

# Special Session

## – IMFEDK Celebrating the 20<sup>th</sup> Anniversary –



### IEEE EDS Kansai Chapter Distinguished Service Award

**Hiroshi Nozawa**  
(Kyoto University)

**Daisuke Ueda**  
(Nagoya University)

**Kenji Taniguchi**  
(Osaka University)



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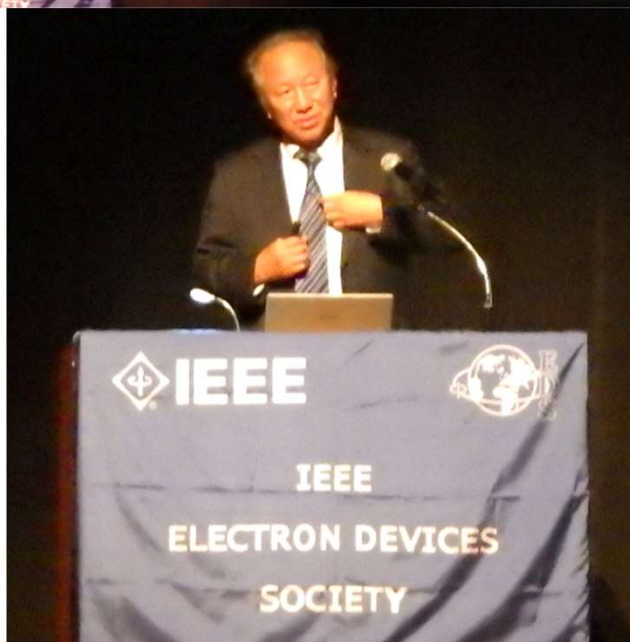


## 日本の半導体産業は衰退しているか？

### 概要

1. 技術者としての昔話
2. 垂直統合と水平分業の利害得失
3. 海外との競争条件はどこが違うか？
4. 経営品質、3σ、ISOなどの技術管理は何だったか？
5. 技術的挑戦からの事業化が難しい組織環境
6. 皆さんの技術を事業化してみませんか
7. 展開シナリオを思い描ける技術者像

