

FRGS 2020

20 January 2020 (Monday)



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GRANTED FRGS 2007 - 2019

2007 - Porous Ceramic/Zelite in Engine Exhaust Treatment (RM 130K)

2010 - Microstructure Control of Electrophoretically Deposited Lanthanum Strontium Cobalt Ferrite (LSCF) Nano-Composite (RM 59K)

- Deposition of Stanum (IV) Oxide Catalyst on Alumina Foams For Emission Abatement System (RM 90K)

2013 - Properties Modification of Lanthanum Strontium Cobalt Ferrite (LSCF)-SDC Carbonate Nanocomposite Cathodes for Durability Enhancement (RM 62.5K)

2016 - Interactions Between Electrophoretically Deposited BSCF-SDCC Cathode on Ferritic Stainless Steel SOFC Interconnect (RM 126.5K)

OUTLINE

- What is FRGS
- Definition and Goal
- What is Fundamental Research
- FRGS Criteria
- Expected Outputs
- Writing FRGS Proposal

SYARAT UTAMA PERMOHONAN

Setiap PENYELIDIK hanya dibenarkan untuk mengemukakan hanya dua (2) permohonan kertas cadangan penyelidikan (sebagai Ketua Projek) sahaja.

Satu (1) permohonan **FRGS** atau **PRGS**; dan
Satu (1) permohonan **TRGS** atau **LRGS**



**KEMENTERIAN
PENDIDIKAN
MALAYSIA**

**JABATAN PENDIDIKAN TINGGI
KEMENTERIAN PENDIDIKAN MALAYSIA**

GARIS PANDUAN SKIM GERAN PENYELIDIKAN FUNDAMENTAL (FRGS) (PINDAAN TAHUN 2020)

https://rmc.uthm.edu.my/images/Documents/FRGS/1._GARIS_PANDUAN_FRGS_PINDAAN_TAHUN_2020.pdf

FRGS

(Fundamental
Research Grant
Scheme)

- Basic, fundamental research, - involves the exploration of new ideas, concepts or theories to generate new discoveries, expansion of knowledge and technologies to deal with unresolved problems.
- Answers the questions 'Why' or 'How'
- The research should focus on:
 - accumulation of theories
 - fundamental structures
 - fundamental processes
- Duration of grant: 2 - 3 years

The Goal:

The goal of the FRGS is to allow the researcher to gain or discover new knowledge and understanding of the physical world that may lead to:

- new theories or extending and refuting existing theories;
- new models or new frameworks
- policy recommendation
- improving technology at the fundamental level.

What is Fundamental Research?



"Excellent Fundamental Research produces new knowledge & ideas"

- that change the way people think
- that endure and
- that are widely used by others

Office of Basic Energy Science, DOE, USA

The research proposal must be tailored such that it deals with solving problem at the fundamental level

IMPORTANT

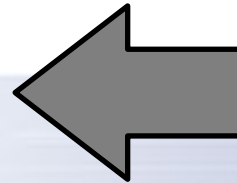
National Priority Areas (NPAs)

- Food Security
- Energy Security
- Plantation Crops
- Cyber Security (*IR 4.0 – big data, artificial intelligence which refers to National Policy on Industry 4.0*)
- Water Security
- Biodiversity
- Healthcare & Medicine
- Environment & Climate Change
- Transportation & Mobility



RESEARCH CLUSTER

- Food Safety & Security
- Basic Infrastructure
- Climate Change & Environment
- Health
- Education & Knowledgeable Civil Society
- National Security
- Social & Economic Wellbeing
- Frontier Technologies & Advanced Manufacturing

