

RESEARCH PROJECT UNDERTAKEN

Date	: Project Leader/ Project Member
1. 2017-2019	: Low Carbon Footprint Calculator for Malaysian Green Highway Index OTR 4B322 (RM530,000) Researcher (LLM)
2. 2017 - 2019	: Low Carbon Calculator for Malaysia Green Highway – (Materials) Contract Research LLM 4B331 (RM 20,000) Head Researcher (LLM)
3. 2017 - 2018	: Rutting and Stripping Performance of Warm Mix Asphalt GUP Research Grant TIER 1 17H69 (RM 40,000) Head Researcher (UTM)
4. 2017	: Kajian Pengurusan Pengangkutan Pusat Bandar Johor Bahru, Batu Pahat, Muar, Kulai dan Pasir Gudang Contract Research 4C127 (RM 460,000) Researcher (Pengangkutan Awam Johor PAJ)
5. 2016 - 2017	: Penilaian Semula Rekabentuk Turapan Jalan Luar Bandar (Jalan Kampung) IISJ 15H16 (RM 39,500) Head Researcher (UTM)
6. 2016 - 2017	: Pemindahan Teknologi Kaedah Rekabentuk Turapan Jalan Business Entity/CCIN/IISJ 4Y060 (RM 5,000) Head Researcher (UTM)
7. 2015 - 2017	: Interaction Mechanism Between Bituminous Mixtures and Kenaf Fibre to Improve Resistance against Rutting and Moisture Damage of Flexible Pavement GUP Research Grant TIER 1 11H35 (RM 40,000) Head Researcher (UTM)
8. 2015	: Development of Green Highway Index (MyGhi) Contract Research OTR 4B184 (RM75,000) Researcher (LLM)
9. 2014 - 2016	: Laboratory Evaluation on Using Bio Binder for Hot Mix Asphalt Mixtures GUP Research Grant TIER 1 06H58 (RM 40,000) Head Researcher (UTM)
10. 2014	: Effect of Clogging on The Properties of Porous Asphalt GUP Research Grant TIER 2 09J89 (RM 30,000) Researcher (UTM)

RESEARCH (LAST UPDATED 17 JULY 2019)

11. 2014 : Traffic Accident Prediction ModelBased on Pavement Condition
GUP Research Grant TIER 1 06H53 (RM 40,000)
Researcher (UTM)
12. 2013 : Recyclability of Asphalt Mixtures
GUP Research Grant TIER 2 07J33 (RM 40,000)
Head Researcher (UTM)
13. 2013 : Development of Road Safety Audit System Using GIS for Transport Infrastructure in Urban Cities of Malaysia,
GUP Research Grant TIER 2 07J06 (RM 50,000)
Researcher (UTM)
14. 2013 : Development and Performance of Low Noise Concrete Block Pavement
GUP Research Grant TIER 1 03H47 (RM 130,000)
Researcher (UTM)
15. 2013 : Laboratory Evaluation on The Effect of Mixture Design on Porous Asphalt Mixture Performance,
GUP Research Grant PAS 00K46 (RM 20,000)
Researcher (UTM)
16. 2013 : Determination of Electromagnetic Properties of Bitumen Emulsion
GUP Research Grant PAS 00K42 (RM 30,000)
Researcher (UTM)
17. 2013 : Behavior of Cold Stone Mastic Asphalt Using Small Nominal Maximum Aggregate Size
GUP Research Grant TIER 2 06J98 (RM 34,000)
Researcher (UTM)
18. 2012 - 2013 : Evaluation on the Performance of Bond Strength Between Surfacing Pavement Layers
GUP Research Grant TIER 2 06J52 (RM 30,000.00)
Researcher (UTM)
19. 2012 : Determining New Development Computerised Traffic Impact System
Vot No. 4D043 (RM 30,000)
Researcher (UTM)
20. 2011 - 2013 : Model for Energy Efficiency, Environment Quality and Material Use in Road Infrastructure
(Flagship Grant) 00G22 (RM 300,000)
Researcher (UTM)
21. 2011 - 2013 : Grooved Underside Concrete Blocks For Pavement,
GUP Grant TIER 1 00H93 (RM 130,000)
Researcher (UTM)
22. 2011 – 2012 : Engineering Properties Of Hot Mix Recycling Asphalt Mixtures
GUP Research Grant TIER 2 01J84 (RM 40,000)

Head Researcher (UTM)

