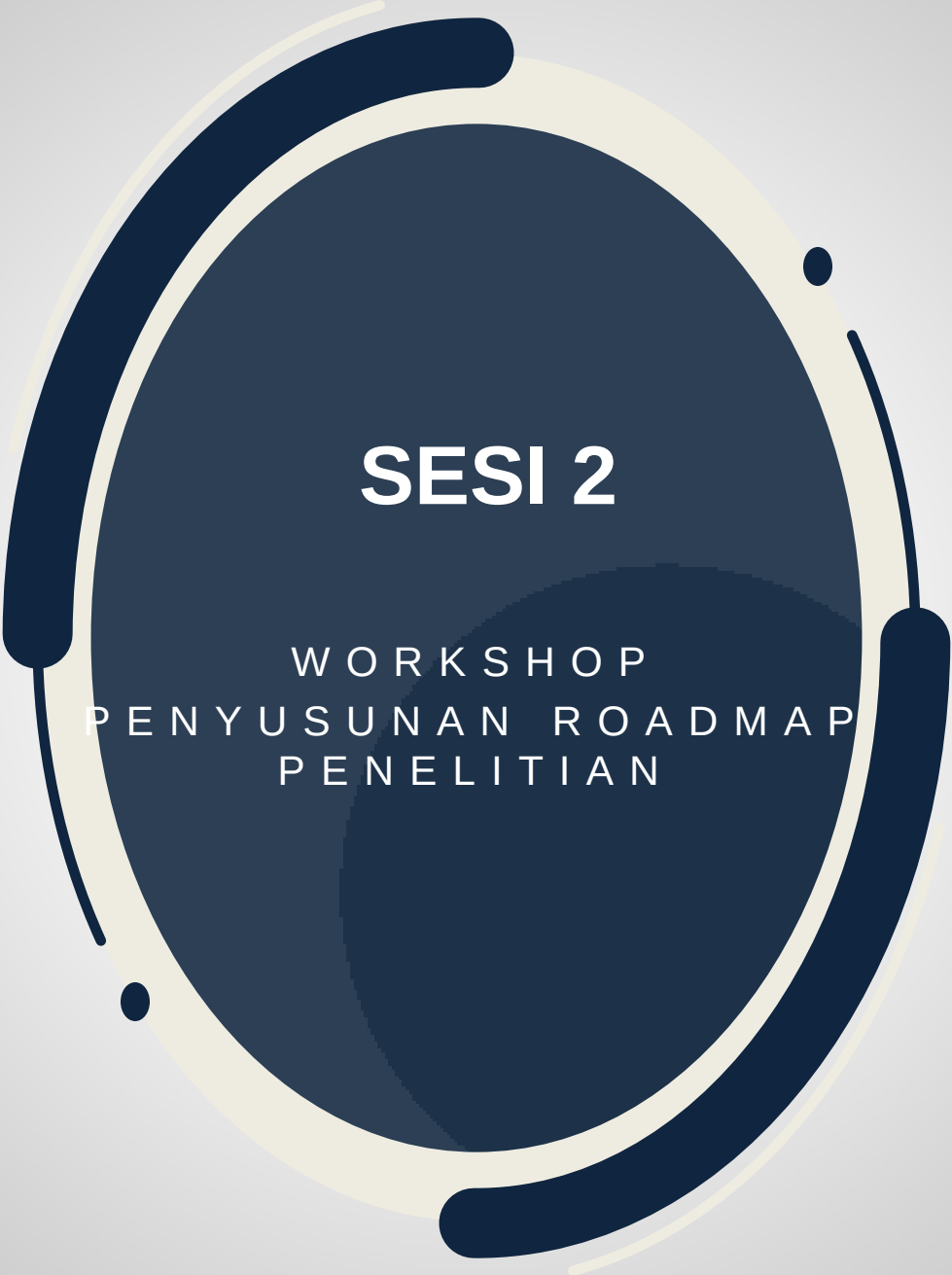




# SESI 2

WORKSHOP  
PENYUSUNAN ROADMAP  
PENELITIAN

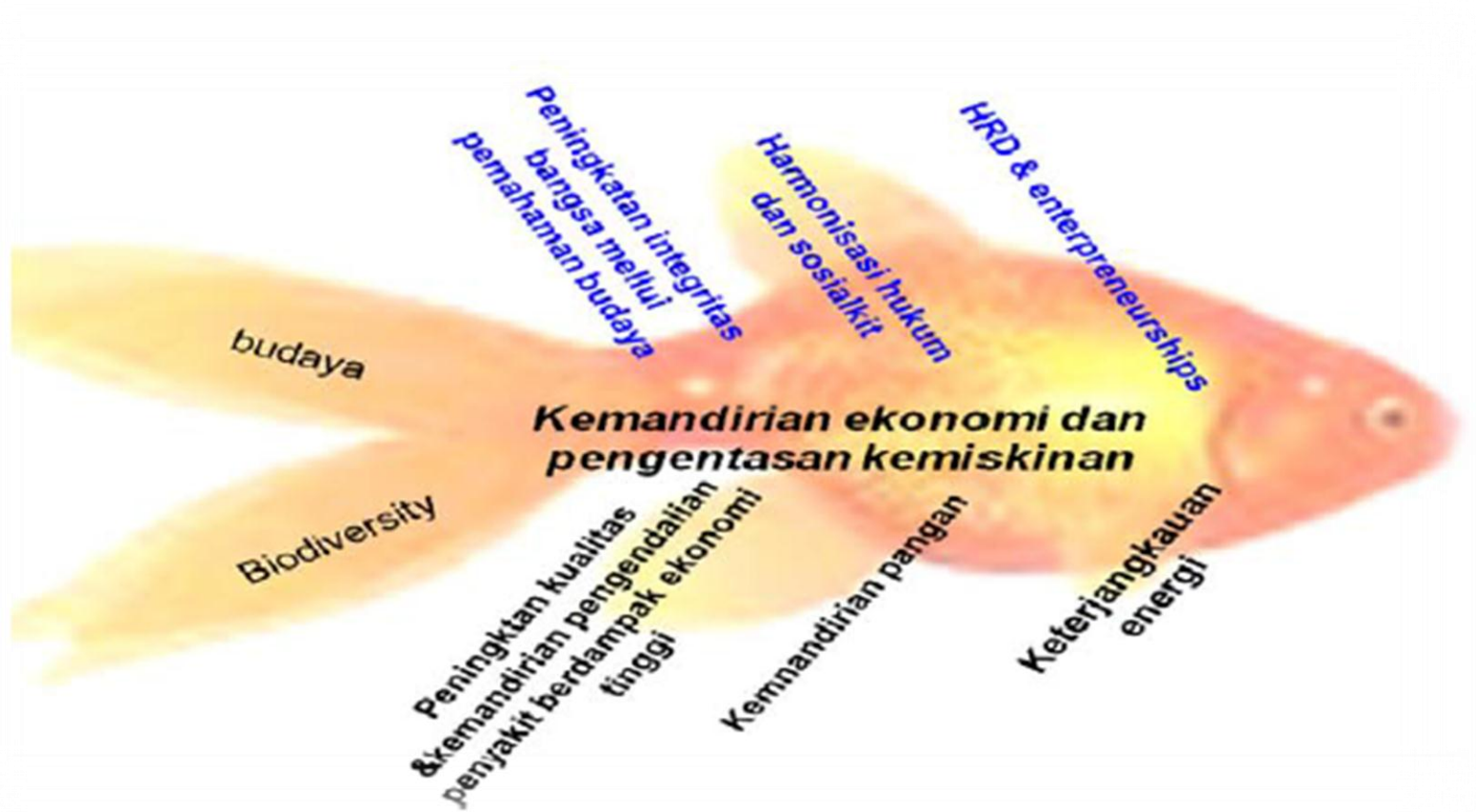
**MEMBANGUN KERJASAMA PENELITIAN  
DENGAN MELIBATKAN SIVITAS AKADEMIKA**

**HIBAH INTERNAL UNPAD  
ACADEMIC LEADERSHIP GRANT (ALG)  
PERIODE 2015-20**

# **JUDUL PENELITIAN**

**PENGEMBANGAN MODEL SPACE TIME DAN APLIKASINYA  
PADA INDUSTRI, ORGANISASI SERTA LINGKUNGAN  
UNTUK MENDUKUNG *COMMON GOALS*  
JAWA BARAT**