IMFEDK 2022

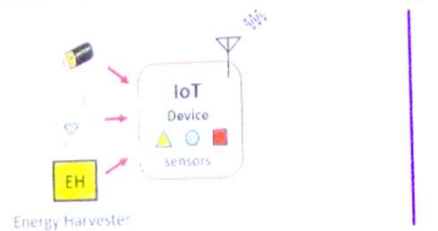






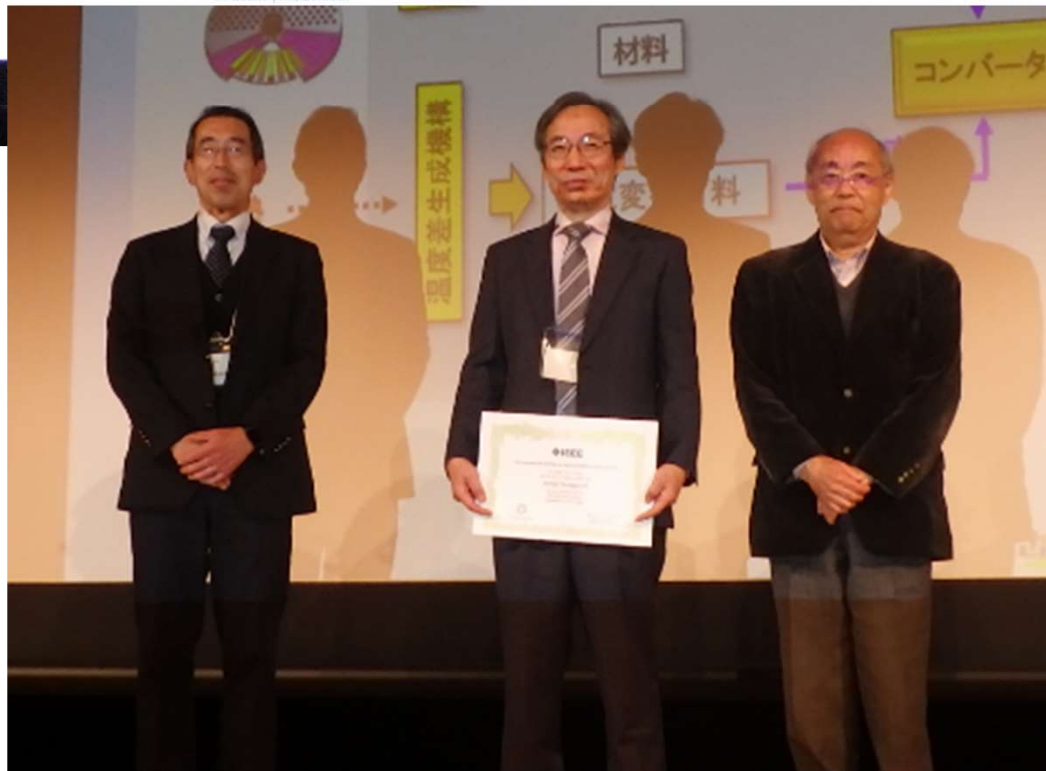
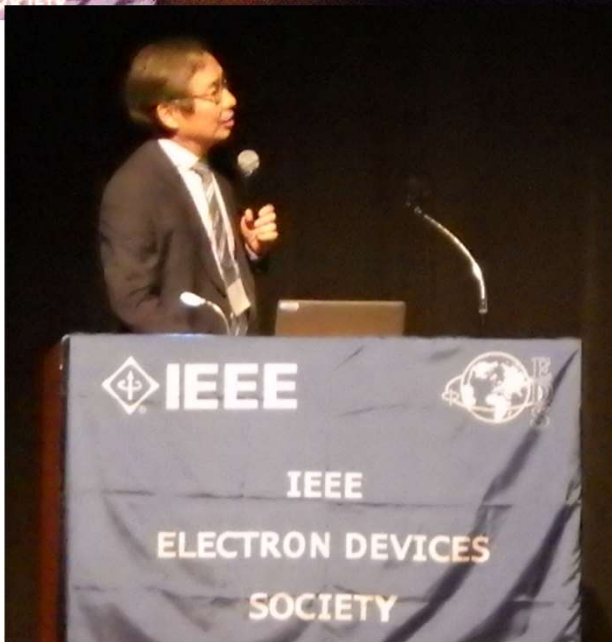
### IoTの経済的な効果

2019年 エコノミスト誌  
 -インターネットはIoTによって第二フェーズに入った。  
 -人工知能(AI)、ビッグデータと並んでIoTは世界のデジタル経済の中心



