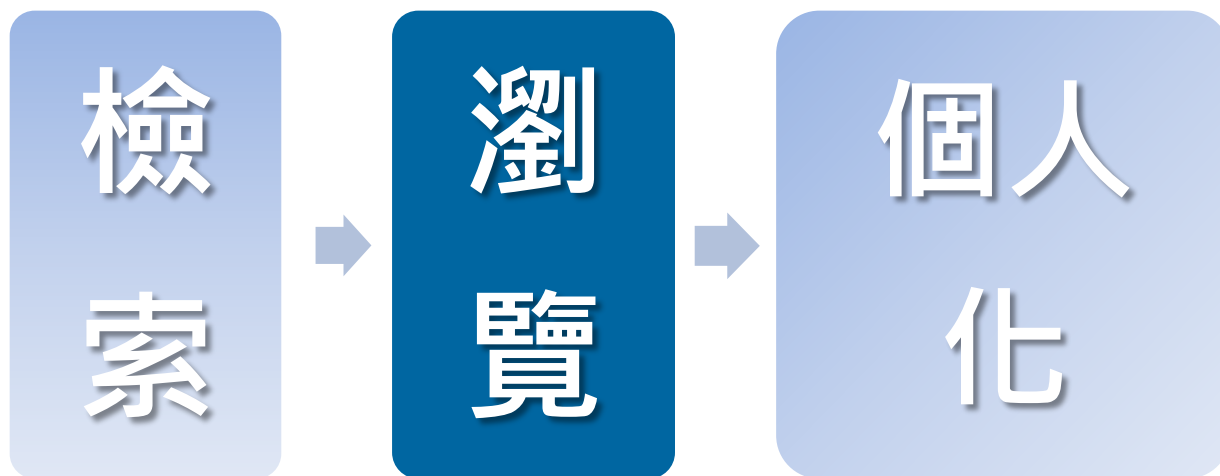
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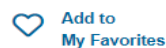
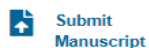
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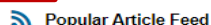
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


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Multimodal Fusion Transformer for Remote Sensing Image Classification

Swalpa Kumar Roy , Student Member, IEEE, Ankur Deria , Danfeng Hong , Senior Member, IEEE, Behnood Rasti , Senior Member, IEEE, Antonio Plaza , Fellow, IEEE, and Jocelyn Chanussot , Fellow, IEEE

Abstract—Vision transformers (ViTs) have been trending in image classification tasks due to their promising performance when compared with convolutional neural networks (CNNs). As a result, many researchers have tried to incorporate ViTs in hyperspectral image (HSI) classification tasks. To achieve satisfactory performance, close to that of CNNs, transformers need fewer parameters. ViTs and other similar transformers use an external classification (CLS) token, which is randomly initialized and often fails to generalize well, whereas other sources of multimodal datasets, such as light detection and ranging (LiDAR), offer the potential to improve these models by means of a CLS. In this article, we introduce a new multimodal fusion transformer (MFT) network, which comprises a multihead cross-patch attention (mCrossPA) for HSI land-cover classification. Our mCrossPA utilizes other sources of complementary information in addition to the HSI in the transformer encoder to achieve better generalization. The concept of tokenization is used to generate CLS and HSI patch tokens, helping to learn a distinctive representation in a reduced and hierarchical feature space. Extensive experiments are carried out on widely used benchmark datasets, i.e., the University of Houston (UH), Trento, University of Southern Mississippi Gulfpark (MUFL), and Augsburg. We compare the results of the proposed MFT model with other state-of-the-art transformers, classical CNNs, and conventional classifiers models. The superior performance achieved by the proposed model is due to the use of mCrossPA. The source code will be made available publicly at <https://github.com/AnkurDeria/MFT>.