# PAYUNG PENELITIAN UNIVERSITAS PADJADJARAN



# **RISET UNGGULAN UNPAD 2012 – 2016 DAN 2016-2020**

## **(5 Pilar)**

### **1. Pangan:**

*Pangan Lokal untuk Pangan Nasional*

### **2. Lingkungan Hidup:**

*Perlindungan dan Pengelolaan Sumberdaya Alam dan Lingkungan Hidup*

### **3. Kesehatan :**

*Infeksi, Onkologi dan Obat Herbal*

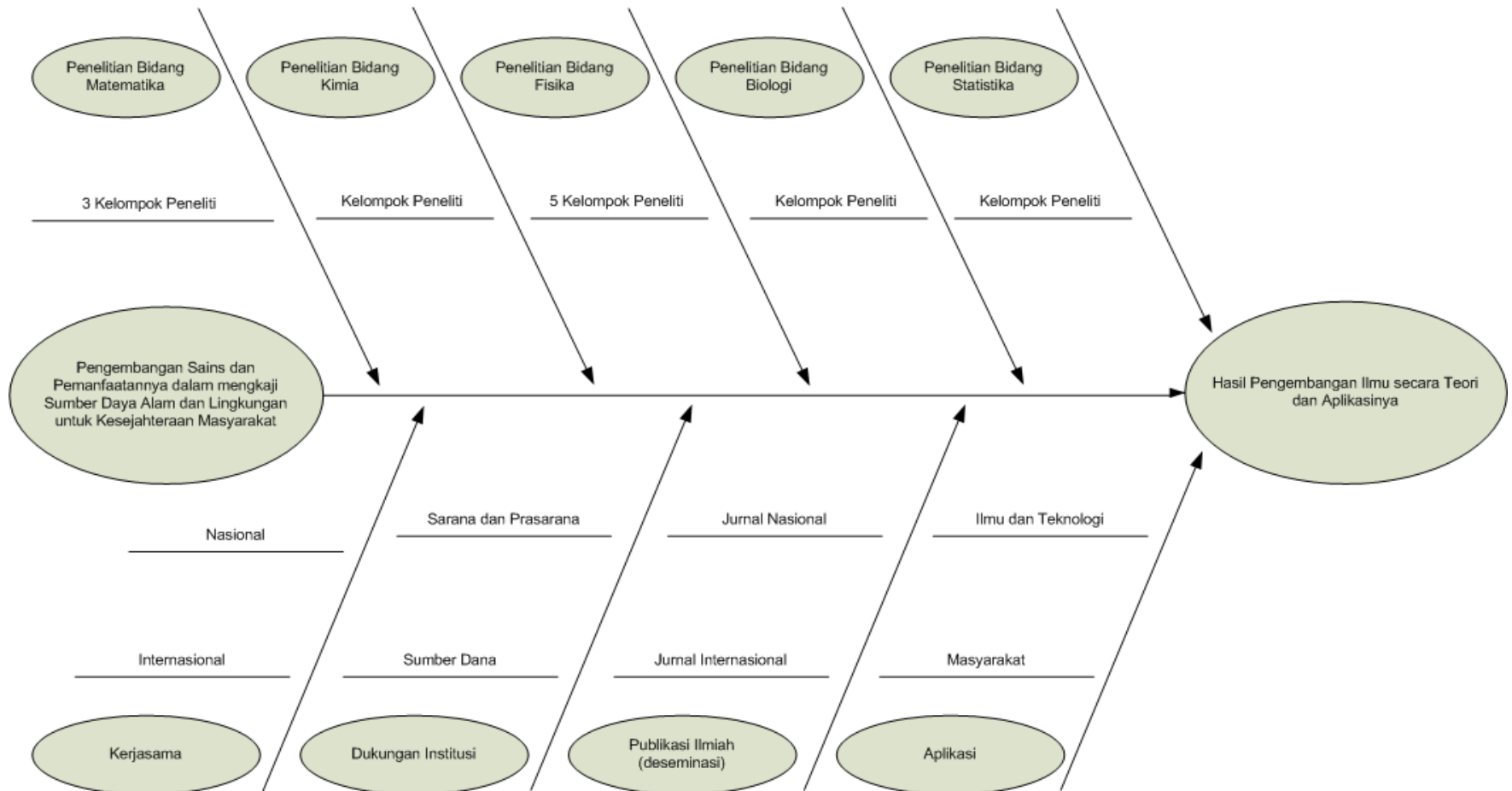
### **4. Energi:**

*Diversifikasi dan Konservasi Energi*

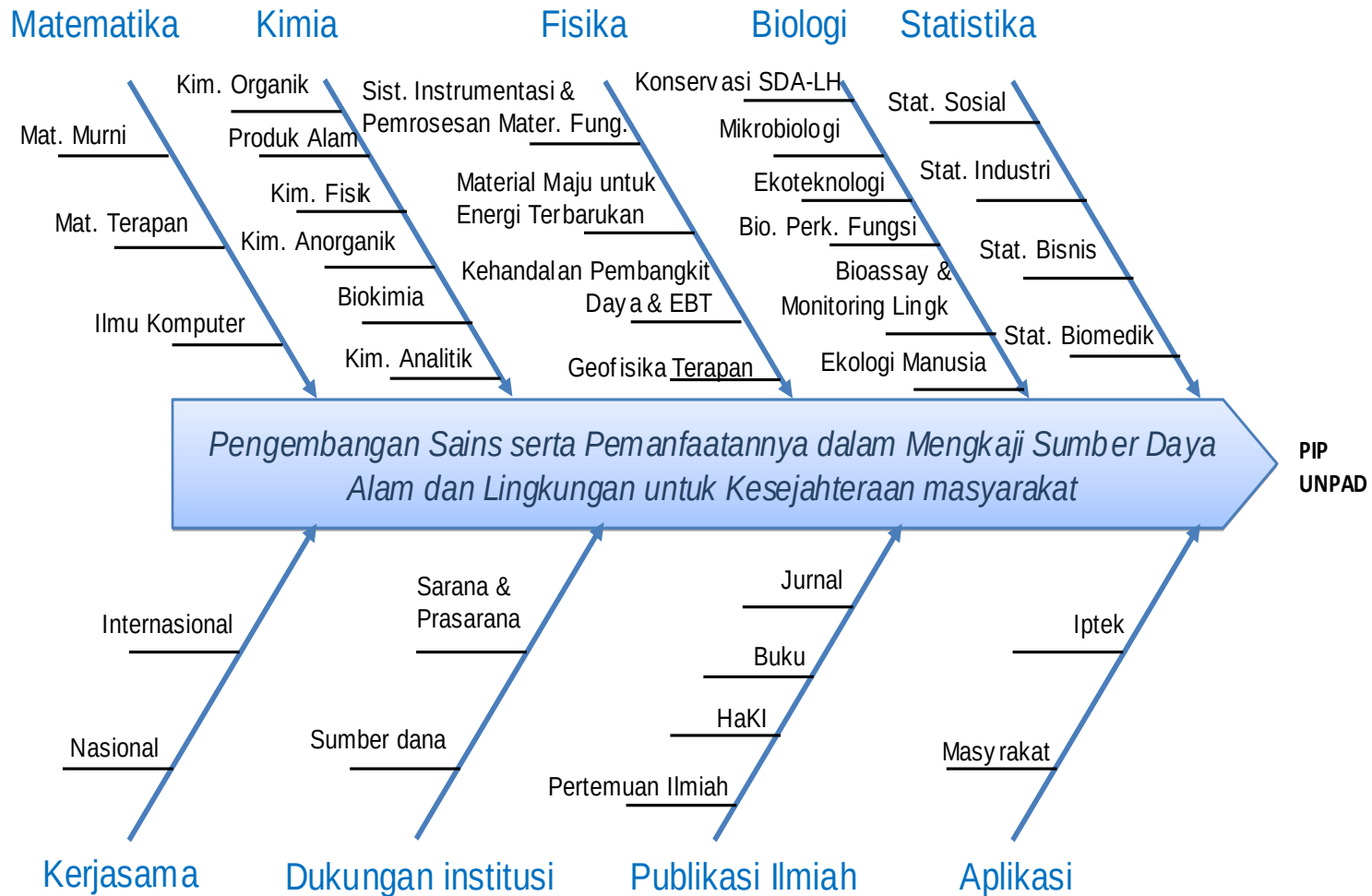
### **5. Kebijakan, Budaya dan Informasi:**

*Peningkatan Kualitas Hidup dan Harmonisasi Sosial*

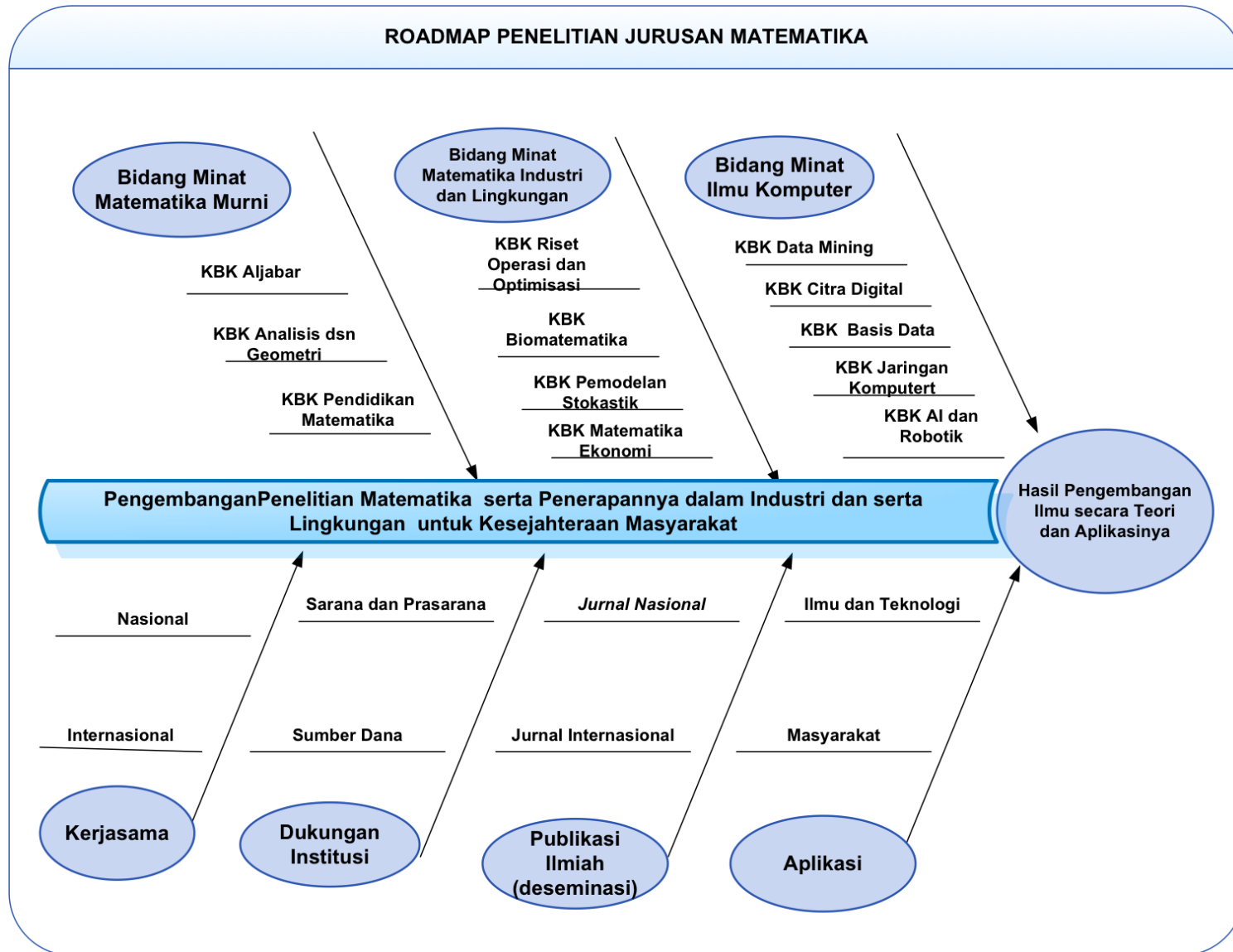
# KELOMPOK PENELITIAN FMIPA UNPAD



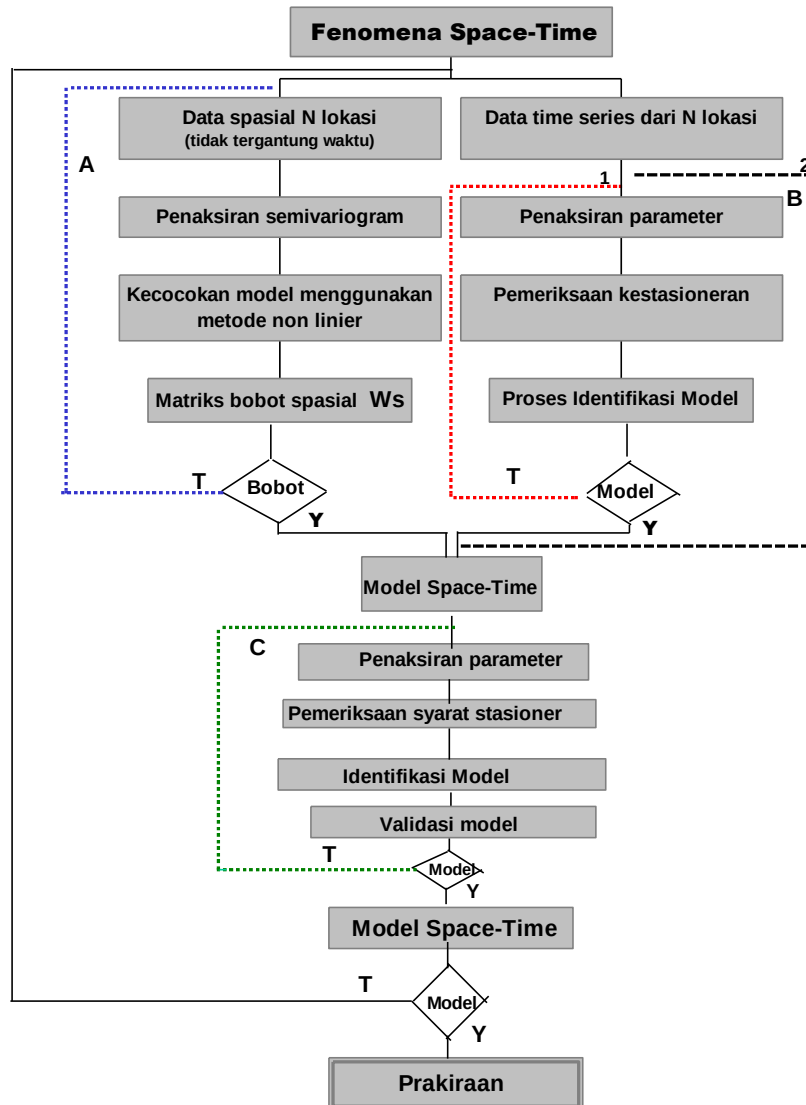
# Payung Penelitian Fakultas Matematika dan Ilmu Pengetahuan Alam Universitas Padjadjaran



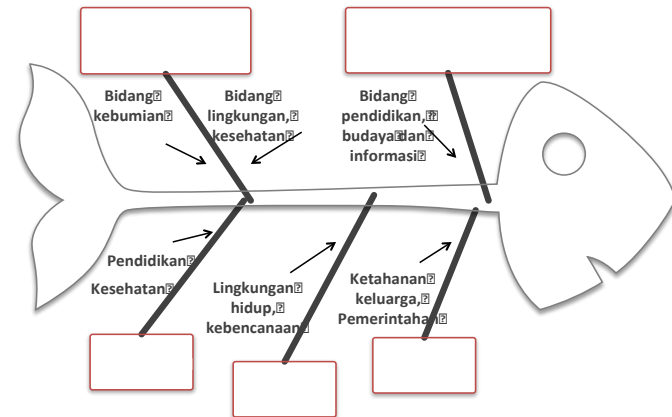
# ROADMAP PENELITIAN DEPARTEMEN MATEMATIKA FMIPA UNPAD