23. 2009 : Use of Oil Palm Fruit Ash in Bitumen
IGRS Vote 78921 (RM 10,000),
Head Researcher (UTM)
24. 2009 : Use of Sasobit in Warm Mix Asphalt Mixtures
IGRS Vote 78918 (RM 10,000)
Head Researcher (UTM)
25. 2007 - 2009 : Development of A Simulation Model of Traffic Operations
at Signalised Junctions for the Improvements of Traffic
Signal Design Procedure and Elimination of Dilemma
Zone Problems
(E-Science) 06-01-06-SF 0299 (RM 186,000)
Researcher (UTM)
26. 2006 - 2008 : Development of Superpave Designed HMA under
Malaysia Environment.
(E-Science) 03-01-SF 0090 (RM 80,500)
Researcher (UiTM)
27. 2005-2006 : Evaluation on Fundamental Properties of Hot Mix Asphalt
Mixes As Related to Permeability
Vot RMC 75196 (RM 15,000)
Head Researcher (UTM)
28. 2005-2006 : Guidelines for Patching Works
Vot RMC 75188 (RM 15,000)
Researcher (UTM)
29. 2001 – 2004 : Evaluation on Relationships of In-Place Air Voids, Lift
Thickness, and Permeability of Hot Mix Asphalt
Pavement (USD 355,000)
National Cooperative Highway Research Program
(NCHRP) 9-27, USA
Researcher (NCAT)
30. 2000 - 2002 : Evaluation of Past Performance and Establishment of
New Construction Method for Interlocking Concrete Block
Pavement
Vot IRPA 72339 (RM235,650)
Researcher(UTM)
31. 2000 – 2001 : Drivers Car Following Headway on Single Carriageway
Road
Vot 71620 (RM 20,000)
Researcher (UTM)
32. 1998 – 2000 : Merging Process on Urban Dual Carriageway
Vot 71323 (RM14,000)
Researcher (UTM)

33. 1995 - 1996 : Effects of Segregation on Hot Mix Asphalt Properties (USD 37,500) K-Tran:KU-96-6, Kansas Department of Transportation, USA
Researcher (Univ. of Kansas)
34. 1994 : Relationships of Materials Properties Pavement Durability
Vot 61635 (RM 20,000)
Head Researcher (UTM)
35. 1992 - 1993 : Performance of Recycled Asphalt Pavement with Palm Oil as Rejuvenator
Vot RMC 61341(RM 7,000)
Head Researcher (UTM)

FUNDAMENTAL RESEARCH GRANT SCHEME (FRGS FUND)

- | Date | : Project Leader/ Project Member |
|--------------|---|
| 1. 2019-2021 | : Microstructural Behaviour for Reversible Moisture Damage in Flooded Asphalt Mixture (FRGS) Vot 5F019 (61,000)
Researcher (UTM) |
| 2. 2017 | : Menaiktaraf Fasiliti Asas bagi Meningkatkan Kehidupan dan Ekonomi Asnaf (FRGS) Vot 4X283 (RM 11,986)
Researcher (UTM) |
| 3. 2016-2019 | : Emperical Modelling of Noise Arising Due to Transverse Rumble Strips Installation, (FRGS) Vot 4F887 (RM 80,000)
Researcher (UTM) |
| 4. 2014-2016 | : Effects of Warm Asphalt Additive on Waste Engine Oil Based Recycled Mixture, (FRGS) Vot 4F436 (RM 80,000)
Researcher (UTM) |
| 5. 2014-2017 | : Investigation on Characteristics of Titanium Dioxide Nanoflowers as NewAdditive to Reduce Energy Consumption of Asphalt Mixture Production, (FRGS) Vot 4X023 (RM 130,800)
Researcher (UTHM) |
| 6. 2013-2015 | : Relationship of Tack Coat Application Factors in Assessing the Bonding Characteristics for Asphalt Paving Surfacing Layers, Fundamental (FRGS) Vot 4F201 (RM 72,300)
Researcher (UTM) |
| 7. 2010-2011 | : Structural Performance Evaluation of Modified Block Pavement: Underside Surface Modification |

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| | | Fundamental (FRGS) Vot 78556 (RM 48,800)
Researcher (UTM) |
| 8. | 2010-2011 | : Premature Failure of Asphalt Pavements in Tropical Climate Countries
Fundamental (FRGS) Vot 0712 (RM 46,200)
Researcher (UTHM) |
| 9. | 2007 – 2009 | : Impacts of Climate Change to Frictional Properties of Road Surface.
Fundamental (FRGS) Vot 78242 (RM 100,000)
Head Researcher (UTM) |
| 10. | 2006-2008 | : Engineering Properties of HMA with POFA.
Fundamental (FRGS) Vot 3F008 (RM 30,000)
Head Researcher (UTM) |
| 11. | 2006-2007 | : Investigation on the mechanical and bonding behaviour of asphaltic concrete as a new structural material.
(FRGS) Vot 78017 (RM 40,000)
Researcher (UTM) |

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1. Single Face Compaction on Asphalt Specimen **PI 2014701351**
2. A Surface Friction Tester **PI 20083089 MY-150024**
3. Student Report Card Considering ICGPA **IPCR20160791**
4. An Improved Binder Composition For Flexible Pavement **UI 2016701528**
5. Blending Process Cup Lump Rubber in Modified Asphalt **IP/CR/2019/0228**
6. Curriculum for Bachelor of Civil Engineering **IP/CR/2019/0163**
7. Curriculum for Master in Highway and Transportation **IP/CR/2019/0059**
8. Web based Application for Malaysian Green Highway Index **IP/CR/2018/0706**
9. Studded Concrete Block Paver **LY 2018003883**
10. Slide Pengajaran dan Pembelajaran Asphalt Modification **Copyright 2018 UTM**