

PERFORMANCE SUMMARY

# INTEGRATED SENSORS RESEARCH GROUP

*6 NOVEMBER 2017*



# TIER 5 – RESEARCH INITIATIVE GROUP (RIG)

<b>Name of RIG</b>	<b>:</b>	<b>Integrated Sensors Research Group</b>
<b>Registration Code</b>	<b>:</b>	<b>CoRe98/T5/2016(3)/FMIA(16)</b>
<b>Tier</b>	<b>:</b>	<b>5</b>
<b>Leader</b>	<b>:</b>	<b>Dr. Sukreen Hana Binti Herman</b>
<b>CoRe</b>	<b>:</b>	<b>Frontier Materials and Industrial Application (FMIA)</b>
<b>Registered Faculty</b>	<b>:</b>	<b>Electrical Engineering</b>
<b>Registration date (Senate Approval)</b>	<b>:</b>	<b>14 January 2016</b>
<b>UiTM Niche Area</b>	<b>:</b>	<b>Industry 4.0</b>
<b>RIG Niche Area</b>	<b>:</b>	<b>Sensor materials and sensor system development</b>

# BACKGROUND OF MEMBERS

BIL	NAMA	KELAYAKAN AKADEMIK	FAKULTI	BIDANG KEPAKARAN
1	DR. SUKREEN HANA HERMAN	PhD	Kej. Elektrik	Materials Science, Nanomaterials
2	ASSOC. PROF. DR. WAN FAZLIDA HANIM ABDULLA	PhD	Kej. Elektrik	Embedded Systems, IC Design
3	IR. DR. HASHIMAH BINTI HASHIM	PhD	Kej. Elektrik	Semiconductor materials and Fabrication, Condensed matters,
4	DR. ROSMALINI AB KADIR	PhD	Kej. Elektrik	Nanotechnology
5	DR. ZULFAKRI MOHAMAD	PhD	Kej. Elektrik	Nanotechnology
6	DR. ROSMALINI AB KADIR	PhD	Kej. Elektrik	Materials Science and Engineering
7	DR. ZAINIHARYATI MOHD ZAIN	PhD	Sains Gunaan	Electroanalytical Chemistry
8	AZNILINDA ZAINUDDIN	PhD	Kej. Elektrik (UiTM Pasir Gudang)	Materials Science, Nanomaterials



# ACHIEVEMENT(2015-2017)

ACHIEVEMENT	2015	2016	2017
Master Degree – Enrolled/On-Going	7	7	9
Master Degree - Graduated	2	3	2
PhD – Enrolled/On-Going	2	3	4
PhD – Graduated	-	-	-
No. of research grants (PI ONLY)	2 (NEW)	2 (NEW)	5 (NEW)
Total value of research grants (RM) (PI ONLY)	118,000.00	139,000.00	208,780.00
Cumulative total value of ACTIVE research grants (RM) – PI ONLY	1,146,000.00	1,285,000.00	1,504,400.00
Total publication (Indexed Journals)	3	7	5
Total publication (Non-indexed Journals)	-	1	2
IPR (Patent, Industrial design, Copyright)	-	1 Copyright	2 Copyrights

# OTHER ACHIEVEMENT (2015-2017)

ACHIEVEMENT	2015	2016	2017
NO. OF CONSULTANCY/ INDUSTRIAL LINKAGE/ COLLABORATION (National & International)		1 (International Collab)	2 (International Collab.) 1 (Research Consultancy)
NO. OF MEMBERSHIP OF PROFESSIONAL BODIES AND ASSOCIATIONS (National & International)	7	7	7
NO. OF SPECIAL INVITATION/ APPOINTMENT/ EXPERTISE (National & International) incl. Keynote Speaker, Invited speaker, Thesis examiner, Judge, Reviewer, Panel, etc.)	16 (Thesis examiner, Interview panel, Judge, Int. Journal Reviewer)	14 (Thesis examiner, Interview panel, Judge, Int. Journal Reviewer)	10 (Thesis examiner, Interview panel, Judge, Int. Journal Reviewer)
NO. OF AWARDS/ RECOGNITION AND APPRECIATION (National & International)	5 (IMDC 2015) 1 (PIID – BRONZE)	2 (IMDC 2016) 2 (IINDEX 2016 – GOLD & DIAMOND)	1 (ITEX2017 – GOLD) 2 (IINDEX 2017) 1 (ICON 2017) Anugerah Kecemerlangan Penyelidikan, Dana Penyelidikan UiTM Johor

# Niche Area and Relevance of RIG

Integrated Sensors Research Group (DERIA) is formed to enhance multidisciplinary researches while focusing in one niche area : **sensor and sensing system**. It is unique in a way that each of the member has their own niche fundamental research which when combined forms a complete applied system.