# ROADMAP PENDUKUNG PENGEMBANGAN MODEL SPACE TIME DAN APLIKASINYA



**ROADMAP ALG-1-677**  
**SESUAI DENGAN PILAR UNPAD DAN CG ABAR**

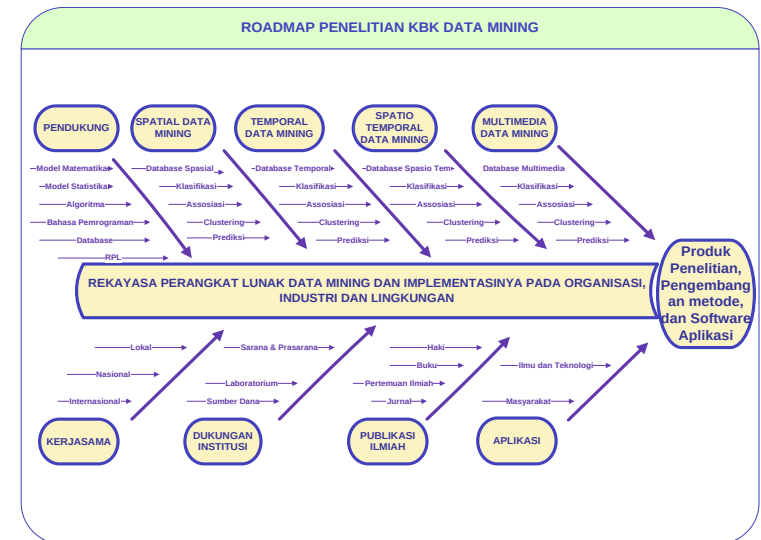
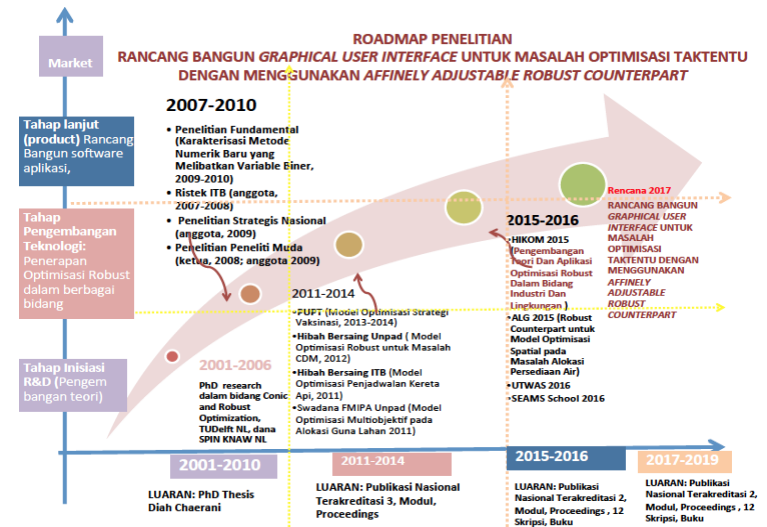
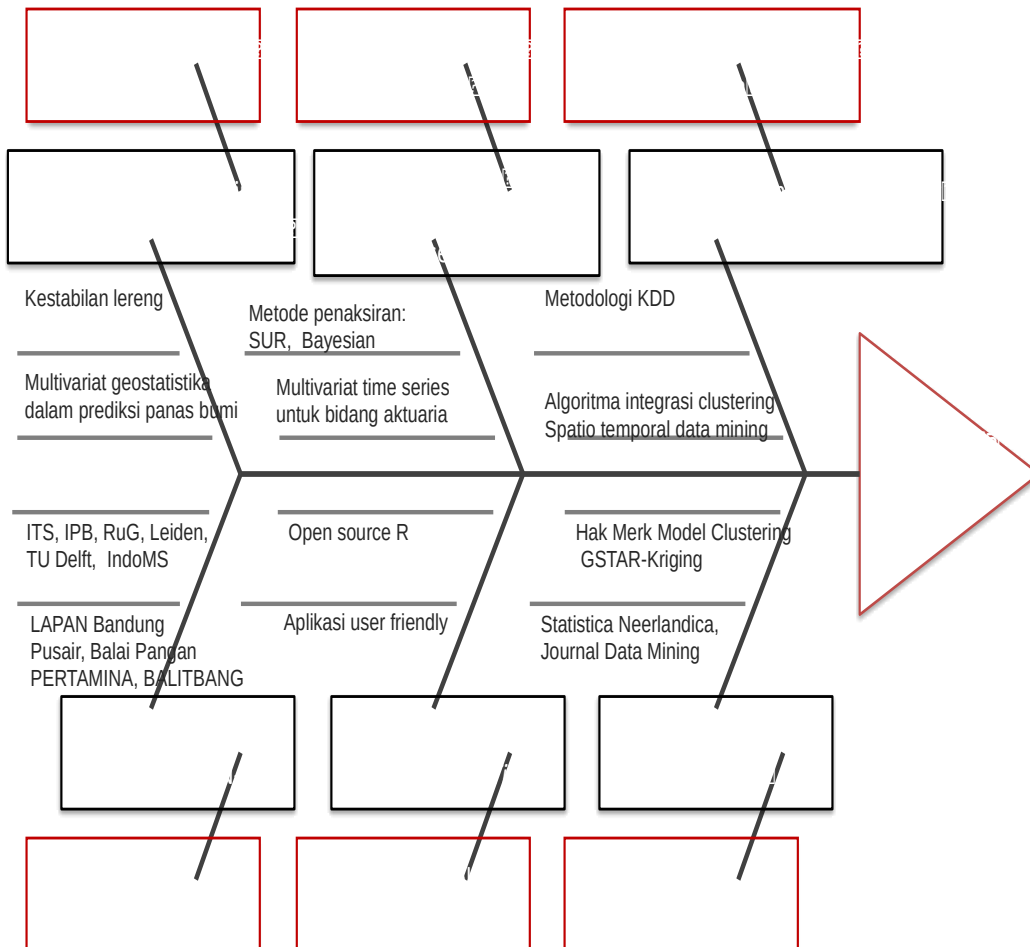


## TOPIK PENELITIAN ALG DIKAITKAN DENGAN MISI DAN COMMON GOALS JAWA BARAT

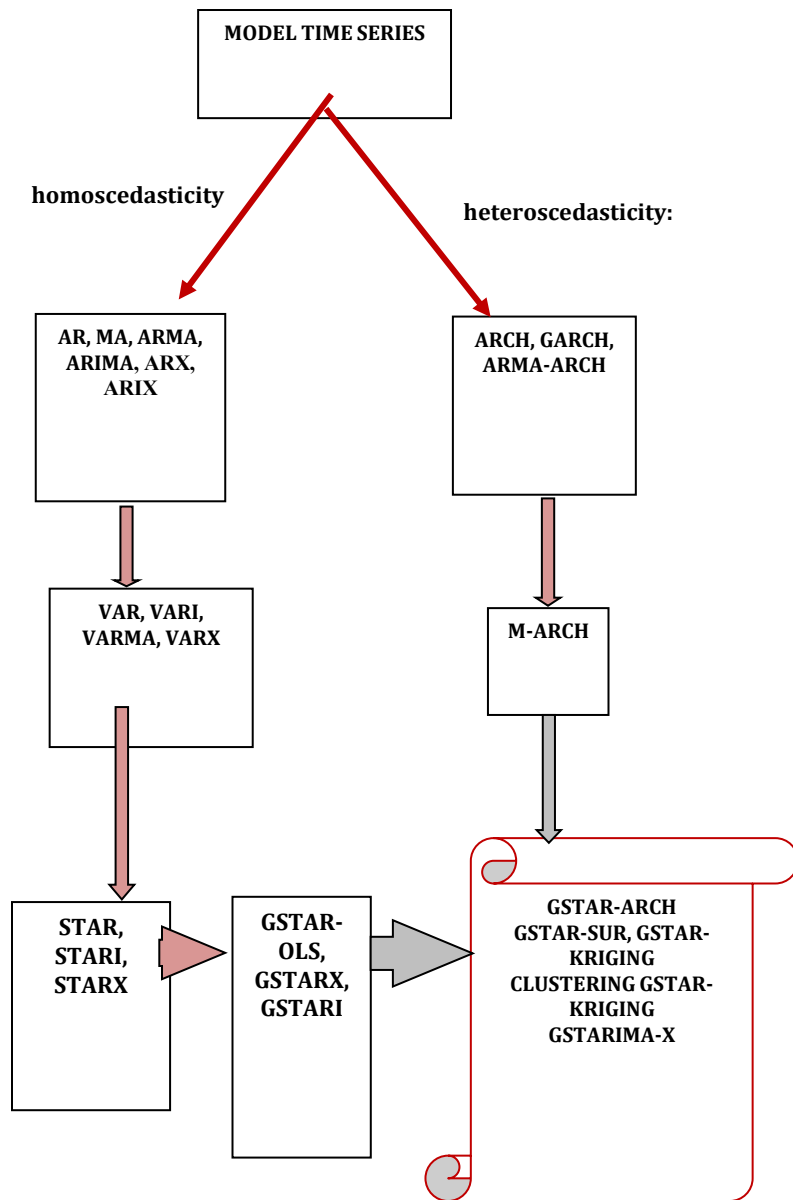
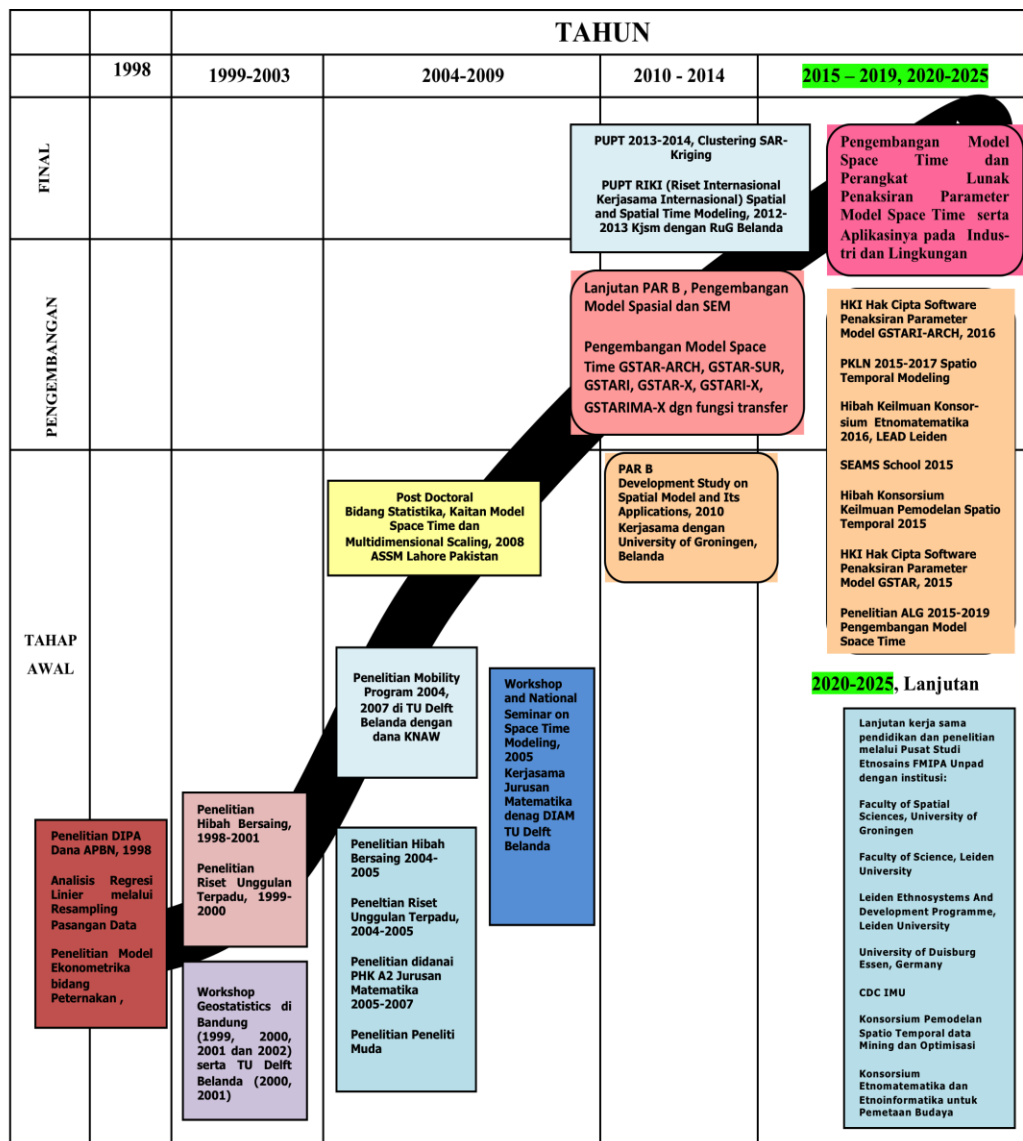
| No. | Misi                                                                    | Sasaran Misi                                                                                       | CG 1:<br>Pendidikan | CG 2:<br>Kesehatan | CG 3 :<br>Infrastruktur | CG 4 :<br>Ekonomi<br>Pertanian | CG 5 :<br>Ekonomi<br>Non<br>Pertanian | CG 6 :<br>Lingkungan<br>Hidup dan<br>Kebencanaan | CG 7 : Seni,<br>Budaya,<br>wisata dan<br>Kepemudaran | CG 8 :<br>Ketahanan<br>Keluarga dan<br>Kependudukan | CG 9 :<br>Kemiskinan,<br>PMRS, dan<br>Keamanan | CG 10 :<br>Pemerintahan |
|-----|-------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|---------------------|--------------------|-------------------------|--------------------------------|---------------------------------------|--------------------------------------------------|------------------------------------------------------|-----------------------------------------------------|------------------------------------------------|-------------------------|
| 1.  | Misi Pertanian, Membangun Masyarakat Yang Berkualitas dan Berdaya Saing | a. Meningkatkan aksesibilitas dan mutu pendidikan yang unggul, terjangkau dan merata               |                     |                    |                         |                                |                                       |                                                  |                                                      |                                                     |                                                |                         |
|     |                                                                         | b. Meningkatkan aksesibilitas dan kualitas layanan kesehatan masyarakat yang terjangkau dan merata |                     |                    |                         |                                |                                       |                                                  |                                                      |                                                     |                                                |                         |
|     |                                                                         | c. Meningkatkan daya saing sumberdaya manusia dan kelembagaan serta kebudayaan IPTEK               |                     |                    |                         |                                |                                       |                                                  |                                                      |                                                     |                                                |                         |
|     |                                                                         | d. Meningkatkan kualitas ketahanan keluarga                                                        |                     |                    |                         |                                |                                       |                                                  |                                                      |                                                     |                                                |                         |