I. INTRODUCTION AND CONTRIBUTIONS

PHENOMENA, such as climate change or desertification, have led to a drastic growth in the popularity of Earth observation (EO) via remote sensing (RS). These tasks include (but are not limited to) land-cover classification [1], [2], [3], forestry [4], mineral exploration and mapping, object/target detection [5], [6], environmental monitoring [7], urban planning [8], biodiversity conservation, and disaster response and management. All of these tasks have been explored in the past few decades using data coming from single EO sensors, i.e., hyperspectral imaging (HSI) instruments, which can simultaneously provide rich spectral and spatial information [9]. However, such single-sensor data tend not sufficient to identify and recognize objects of interest.

Recent advances in RS technology have increased the availability of multisensor data, allowing for multiple representations of the same geographical region. Depending on the sensors' characteristics, the captured data can provide information with different characteristics for the same observed land-cover region. For example, synthetic-aperture radar (SAR) data provide the amplitude and phase geometrical information, while light detection and ranging (LiDAR)

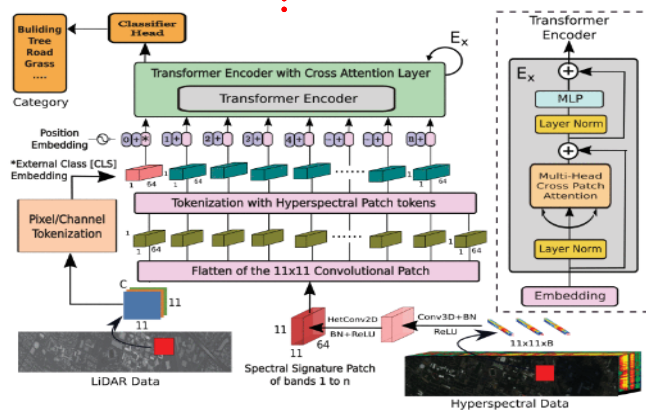
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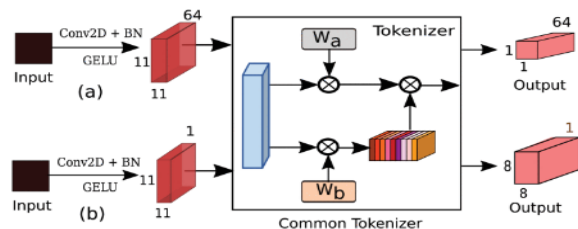
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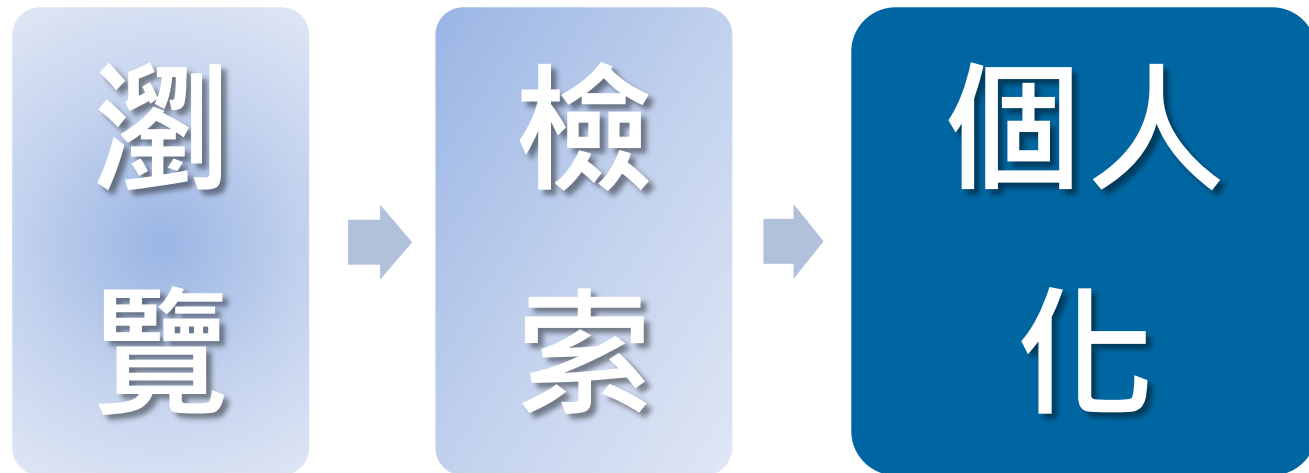
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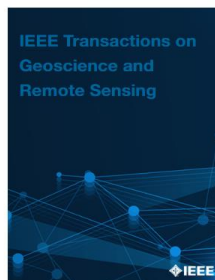
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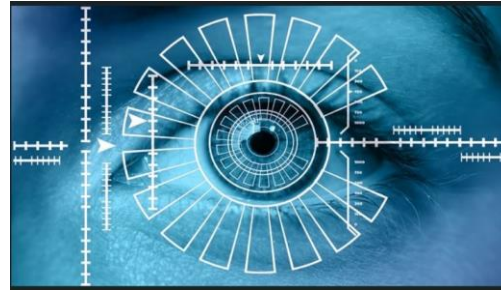
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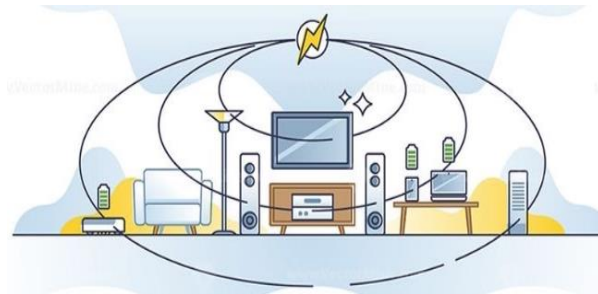
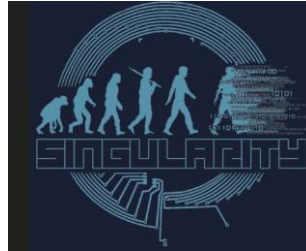