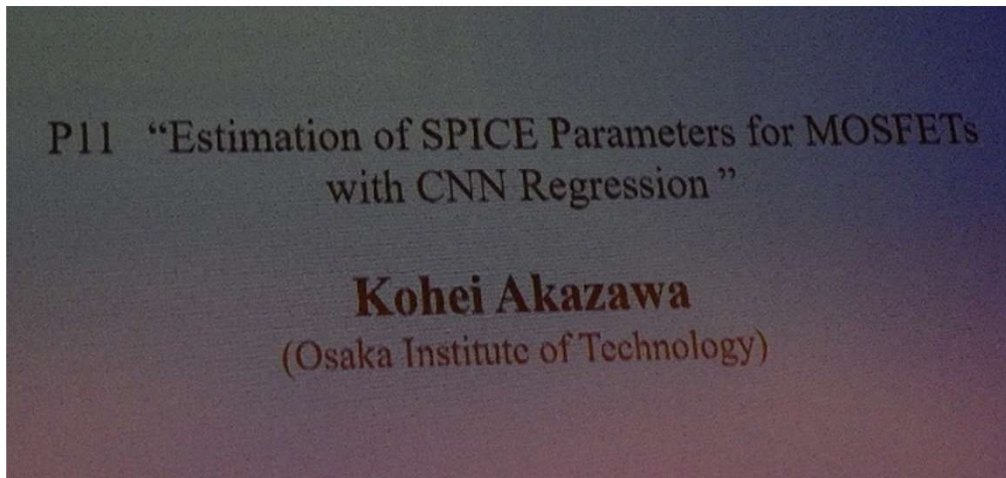
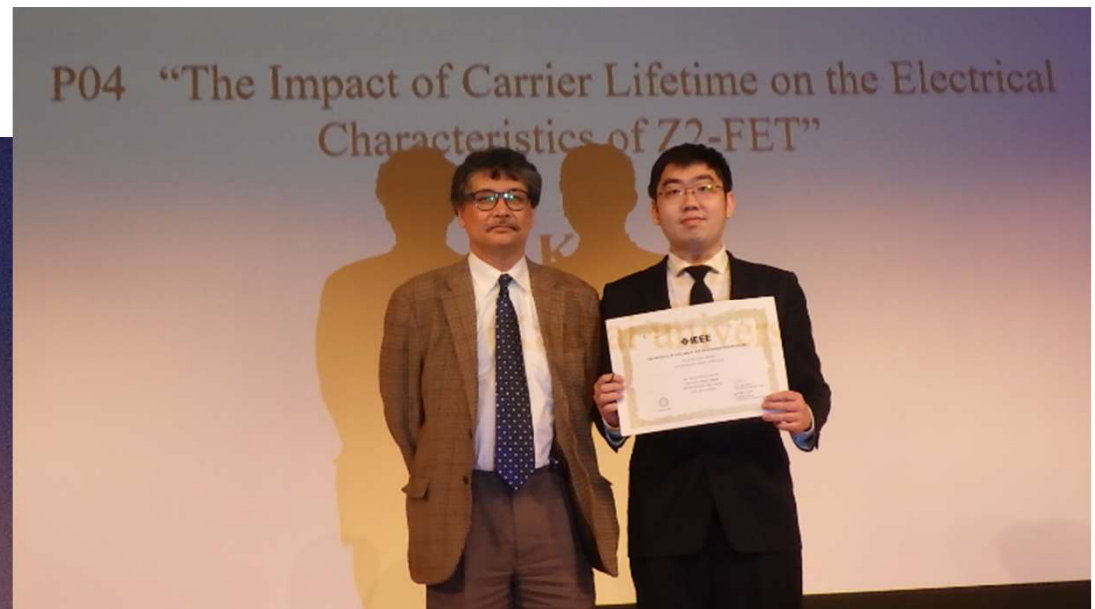
**Applications of EH assisted IoT**

Home	Fire detection, Smoke sensors, intrusion detection
Retail	Product tracking and Shop check out (RFID tag)
Health	Activity tracker, Fall detect on, Emergency tag
Logistics	Quality of storage and Shipment condition monitoring
Agriculture	Animal tracking(RFID tag), Irrigation monitoring
Factory	Asset tracking, Inventory management (RFID tag)











## IEEE EDS Kansai Chapter IMFEDK Most Downloaded Paper Award

**“An 800-MHz 8-bit High Speed SAR ADC  
in 16nm FinFET Process”**

Keisuke Okuno, Koji Obata, Takumi Kato and Koji Sushihara

**“Development of SiC Power Devices and Modules  
for Automotive Motor Drive Use”**

Tristan Evans, Toshio Hanada, Yuki Nakano and Takashi Nakamura

**“Improvement of Drain Leakage Current Characteristics  
in Metal-Oxide-Semiconductor-Field-Effect-Transistor  
by Asymmetric Source-Drain Structure”**

Byoungseon Choi, Hyunae Park, Dongsoo Kim and Byoungdeog Choi

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