# ROADMAP PENELITIAN ALG 2015-2019 (PEMODELAN STOKASTIK, OPTIMISASI, DATA MINING)

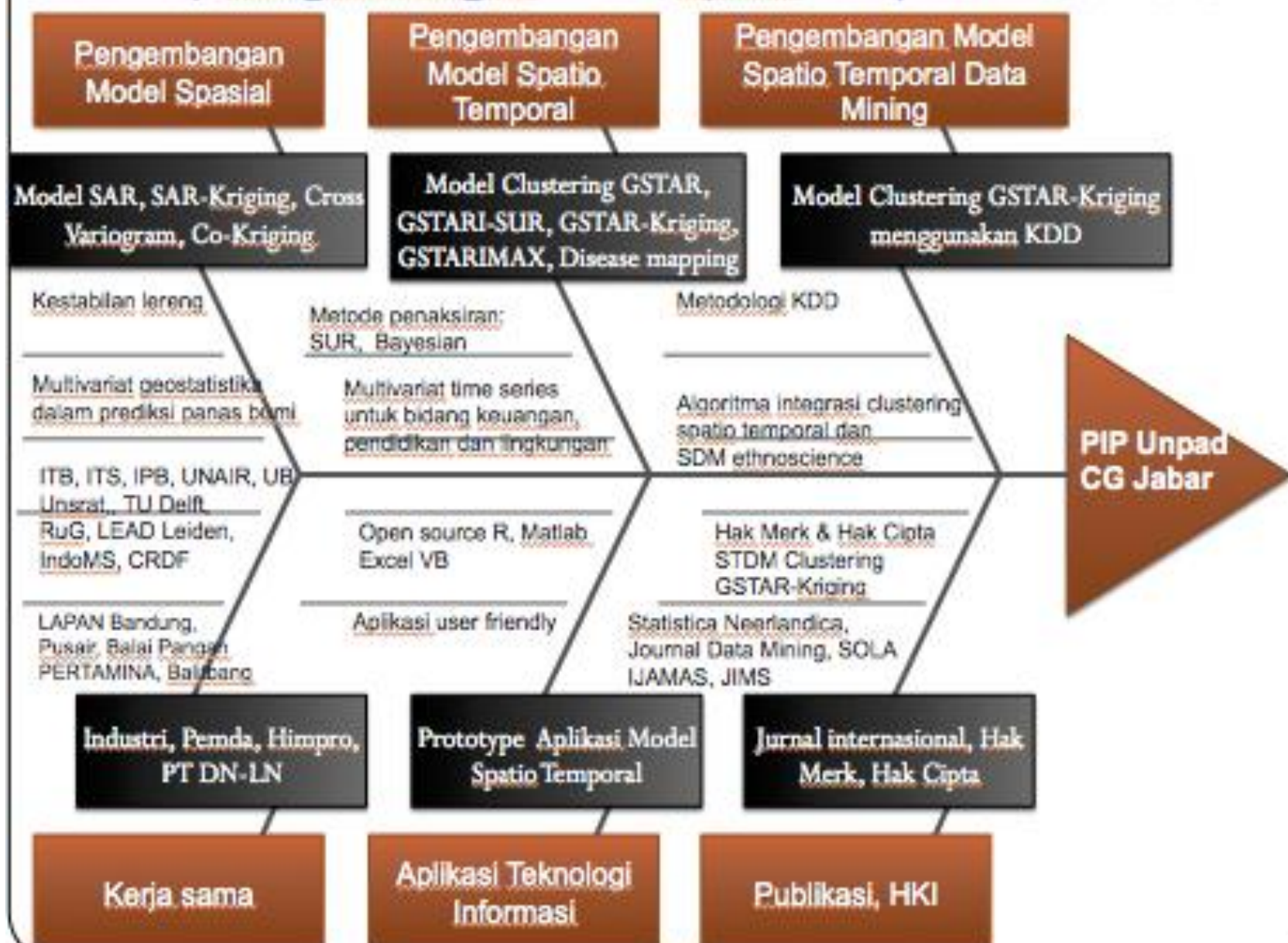
## Roadmap Pengembangan Model Space-Time 2015-2019



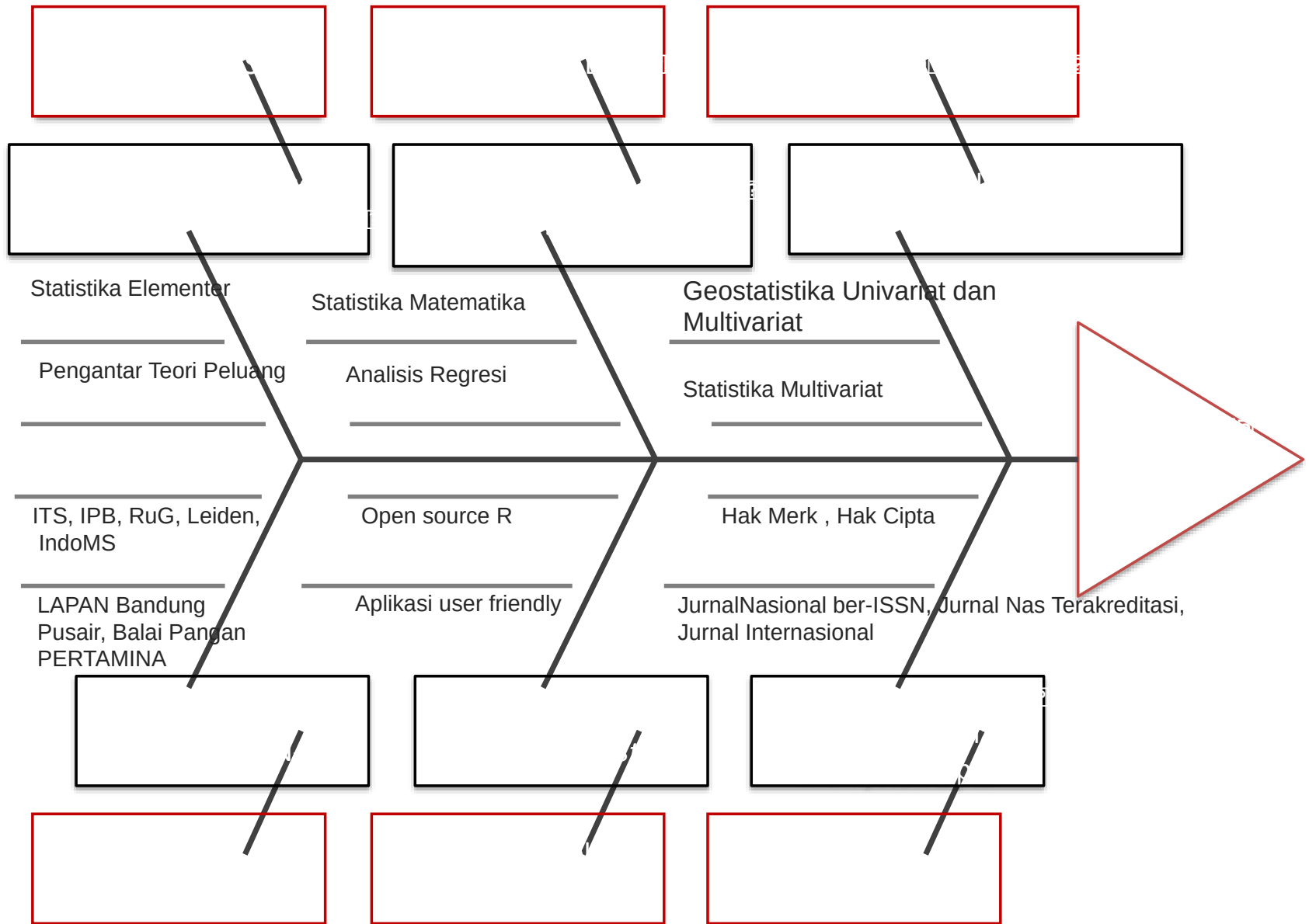
# ROADMAP PENELITIAN JANGKA PANJANG PEMODELAN SPACE TIME DAN APLIKASINYA



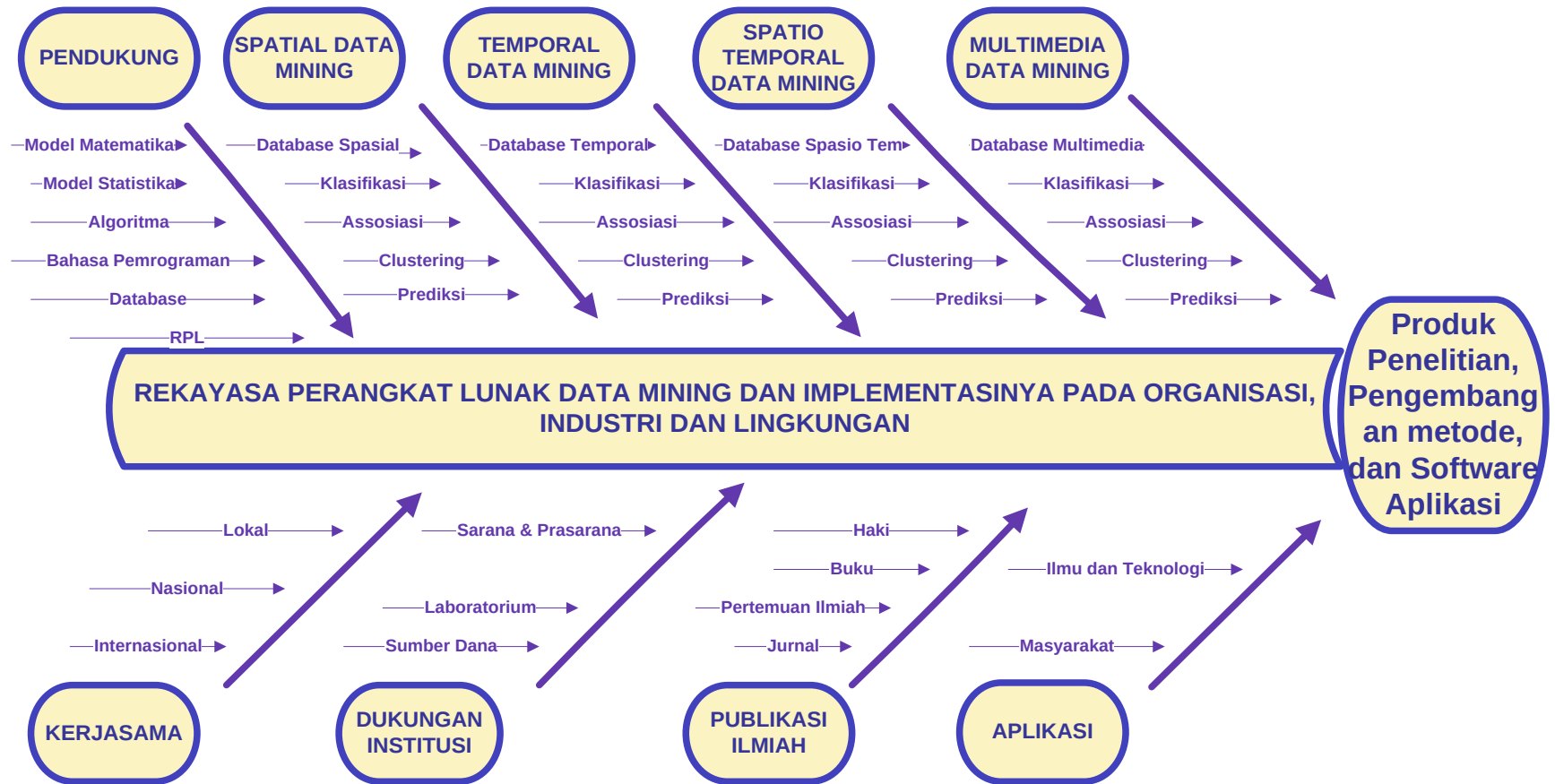
# Roadmap Pengembangan Model Spatio Temporal 2015-2019