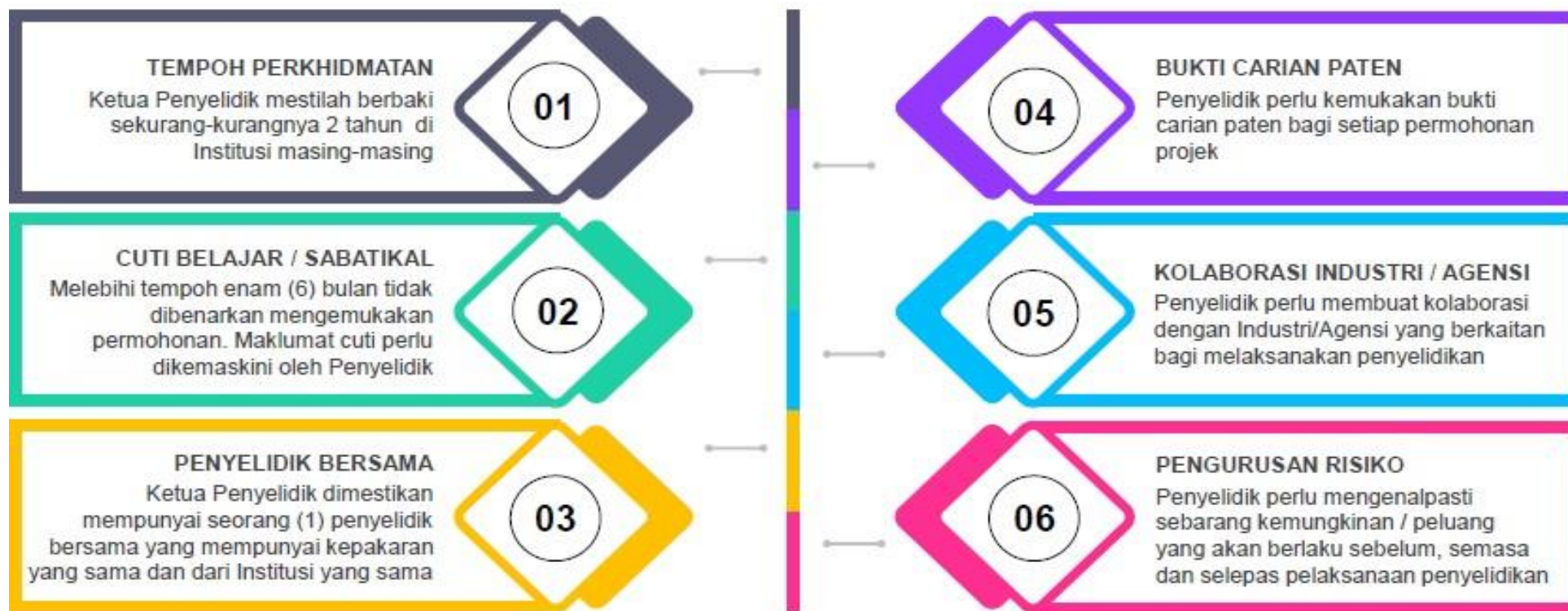


RESEARCH DOMAIN

- Pure & Applied Science
- Technology & Engineering
- Clinical & Health Sciences
- Social Science
- Arts & Applied Science
- Natural & Cultural Heritage
- Information and Communication Technology

SYARAT TAMBAHAN PERMOHONAN

Geran Penyelidikan Dana Penyelidikan KPM Tahun 2020

**Nota :**

Keperluan RMC @ UTHM adalah minimum **Lo!** shj. MoU/MoA adalah lebih baik.

RINGKASAN PENILAIAN & PEMARKAHAN TAHUN 2020

(Melibatkan kriteria Carian Paten; Kolaborasi; dan Pengurusan Risiko)

	FRGS	PRGS	TRGS	LRGS
CARIAN PATEN	Digalakkan	Diwajibkan	Diwajibkan	Diwajibkan
KOLABORASI	Digalakkan	Digalakkan	Diwajibkan	Diwajibkan
PENGURUSAN RISIKO	Digalakkan	Diwajibkan	Digalakkan	Diwajibkan



Program/projek penyelidikan yang mencapai *scientific merit* yang ditetapkan akan dipertimbangkan untuk perakuan seterusnya.

Nota :

Syor RMC @ UTHM – Semua permohonan geran perlu **melengkapkan** “CARIAN PATEN, KOLABORASI dan PENGURUSAN RISIKO” berikutan permohonan dana amat kompetitif.



PENGURUSAN KEWANGAN

Perbelanjaan hanya dibenarkan untuk vot-vot yang telah ditetapkan dalam Garis Panduan DP KPM sahaja

V11000	V21000	V24000	V27000	V28000	V29000	V35000
ELAUN GRA / RO / RA	PERJALANAN DAN PENGANGKUTAN	SEWAAN	BEKALAN DAN BAHAN PENYELIDIKAN	BAIK PULIH KECIL DAN UBAHSUAI	PERKHIDMATAN IKHTISAS	AKSESORI DAN PERALATAN
_____	_____	_____	_____	_____	_____	_____

Penggunaan vot-vot lain selain daripada yang telah dinyatakan dalam Garis Panduan DP KPM adalah tidak dibenarkan.