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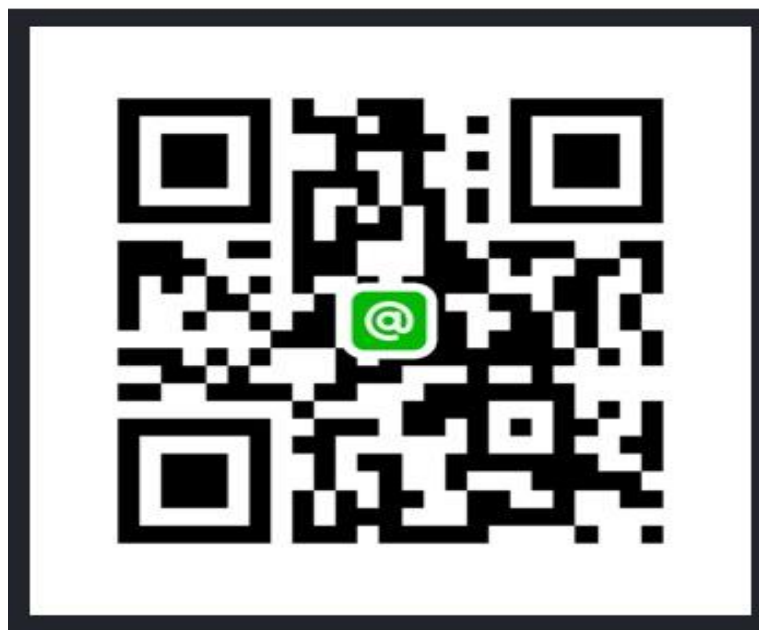
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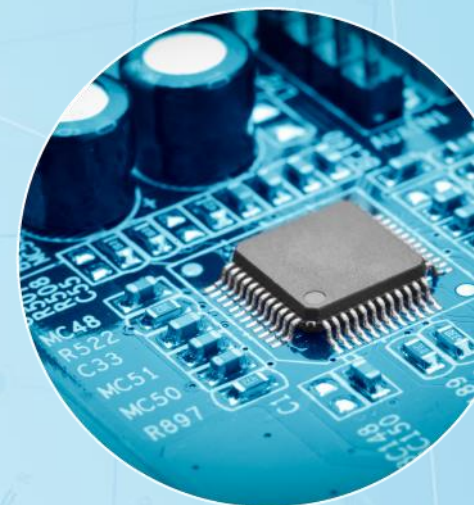
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