# ROADMAP PENELITIAN PEMODELAN STOKASTIK 2015-2019



## ROADMAP PENELITIAN KBK DATA MINING

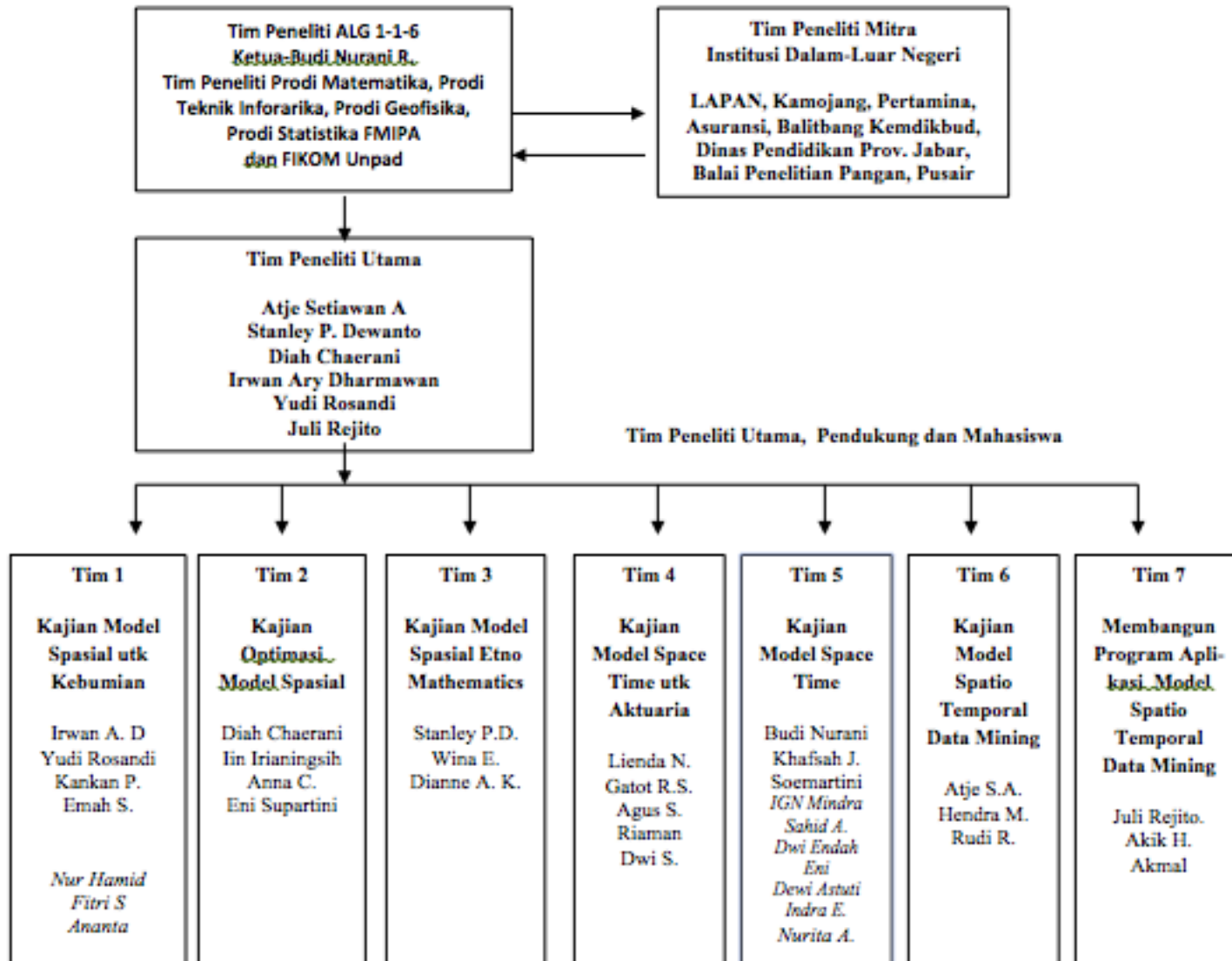


# Roadmap Pusdi Etnosains FMIPA Unpad 2016-2020

## Roadmap Riset Pusdi Etnosains FMIPA Unpad 2016-2020



# TIM PENELITIAN ALG



# TIM PENELITIAN UTAMA

## KOORDINATOR

- **Prof. Dr. Budi Nurani Ruchjana (0023126313)**

## ANGGOTA:

- 1. Dr. Atje Setiawan Abdullah, M.S., M.Kom (0017125402)**
- 2. Dr. Stanley P Dewanto, M.Pd (0011035201)**
- 3. Dr. Diah Chaerani, M.Si (0005067601)**
- 4. Dr. Irwan Ary Dharmawan (0031057202)**
- 5. Dr. rer.nat. Yudi Rosandi (0008087106)**
- 6. Dr. Juli Rejito (0017076801)**
- 7. I Gede Nyoman Mindra Jaya, S.Si., M.Si. (0003068001)**
- 8. Dra. Wina Erwina, MA (0006026701)**
- 9. Rudi Rosadi, S.Si., M.Kom. (0023077606)**

| No. | Nama                                       | Gol-Jab     | Tugas dalam Tim                                                      |
|-----|--------------------------------------------|-------------|----------------------------------------------------------------------|
| 1   | Prof. Dr. Budi Nurani Ruchjana             | IV/b<br>GB  | Koordinator Peneliti                                                 |
| 2   | Dr. Atje Setiawan Abdullah,<br>M.Kom.      | IV/a<br>LK  | Pembantu Peneliti<br>Bidang Spatio<br>Temporal Data<br>Mining (STDM) |
| 3   | Dr. Stanley P. Dewanto, M.Pd.              | IV/b<br>LK  | Pembantu Peneliti<br>Bidang<br>Ethnomathematics                      |
| 4   | Dr. Diah Chaerani                          | III/d<br>L  | Sekretariat<br>Peneliti/Perekayasa<br>Bidang Optimasi<br>Spasial     |
| 5   | Dr. Irwan Ary Dharmawan                    | III/c<br>L  | Pembantu<br>PenelitiBidang<br>Spasial Kebumian                       |
| 6   | Dr. rer.nat. Yudi Rosandi                  | III/d<br>L  | Pembantu Peneliti<br>Bidang Spasial<br>Kebumian                      |
| 7   | Dr. Juli Rejito, M.Kom.                    | III/b<br>AA | Pembantu Peneliti<br>Bidang Prototype<br>Aplikasi STDM               |
| 8   | Dra. Wina Erwina, MA                       | IV/a<br>LK  | Pembantu Peneliti<br>Bidang<br>Ethnomathematics                      |
| 9   | Rudi Rosadi, S.Si., M.Kom.                 | III/d<br>L  | Pembantu Peneliti<br>Bidang STDM                                     |
| 10  | I Gede Nyoman Mindra Jaya,<br>S.Si., M.Si. | III/d<br>L  | Pembantu Peneliti<br>Bidang Pemodelan<br>Space Time                  |

# TIM PENELITIAN LAPANGAN

| No. | Nama                             | Tugas dalam Tim                                    |
|-----|----------------------------------|----------------------------------------------------|
| 1   | Dra. Kankan Parmikanti, M.Stats. | Pembantu Lapangan Bidang Spasial Kebumian          |
| 2   | Dra. Emah Suryamah, M.Stats.     | Pembantu Lapangan Bidang Spasial Kebumian          |
| 3   | Dra. Iin Irianingsih, M.Stats.   | Pembantu Lapangan Bidang Optimasi Spasial          |
| 4   | Dra. Anna Chadidjah, MT          | Pembantu Lapangan Bidang Optimasi Spasial          |
| 5   | Dra. Eni Supartini, MT           | Pembantu Lapangan Bidang Optimasi Spasial          |
| 6   | Drs. Agus Supriatna, MS          | Pembantu Lapangan Bidang Space Time untuk Aktuaria |
| 7   | Dra. Dwi Susanti, MS             | Pembantu Lapangan Bidang Space Time untuk Aktuaria |
| 8   | Drs. Riaman, MS                  | Pembantu Lapangan Bidang Space Time untuk Aktuaria |
| 9   | Dra. Soemartini, MS              | Pembantu Lapangan Bidang Pemodelan Space Time      |
| 10  | Drs. Hendra Mulyana, MS          | Pembantu Lapangan Bidang STDM                      |
| 11  | Drs. Akik Hidayat, M.Kom.        | Pembantu Lapangan Bidang Prototype Aplikasi STDM   |
| 12  | Akmal, S.Si., MT                 | Pembantu Lapangan Bidang Prototype AplikasiSTDM    |
| 13  | Dianne Amor Kusuma, S.Pd., M.Pd. | Pembantu Peneliti Bidang Ethnomathematics          |
| 14  | Samson CMS, S.Sos., M.I.Kom.     | Pembantu Peneliti Bidang Ethnomathematics          |
| 15  | Deni Setiana, S.Si., M.CS        | Pembantu Peneliti Bidang Aplikasi STDM             |

# MAHASISWA (SURVEYOR, PENGUMPULAN DATA)

| No. | Nama                            | Catatan                                     | Tugas dalam Tim                                                 |
|-----|---------------------------------|---------------------------------------------|-----------------------------------------------------------------|
| 1   | Fahmi, S.Si., M.T               | Alumni Matematika FMIPA Unpad               | Tim Pengumpulan dan Pengolahan Data                             |
| 2   | Febrian Gilang Pamungkas, S.Si. | Alumni FPIK Unpad                           | Tim Pengumpulan dan Pengolahan Data                             |
| 3   | Nur Hamid, MT                   | Mahasiswa S3 FTG                            | Tim Pengumpulan dan Pengolahan Data Bidang Spasial Kebumian     |
| 4   | Sahid Akbar, M.Stats.           | Mahasiswa S3 Statistika ITS                 | Tim Pengumpulan dan Pengolahan Data Bidang Pemodelan Space time |
| 5   | Dwi Endah, M.Stats.             | Mahasiswa S3 Statistika ITS                 | Tim Pengumpulan dan Pengolahan Data Bidnag Pemodelan Space Time |
| 6   | Eni, M.Stats.                   | Mahasiswa S3 Statistika ITS                 | Tim Pengumpulan dan Pengolahan Data Bidnag Pemodelan Space Time |
| 7   | Nurita Handayani, M.Stats.      | Mahasiswa S3 Statistika IPB                 | Tim Pengumpulan dan Pengolahan DataBidang Pemodelan Space Time  |
| 8   | Indra Elfiyan, S.Si.            | Mahasiswa S2 Statistika Terapan FMIPA Unpad | Tim Pengumpulan dan Pengolahan Data Bidang Pemodelan Space Time |
| 9   | Dewi Astuti, S.Si.              | Mahasiswa S2 Statistika Terapan FMIPA Unpad | Tim Pengumpulan dan Pengolahan Data Bidang Pemodelan Space Time |
| 10  | Ananta                          | Mahasiswa S1 Matematika FMIPA Unpad         | Tim Pengumpulan dan Pengolahan Data Spasial kebumian            |
| 11  | Fitri Suhada                    | Mahasiswa S1 Matematika FMIPA Unpad         | Tim Pengumpulan dan Pengolahan Data Bidang Spasial kebumian     |
| 12  | Verly Fayi Hadi Putra           | Mahasiswa S1 FIKOM Unpad                    | Tim Pengumpulan dan Pengolahan Data Bidang Ethnomathematics     |
| 13  | Adriatne                        | Mahasiswa S1 Matematika FMIPA Unpad         | Tim Pengumpulan dan Pengolahan Data Bidang Optimasi Spasial     |
| 14  | Rizky                           | Mahasiswa S1 Matematika FMIPA Unpad         | Tim Pengumpulan dan Pengolahan Data Bidang Pemodelan Space Time |

|    |                |                                                      |                                                                   |
|----|----------------|------------------------------------------------------|-------------------------------------------------------------------|
| 15 | Dati           | Mahasiswa S1<br>Matematika<br>FMIPA Unpad            | Tim Pengumpulan dan<br>Pengolahan Data Bidang Spasial<br>Kebumian |
| 16 | Ziky           | Mahasiswa S1<br>Matematika<br>FMIPA Unpad            | Tim Pengumpulan dan<br>Pengolahan Data Bidang Spasial<br>Kebumian |
| 17 | Edo            | Mahasiswa S1<br>Matematika<br>FMIPA Unpad            | Tim Pengumpulan dan<br>Pengolahan Data Pemodelan<br>Space time    |
| 18 | Jordhi Saragih | Mahasiswa S1<br>Teknik<br>Informatika<br>FMIPA Unpad | Programmer                                                        |
| 19 | Miftah         | Mahasiswa<br>S1Teknik<br>Informatika<br>FMIPA Unpad  | Programmer                                                        |

TENDIK/SEKRETARIAT: AAS HASANAH

# PENGEMBANGAN MODEL *SPACE TIME*

2010 Mathematics Subject Classification : 62 Probability theory and Stochastic Processes  
62M10 (TIME SERIES), 63M30 (SPATIAL PROCESSES), 62H11 (SPATIAL STATISTICS)

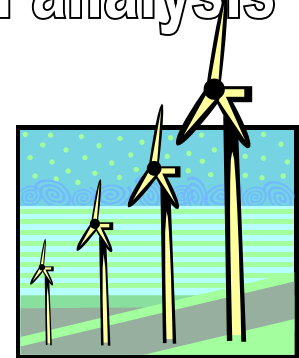
Data deret waktu

Time series analysis



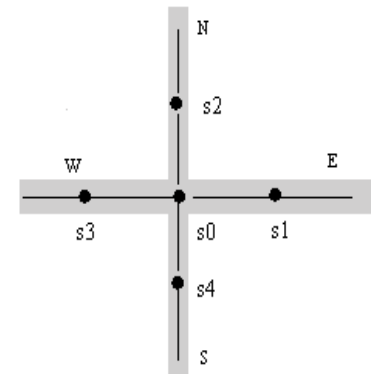
Data spasial

Spatial analysis



Data lokasi-waktu

Space-time analysis



$z(t-1)$   $z(t)$   $z(t+1)$

# TOPIK PENELITIAN ALG DIKAITKAN DENGAN PIP DAN PILAR PENELITIAN UNGGULAN UNPAD

- **PILAR LINGKUNGAN HIDUP**

- PENGEMBANGAN MODEL *SPACE TIME* UNTUK PREDIKSI VARIABEL IKLIM AGAR DAPAT MEMBANTU PARA PETANI PADI DI WILAYAH PANTURA JAWA BARAT DALAM MENENTUKAN MUSIM UNTUK MASA TANAM
- PENERAPAN MODEL SPASIAL UNTUK PENENTUAN KRITERIA KESTABILAN LERENG DALAM MENGATASI LONGSOR