Ceiling per project is **RM250,000** or RM125,000 per year

TIPS : Bagi proposal baharu, perlu sertakan sebutharga dan justifikasi yang kukuh.
Lampirkan di setiap agihan vot.

FRGS CRITERIA

Fundamental
Fundamental
Fundamental

CRITERIA (1)

TITLE

- Specific in nature reflecting fundamental issues to be resolved/novelty
- Brief and reflects the content of the proposal
- Short/simple/concise and solid

E.g. Interactions Between Electrophoretically Deposited BSCF-SDCC Cathode on Ferritic Stainless Steel SOFC Interconnect

Should Avoid :

- Words like : Development of, application of, design of.....
- Some word with no meaning : Studies on... , investigation on.... , Research on.... ,
- Some words that don't contribute to understanding of title : theoretical investigation of..., New technique...., Novel theory...

CRITERIA (2)

EXECUTIVE SUMMARY

- Problem statement
- Objectives
- Methodology
- Expected output/outcome/implication
- Significance output
- 300 words

CRITERIA (3)

RESEARCH BACKGROUND

- Elaboration of title
- Clarity of problem statement and research question/hypothesis/theoretical framework (if applicable)
- Cited most recent (last 5 years) related references
- In line with **government policy** (*NPA, NKRA, NKEA, National Education Blueprint etc...*), **national agenda and global aspiration** (can help alleviate problem at local, national or world level)

CRITERIA (4)

OBJECTIVES

- Specific, Measurable, Achievable, Realistic and within Time-frame (SMART)
- Relate to problem statement/research question

Use word that reflect fundamental research;

- Mechanisms , Correlation, Elucidation of, Behavioral, Formulation, Relationships, Interaction etc.

CRITERIA (5)

METHODOLOGY

- Divide into a number of steps/tasks/phases
- Explain each step/tasks/phase clearly
- Explain the methods and tools/equipment to be used – (note: to be related to budgeting)
- Show clear flow chart and gantt chart
- Put milestones every half year.

CRITERIA (5)

METHODOLOGY (cont.)

- Clear and detailed description of methodology (may consist of field work, sampling techniques, interview session, analysis, lab work of different phases, experimental protocol, statistical analysis)
- Able to achieve research objectives
- Include research design, flow chart, Gantt chart, activities and milestones



CRITERIA (6)

EXPECTED OUTPUT

- New theory or new findings/knowledge
- TWO (2) Publication in indexed journals
- Human capital - 1 Phd or 2 Master (full-time research) – 3 years project
1 Master (full-time research) – 2 years project
- Intellectual property – *encourage to apply*
- Impact on society, economy and nation

CRITERIA (7)

TRACK RECORD AND COMPOSITION OF TEAM

- Evidence of previous successful research projects
- Qualification and rank of researchers
- Well balanced team

Tempoh perkhidmatan Ketua Penyelidik mestilah berbaki sekurang-kurangnya dua (2) tahun di Institusi masing-masing mulai daripada tarikh tutup permohonan.

Melebihi tempoh enam (6) bulan **TIDAK DIBENARKAN** mengemukakan permohonan.

Maklumat Profil Penyelidik perlu dikemaskini oleh Penyelidik dalam MyGRANTS, dan disahkan oleh RMC Institusi masing-masing.



CRITERIA (8)

QUALITY OF PROPOSAL

-
- Meticulous
 - Proper use of language (grammar, spelling, sentence construction)
 - Good formatting and presentation

Reasons for rejection:

- Unclear and unfocussed proposal.
- No original idea, the proposal is a routine application of a known technique or research.
- Does not lead to new findings / new theory / new idea generation
- Objectives are not clearly spelled out.... not fundamental!
- Lack of specific research problem.
- Outcome is not clear.
- The proposer is not qualified or capable - Principal Investigator has no relevant knowledge / expertise
- The proposal is not of national interest.
- The proposal is poorly presented.
- Unrealistic and overly ambitious within the given time frame.
- Poor English.
- Does not follow guide (please read carefully) , especially on budget.



*Thank
you*