**Hana**  
**Memristor,**  
**Sensor Material**

**Rosalena**  
**Phase Change Material,**  
**Material Simulation**

**Wan Fazlida**  
**Sensor circuit and systems,**  
**Photonics Sensor**

**Zulfakri**  
**Circuit and System**

**Hashimah**  
**Materials Fabrication**  
**Method**

**Zainiharyati**  
**Biosensor**

**Rosmalini**  
**Sensor Materials**

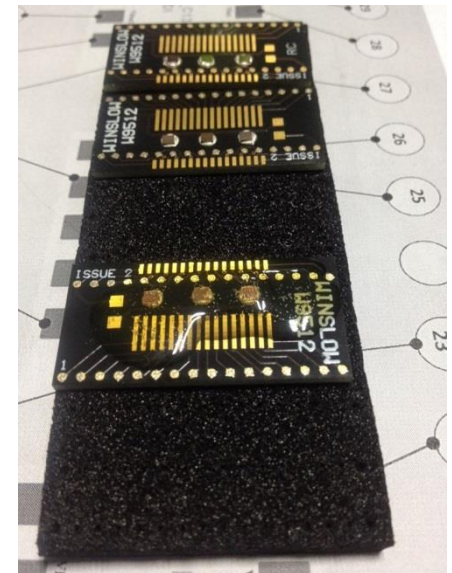
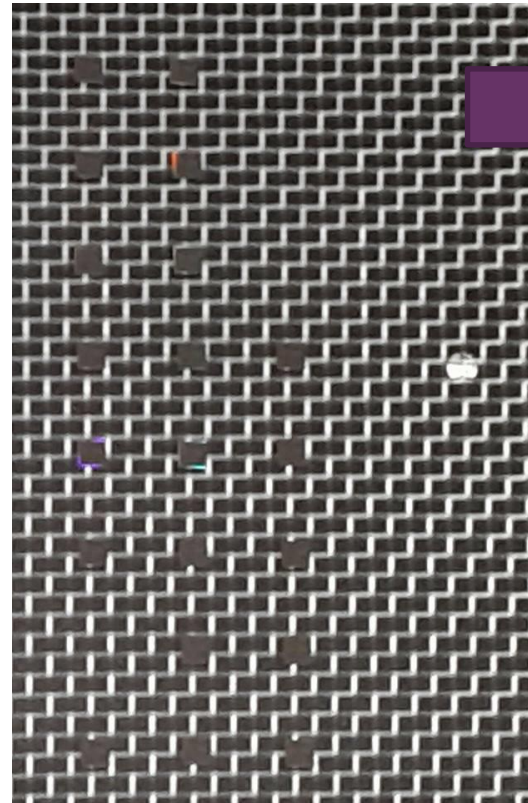
**Aznilinda**  
**Memristor, Materials**  
**Characterization**



# Research Activities - Product



PRODUCT:  
IC Chip tape-out @ Silterra





## Visit & Research Discussion @ Keysight Technologies , Penang

## Workshop on CMOS Technology @ FKE with MIMOS



SEMINAR SERIES

25 October 2017  
2.00 – 5.00 pm  
Dewan Kuliah H



Workshop on CMOS  
Technology (IC Design):  
Schematics to Fabrication



Open to all staff/  
postgraduates/  
undergraduates who are  
interested to tape out  
(fabricate) circuit structures,  
including researchers who are  
not from IC design/  
microelectronics/VLSI  
background.



Talk 1: From Design to Fabrication  
by PM Dr Wan Fazlida Hanim Abdullah,  
FKE UiTM



Talk 2: MPW Program by Silterra  
by Dr Roskhatijah Radzuan, FKE UiTM



Talk 3: Permanent Magnet  
Synchronous Motor (PMSM)  
Controller IC  
by Chia Chieu Yin, MIMOS



# Activities – International Collab.



International Junior Research Assistant  
Award (IJRA) @ Univ. of Sussex



Student Exchange Program from  
National Institute of Technology Ube  
College, Japan

# Activities – Talent Development

## Nurturing talents through Industrial Competitions – Innovate Malaysia Design Competition (IMDC)



2013



2013



2014



2014



2014



2015



2015



2015



2016

Cumulative ~ RM50,000.00 prize won in 2015 – 2017 (cash & in kind)



# Activities – Community Outreach

Supporting STEM Ecosystem through participations in exhibitions



DERIA @ UiTM STEM Q-Helix  
Young Innovators Challenge 2017



DERIA @ STEM Day Iskandar  
Malaysia Learning Festival 2017