- **PILAR KEBIJAKAN, BUDAYA DAN INFORMASI**

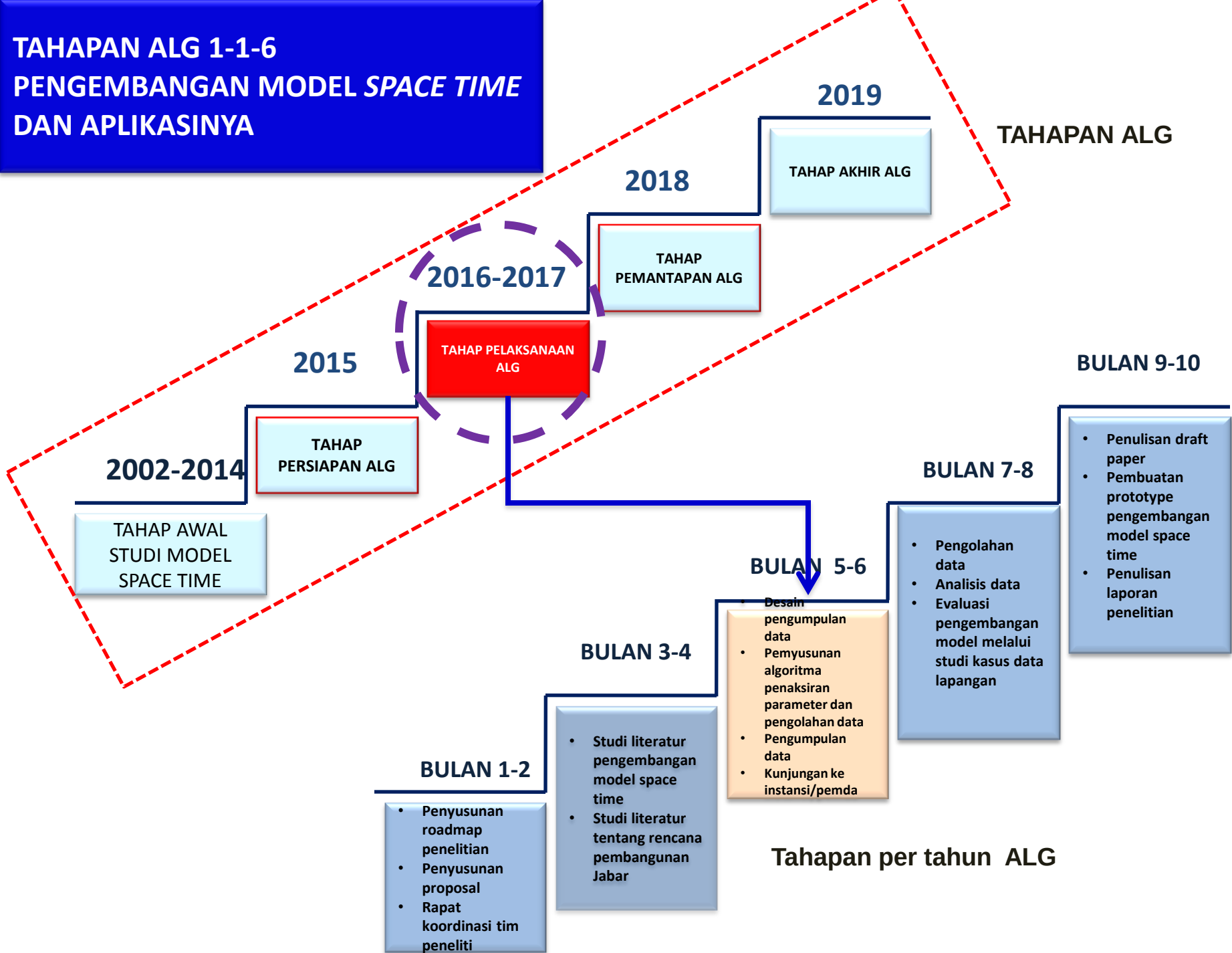
- PEMBUATAN PROTOTYPE PEMODELAN SPATIO TEMPORAL DATA MINING UNTUK PEMETAAN VARIABEL PENDIDIKAN DASAR/MENENGAH SERTA PEMETAAN PREDIKSI VARIABEL IKLIM UNTUK WILAYAH JAWA BARAT
- PENGEMBANGAN *ETNO MATHEMATICS* UNTUK MENDUKUNG PENINGKATAN KUALITAS BIDANG PENDIDIKAN

# TOPIK PENELITIAN ALG DIKAITKAN DENGAN MISI DAN COMMON GOALS JAWA BARAT

| No. | Misi                                                                                    | Sasaran Misi                                                                                       | CG 1:<br>Pendidikan | CG 2:<br>Kesehatan | CG 3 :<br>Infrastruktur | CG 4 :<br>Ekonomi<br>Pertanian | CG 5 :<br>Ekonomi<br>Non<br>Pertanian | CG 6 :<br>Lingkungan<br>Hidup dan<br>Kebencanaan | CG 7 : Seni,<br>Budaya,<br>wisata dan<br>Kepemudaan | CG 8 :<br>Ketahanan<br>Keluarga dan<br>Kependudukan | CG 9 :<br>Kemiskinan,<br>PMKS, dan<br>Keamanan | CG 10 :<br>Pemerintahan |
|-----|-----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|---------------------|--------------------|-------------------------|--------------------------------|---------------------------------------|--------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------|------------------------------------------------|-------------------------|
| 1.  | Misi Pertama,<br>Membangun<br>Masyarakat<br>Yang<br>Berkualitas<br>dan Berdaya<br>Saing | a. Meningkatkan aksesibilitas dan mutu pendidikan yang unggul, terjangkau dan merata               |                     |                    |                         |                                |                                       |                                                  |                                                     |                                                     |                                                |                         |
|     |                                                                                         | b. Meningkatkan aksesibilitas dan kualitas layanan kesehatan masyarakat yang terjangkau dan merata |                     |                    |                         |                                |                                       |                                                  |                                                     |                                                     |                                                |                         |
|     |                                                                                         | c. Meningkatkan daya saing sumberdaya manusia dan kelembagaan serta berbudaya IPTEK                |                     |                    |                         |                                |                                       |                                                  |                                                     |                                                     |                                                |                         |
|     |                                                                                         | d. Meningkatkan kualitas ketahanan keluarga                                                        |                     |                    |                         |                                |                                       |                                                  |                                                     |                                                     |                                                |                         |

Gambar 1.2 Kaitan Topik Penelitian dengan Misi dan CG Jawa Barat

# TAHAPAN ALG 1-1-6 PENGEMBANGAN MODEL *SPACE TIME* DAN APLIKASINYA



# TARGET ALG 1-1-6

## TAHUN 2016-2019

|                        |                  |                          |                           |
|------------------------|------------------|--------------------------|---------------------------|
| SDM ( doktor-magister) | LEKTOR           | PENINGKATAN<br>KUM       | KENAIKAN<br>JABATAN KE LK |
|                        | LEKTOR<br>KEPALA | PENINGKATAN<br>KUM       | <b>GURU<br/>BESAR</b>     |
|                        |                  | SEMINAR<br>INTERNASIONAL | JURNAL<br>INTERNASIONAL   |
| PUBLIKASI              |                  |                          |                           |

# DISEMINASI HASIL PENELITIAN

## (JATMIKO, W. , 2015)

### 1. PRESENTASI PADA FORUM ILMIAH

- Melalui presentasi ini penulis mendapat kesempatan untuk bisa menerima feedback dari para peserta konferensi. Setelah dipresentasikan, tulisan ilmiah akan dimuat dalam proceeding yang diterbitkan oleh instansi penyelenggara seminar tersebut.

### 2. PENERBITAN BUKU

- Penerbitan buku ber-ISBN atau International Standard Book Number sangatlah penting karena ISBN merupakan nomor kode buku unik yang hanya dimiliki oleh satu buku itu saja dan berlaku di tingkat internasional

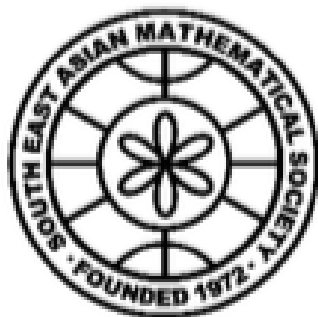
### 3. ARTIKEL ILMIAH

Artikel merupakan versi laporan yang dipadatkan. Seperti yang dikutip Prof. Sulistyowati Irianto, artikel tidak seperti laporan (Irianto, 2015). Artikel diharapkan berisi sintesa, penilaian, interpretasi, dan evaluasi akan temuan dari penelitian.

Artikel dibedakan menjadi artikel lepas yaitu artikel yang diterbitkan di majalah-majalah pada umumnya, dan artikel atau artikel ilmiah yang merupakan artikel untuk diterbitkan di jurnal-jurnal maupun forum- forum ilmiah

### 4. JURNAL ILMIAH

Jurnal merupakan kumpulan artikel ilmiah yang dimiliki oleh suatu instansi atau perorangan yang diterbitkan secara berkala. Artikel- artikel yang akan dimuat di jurnal dikirim oleh penulisnya dalam bentuk manuskrip. Oleh editor, manuskrip ini diperiksa oleh editor apakah sesuai dengan topik jurnalnya ataukah tidak.



THE ASIAN MATHEMATICAL CONFERENCE

# AMC 2016

MON 25 - FRI 29 JULY 2016

Bali Nusa Dua Convention Center

Bali - Indonesia

SOUTHEAST ASIAN MATHEMATICAL SOCIETY

INDONESIAN MATHEMATICAL SOCIETY



## AMC 2016 BALI



# AMC 2016 BALI

The Asian Mathematical Conference

July 25-29, 2016  
Bali, Indonesia


[HOME](#)
[GENERAL INFORMATION](#)
[PLENARY SPEAKERS](#)
[PROGRAM](#)
[SESSIONS](#)
[SESSION INVITED SPEAKERS](#)
[SPECIAL / SOCIAL PROGRAM](#)
[SUBMISSION OF ABSTRACT](#)
[REGISTRATION](#)
[FINANCIAL SUPPORT](#)

Home > Asian Mathematical Conference 2016 > **AMC 2016**

## AMC 2016



The Asian Mathematical Conference (AMC) series is a major SEAMS conference, held every 4-5 years since 1990, and hosted by countries in Asia. The first AMC was held in Hong Kong (1990), the second was in Thailand (1995), the third in the Philippines (2000), the fourth in Singapore (2005), the fifth was Malaysia (2009), and sixth AMC was in Busan, Korea (2013). The objective of the conference is to provide a forum for mathematics researchers from Asia and as well as other continents to foster links and collaboration among themselves and with



The leaflet of AMC 2016 is available to download here



# AMC 2016-INDOMS





# INTERNATIONAL MATHEMATICS UNION (IMU) SINCE 2006

## Mathematics in Southeast Asia:

### Country Reports

Commission for Developing Countries,  
International Mathematical Union

#### Mathematics in Southeast Asia: Challenges and Opportunities Country Reports

##### Contents

Country report 1: Brunei by Prof Wong Khoon Yoong

Country report 2: Cambodia by Prof Chan Roath

Country report 3: Cambodia and Laos by Prof Michel Jambu

Country report 4: Indonesia (1) by Prof Kiki Ariyanti Sugeng

Country report 5: Indonesia (2) by Prof Budi Nurani Ruchjana and Prof Widodo

Country report 6: Malaysia by Prof Arsmah Ibrahim, Prof Mohd Salmi Md Noorani, Prof Nor Haniza Sarmin, and Mr Mohd Suhaimi Ramly

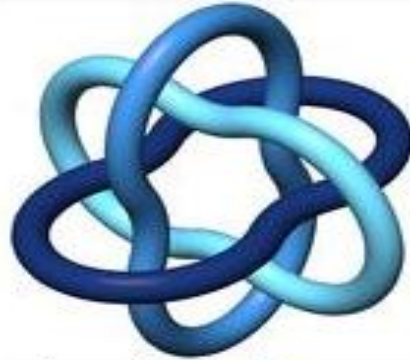
*Country report 7: Mathematics Education in Myanmar by Dr Khaing Khaing Aye (Due to copyright issues this report is not included in this document.)*

Country report 8: The Philippines (1) by Prof Bienvenido F. Nebres

Country report 9: The Philippines (2) by Prof Jose Maria Balmaceda

Country report 10: Mathematics in Singapore by Prof Ling San

# INTERNATIONAL MATHEMATICAL UNION (IMU)



IMU logo based on the [Borromean rings](#)

|                                |                                                                                                                                       |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| <b>Legal status</b>            | unincorporated association,<br>recognized as a charitable<br>organization by the internal<br>revenue service of Berlin,<br>Germany    |
| <b>Purpose</b>                 | Promoting International<br>Cooperation in Mathematics                                                                                 |
| <b>Location</b>                | IMU Secretariat,<br>Markgrafenstr.32, D-10117<br><a href="#">Berlin, Germany</a>                                                      |
| <b>President</b>               | <a href="#">Shigefumi Mori</a>                                                                                                        |
| <b>Parent<br/>organization</b> | <a href="#">International Council for<br/>Science</a>                                                                                 |
| <b>Website</b>                 | <a href="http://mathunion.org">mathunion.org</a>  |

## Commission for Developing Countries (CDC) 2015 – 2018

- Wandera Ogana (Kenya) - CDC President
- C. Herbert Clemens (USA) - CDC Secretary for Policy
- Srinivasan Kesavan (India) - CDC Secretary for Grant Selection
- Alf Onshuus (Colombia) - Latin American Member
- Mama Foupouagnigni (Cameroon)- African Member
- Polly Sy (Philippines) - Asian Member
- Budi Nurani Ruchjana (Indonesia) - CDC member appointed by the IMU Executive Committee
- Angel Pineda (USA/Honduras)-CDC member appointed by the IMU Executive Committee
- Angel Ruiz (Costa Rica)- CDC member appointed by the ICMI Executive Committee
- Shigefumi Mori (Japan), IMU President (2015-2018) and Ex-officio CDC Member



# HIBAH CRDF GLOBAL-USA

[www.crdfglobal.org/about-us/leadership-and-staff](http://www.crdfglobal.org/about-us/leadership-and-staff)



[Support CRDF Global](#) | [Press Room](#) | [Careers](#) | [Contact Us](#)



search the site



☒ Search all CRDF Global sites

☐ Search ONLY this site

[About Us](#)

[Program Areas](#)

[Where We Work](#)

[Grants and Grantees](#)

[CRDF Solutions](#)

[Connect With Us](#)

[News & Events](#)

[Annual Report](#)

[Leadership & Staff](#)

[Board of Directors](#)

[Advisory Council](#)

[U.S. Staff](#)

[International Staff](#)

[Careers](#)

[Office Locations](#)

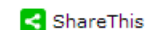
[Funding](#)

[Photo Gallery](#)

[Annual Awards Gala](#)

[HOME](#) | [ABOUT US](#) | [LEADERSHIP & STAFF](#)

## Leadership & Staff



CRDF Global's international staff of 150 are proficient in 30 languages and dialects, have hands-on experience in more than 60 countries and are led and advised by an accomplished cadre of professionals on its Board of Directors and Advisory Council.

### Board of Directors

CRDF Global is led by a Board of Directors, which oversees management of the organization.

[» Board of Directors Bios](#)

### Advisory Council

The Advisory Council serves in a consultative capacity to the Board of Directors and executive staff.

### CRDF GLOBAL LEADERSHIP



**Cathy Campbell**  
President & CEO

[» View Biography](#)



**Dona Crawford**  
Co-chair, Board of Directors

[» View Biography](#)



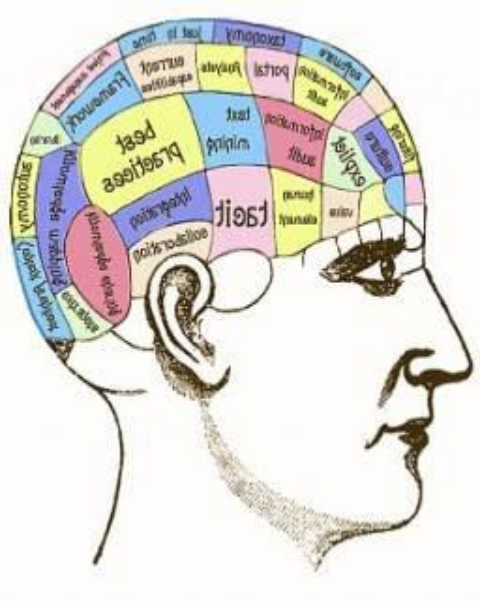
**William Wulf**

# Konsorsium Keilmuan Ethnomatematika dan Ethnoinformatika untuk Pemetaan Budaya Indonesia



Universiteit Leiden





# Meeting on the new 'Center for Ethnoscience' at FMIPA/UNPAD

Bandung, 25 September 2017

## ***ETHNOSCIENCE, ETHNOMATHEMATICS & DEVELOPMENT***

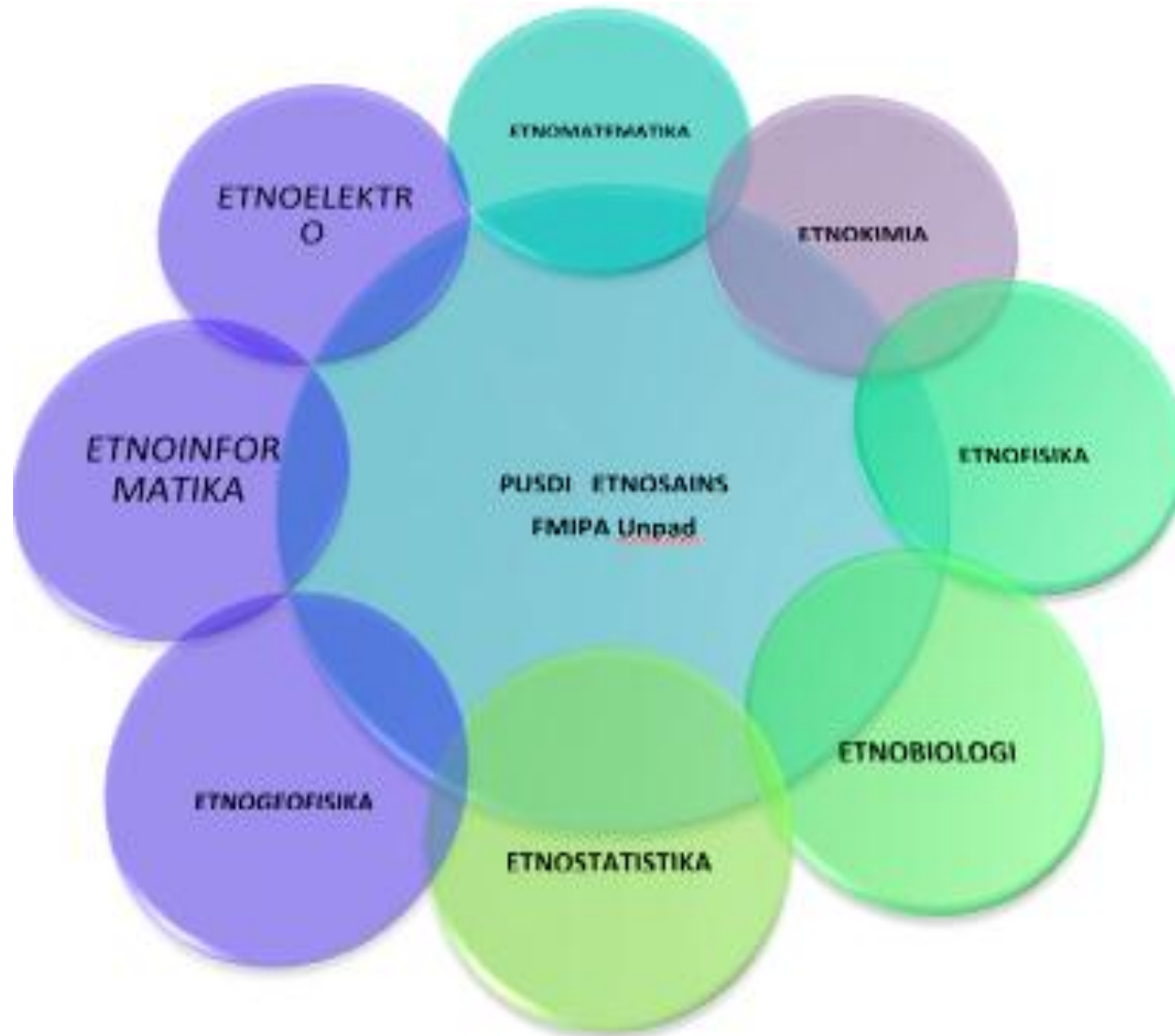
Prof.Dr. L. Jan Slikkerveer

D-Leiden University  
Netherlands

Universiteit Leiden



# Topik Riset Pusdi Ethnosains FMIPA Unpad



# MoU dan MoA Unpad dengan LEAD

**AGREEMENT OF COOPERATION  
BETWEEN  
LEIDEN UNIVERSITY, THE NETHERLANDS  
AND  
UNIVERSITAS PADJADJARAN, BANDUNG, INDONESIA**

**Preamble**

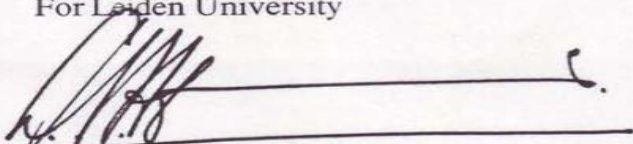
Both parties agree that they have a specific interest in entering into the present agreement to contribute to their common objective by means of exchange of graduate students and academic staff jointly administered by them;

**Article 16**

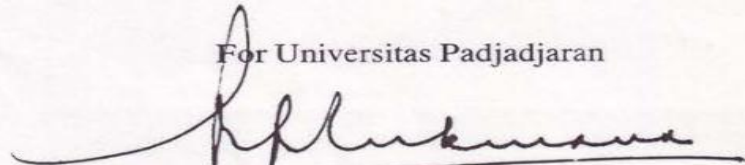
The agreement will become effective on September, 1st, 1996

Done at Bandung, May 1st, 1996

For Leiden University

  
Drs. L.E.H. Vredevoogd  
President

For Universitas Padjadjaran

  
Prof. Dr. H. Maman P. Rukmana  
Rector

# MEMORANDUM OF UNDERSTANDING



*between*  
**UNIVERSITEIT LEIDEN**  
*and*  
**UNIVERSITAS PADJADJARAN**  
*concerning*



## International Interdisciplinary MA Course on Community Health (MCH)

This is to certify that Universiteit Leiden (UL), Leiden, the Netherlands, and Universitas Padjadjaran (Unpad), Bandung, Indonesia – considering their long-term cooperation in Training and Research since 1987 – have expressed their mutual wish to extend their collaborative efforts as to establish an International Interdisciplinary MA Course in Community Health (MCH) (12 months) at Post-Graduate level in the English language, as elaborated on in the attached Programme *'FROM COOPERATION TO TWINNING: Towards a Joint*

As agreed upon, Bandung, 20 November 2000,

for Universiteit Leiden (UL)

for Drs. L.E.H. Vredevoogd, President  
Prof. Dr. L.J. Slikerveer, Coordinator



for Universitas Padjadjaran (Unpad),

Prof. H.A. Himendra Wargahadibrata, Rector





AGREEMENT OF INTENT  
ON ACADEMIC, RESEARCH AND SERVICE  
COLLABORATION  
BETWEEN  
FACULTY OF MATHEMATICS AND NATURAL SCIENCES,  
UNIVERSITAS PADJADJARAN- INDONESIA  
AND  
FACULTY OF SCIENCE, LEIDEN UNIVERSITY  
THE NETHERLANDS



WHEREAS Faculty of Mathematics and Natural Sciences, Universitas Padjadjaran, Indonesia and the Faculty of Science, Leiden University, the Netherlands, are mutually interested in establishing collaboration on academic, research and service related activities contributing to comprehensive development in particular in Indonesia and in Europe, and

WHEREAS the two institutions have discussed the furtherance of these interests and now desire to record their mutual intents in this regard.

NOW, THEREFORE, both parties hereby record to investigate possible collaboration.

ARTICLE FOUR

- (1) This Agreement of Intent is effective as of the date of execution by the legal representative with authority for engaging each institution.
- (2) This Agreement of Intent may be amended at any time by written mutual consent and shall continue in force and effect for five years and can be extended by mutual consent.
- (3) Both parties will have the option to terminate or withdraw this Agreement of intent through three months prior notice, while any dispute arising out of this Agreement will be resolved amicably

Executed for  
Faculty of Mathematics and Natural Sciences  
Universitas Padjadjaran

Executed for  
Faculty of Science  
Leiden University

Dean,

Prof. Dr. Budi Nurani Ruchjana, MS  
Jatinangor, Indonesia  
Date: July 8, 2012

Dean,

Prof. dr. S. M. Verduyn Lunel  
Leiden, the Netherlands  
Date: July 8, 2012



## **MEMORANDUM OF AGREEMENT**

**between**

**LEIDEN ETHNOSYSTEMS AND DEVELOPMENT  
PROGRAMME (LEAD) FACULTY OF SCIENCE  
UNIVERSITEIT LEIDEN**

**and**

**FACULTY OF MATHEMATICS AND NATURAL SCIENCES  
UNIVERSITAS PADJADJARAN**

**on**

**TRAINING AND RESEARCH COLLABORATION**

In order to promote further the existing scientific, research and training cooperation between Universiteit Leiden(UL) in The Netherlands and Universitas Padjadjaran (UNPAD) in Indonesia, Faculty of



## **NOTA KESEPAKATAN**

**antara**

**FAKULTAS MATEMATIKA DAN ILMU PENGETAHUAN  
ALAM (FMIPA)  
UNIVERSITAS PADJADJARAN**

**dan**

**PROGRAM LEIDEN ETHNOSYSTEMS & DEVELOPMENT  
(LEAD) FAKULTAS SAINS UNIVERSITAS LEIDEN**

**tentang**

**KERJA SAMA PENDIDIKAN DAN PENELITIAN**

Dalam rangka mempromosikan lebih lanjut kerjasama ilmiah, penelitian dan proyek-proyek kerjasama antara Indonesia dan Belanda, FMIPA Universitas Padjadjaran dan Program LEAD Fakultas Sains Universitas Leiden

Memorandum can be renewed for additional 3 year periods by mutual consent of the parties to the agreement. Both parties reserve the right to terminate this agreement giving 180 days' advance written notice to the other party prior to the proposed termination date.

2. If this Memorandum is translated into another language, the English text remains the sole authentic text, unless each party agrees in writing that the translation must be treated as the sole authentic text.

berlaku untuk jangka waktu 3 tahun. Nota dapat diperpanjang untuk periode 3 tahun dengan kesepakatan bersama para pihak. Kedua belah pihak berhak untuk mengakhiri perjanjian ini dengan menyampaikan pemberitahuan tertulis 180 hari sebelum tanggal pengakhiran diusulkan.

2. Jika Nota ini diterjemahkan ke dalam bahasa lain, maka teks bahasa Inggris tetap menjadi satu-satunya teks tunggal yang otentik, kecuali setiap pihak menyetujui secara tertulis bahwa terjemahan juga harus diperlakukan sama sebagai teks otentik.

Signed for and on behalf of  
LEAD Programme, Faculty of Science  
Universiteit Leiden



Prof. Dr. (h.c.) L. Jan Slikkerveer  
Director LEAD

Date : 23 September 2015

Ditandatangani untuk dan atas nama  
FMIPA  
Universitas Padjadjaran



Prof. Dr. Budi Nurani Ruchjana  
Dekan FMIPA

Tanggal : 23 September 2015



Universiteit Leiden



**Letter of Intent  
between**

**Center for Ethnoscience Study , Faculty of Mathematics and Natural Sciences,  
Universitas Padjadjaran**

**and**

**Leiden Ethnosystems And Development (LEAD) Programme, Faculty of  
Science, Leiden University Universitas Padjadjaran**

This is to certify, that the undersigned:

- Prof. Dr. Budi Nurani Ruchjana, A Head of Center for Ethnoscience Study, Faculty of Mathematics and Natural Sciences, Universitas Padjadjaran (Unpad), Bandung, Indonesia;
- Prof. Dr. L. J. Slikkerveer, Director of LEAD, Faculty of Science, Universiteit Leiden (UL), Leiden, The Netherlands;

have agreed to further extend their ongoing scientific cooperation programme since 1987 in Training and Research in the newly-developing interdisciplinary field of Ethnoscience in Indonesia.

It has been agreed upon, that the first joint Project under the framework of the ongoing Bilateral Agreement on Scientific Cooperation between UL-Unpad will encompass the joint development of an Ethnoscience, focused on the training programs on Ethnoscience including degree and non-degree, including curriculum development, research collaboration on Ethnoscience in the areas of mutual interest, exchange of academic materials on Ethnoscience which are made available by both parties, exchange of scholars in the course of academic development on Ethnoscience to address problems of academic progress; and sponsorship of cooperative seminars, workshop, and other academic meetings on matters of mutual interest.

It is the objective to locate the activities on research and training and postgraduate curriculum development on Ethnoscience at Universitas Padjadjaran in Jatinangor, Indonesia, where LEAD of Universiteit Leiden will give an input in expertise training, fieldwork/vocational training and exchange of staff and students, project management and further develop related networking activities.

It has also been understood, that the Bilateral Cooperation Programme between Universitas Padjadjaran (Unpad) and Universiteit Leiden (UL) as the basis for the envisaged Project will jointly submit its Project Proposal on a development of Ethnoscience, encompassing a 3-years period of time and mainly focused on the sectors of education and sustainable investment in Indonesia.

In addition, it has been agreed upon, that a similar, joint Project under the framework of the ongoing Bilateral Agreement on Scientific Cooperation between Unpad-UL will encompass collaborative research in the field of Ethnoscience in several sectors of Indonesia, such as health care, agriculture, environment, economy, pharmacy, communication, mathematics, chemistry, biology, physics, informatics, geophysics, and the socio-cultural system.

Since the initiative to such joint venture has been evolved from personal contacts and cooperation which started since the late 1980s between the undersigned representatives from the institutions, it has been emphasized that these personal relationships will form the basis for the envisaged linkage relationship between the counterpart institutions in Indonesia and The Netherlands.

Finally, it has been agreed upon, that the joint Training & Research activities under the framework of this scientific cooperation programme will further strengthen the long-term linkage relationship between the counterparts in Indonesia and The Netherlands.

As agreed upon,

Leiden, the Netherlands, 7 November 2017

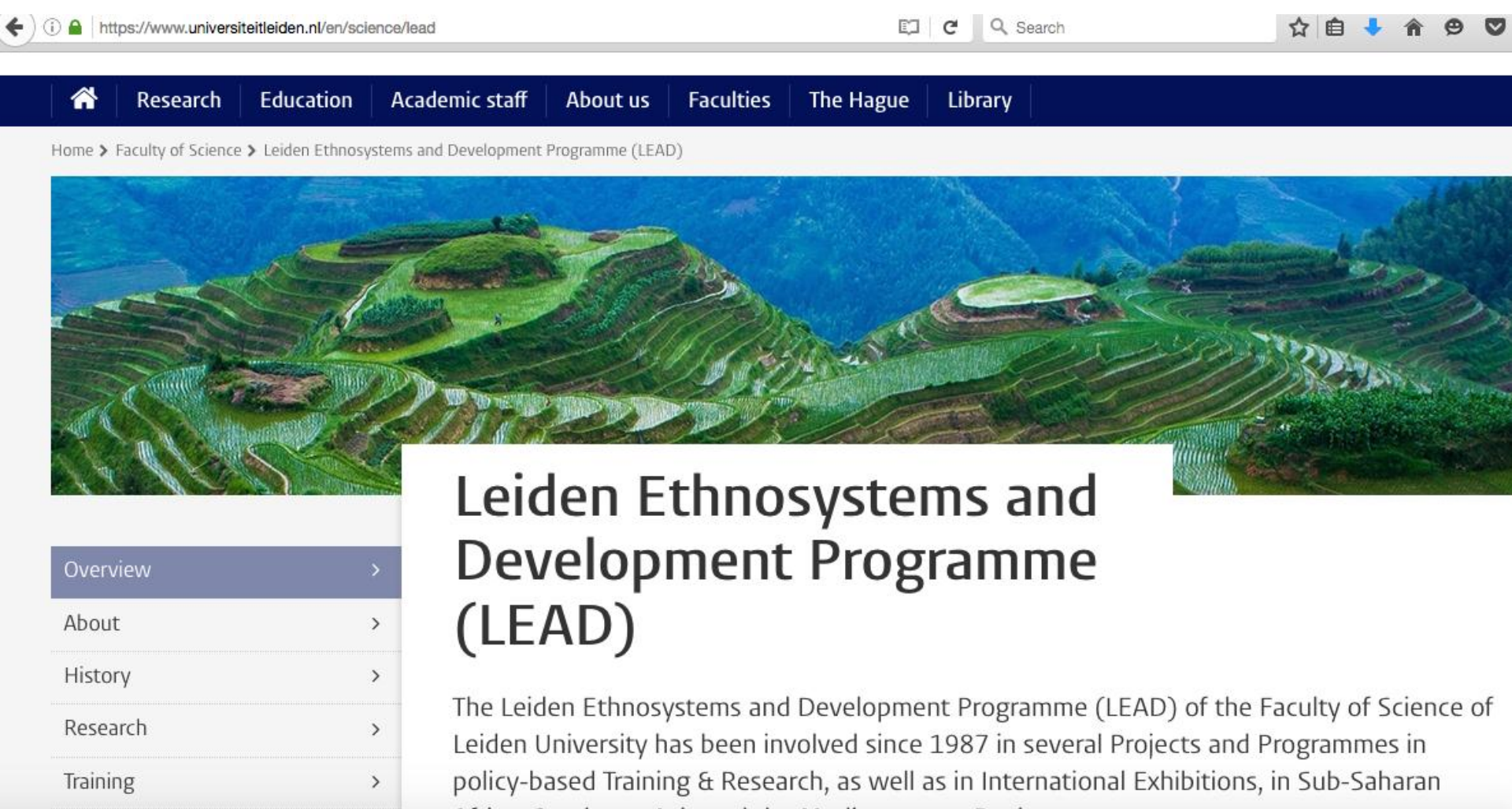


Prof. Dr. Budi Nurani Ruchjana  
Head of Center for Ethnoscience Study  
Faculty of Mathematics and Natural  
Sciences, Universitas Padjadjaran (Unpad)  
Jatinangor, Indonesia



Prof. Dr. L. J. Slikkerveer  
Director of the LEAD Programme  
Universiteit Leiden (UL)  
Leiden, the Netherlands

# Kerja Sama Unpad dan LEAD dalam Bidang Etnosains



https://www.universiteitleiden.nl/en/science/lead

Home > Faculty of Science > Leiden Ethnosystems and Development Programme (LEAD)

## Leiden Ethnosystems and Development Programme (LEAD)

The Leiden Ethnosystems and Development Programme (LEAD) of the Faculty of Science of Leiden University has been involved since 1987 in several Projects and Programmes in policy-based Training & Research, as well as in International Exhibitions, in Sub-Saharan Africa, South and Central America, and the Pacific.

- Overview >
- About >
- History >
- Research >
- Training >

# Kunjungan ke LEAD Leiden, 23 September 2015



# Kunjungan ke LEAD Leiden, 23 September 2015



# KUNJUNGAN KE LEAD LEIDEN, 5 DESEMBER 2016



# LEAD LEIDEN UNIVERSITY, 7-9 NOVEMBER 2017



DEP. OF MATHEMATICS AND DEP. OF COMPUTER SCIENCE  
FAC. OF SCIENCE , LEIDEN UNIVERSITY





# KESEDIAAN SEBAGAI INVITED SPEAKER ITES CONFERENCE 2018

- **The University of Leiden**, the Leiden Institute of Advanced Computer Science (LIACS) is a leading institution for research and education in computer science. The mission is to improve the current computer science methods, systems, and techniques. It explores new research areas that are relevant to society. LIACS exists since 1996 and employs currently about 170. Many of the employees work in companies or governmental organisations as well. LIACS collaborates with many Dutch and foreign institutes and companies. We have formal affiliations with the national research schools Advanced School for Computing and Imaging (ASCI) and the Institute for Programming Research and Algorithmics (IPA). LIACS is furthermore one of the founding institutes of the **Leiden Centre of Data Science (LCDS)**: a network of researchers from different scientific disciplines, who use innovative methods to deal with large amounts of data. The LCDS trains researchers to discover and analyse meaningful patterns in data, and to convert these into useful information.

# Dr. Michael Emmerich

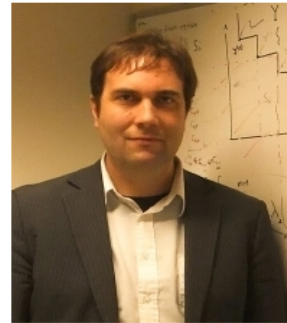
- **Dr. Michael Emmerich** is Associate Professor at LIACS, Leiden University, and leader of the Multicriteria Optimization and Decision Analysis research group. He was born in 1973 in Coesfeld (Germany) and received his doctorate in 2005 from Dortmund University (H.-P. Schwefel promoter). He carried out projects as a researcher at ICD e.V. (Germany), IST Lisbon, University of the Algarve (Portugal), ACCESS Material Science e.V. (Germany), and the FOM/AMOLF institute on Fundamental Science of Matter (Netherlands). He is known for pioneering work on model-assisted and indicator-based multiobjective optimization, and has edited 4 books, and co-authored more than 120 papers in multicriteria optimization algorithms and their application in computational chemistry and engineering.

<https://www.universiteitleiden.nl/en/staffmembers/michael-emmerich#tab-1>

## Michael Emmerich

Associate professor

|           |                                    |   |
|-----------|------------------------------------|---|
| Name      | Dr. M.T.M. Emmerich                |   |
| Telephone | +31 71 527 7094                    | > |
| E-mail    | m.t.m.emmerich@liacs.leidenuniv.nl | > |



Overview

Profile

Contact

Publications

Ancillary activities

Michael T.M. Emmerich,  
Associate Professor  
Multicriteria Optimization and Decision  
Analysis  
LIACS, Leiden University  
[Niels Bohrweg 1](#), R 1.61  
2333-CA Leiden  
The Netherlands  
<http://moda.liacs.nl>  
Tel: +31 71 527 7094

# PROF. DR. SRI HARTATI (UGM)



- **Nama :** [Prof. Sri Hartati, M.Sc, Ph.D](#)
- **NIP. :** 19610921 1988 03 2 001
- **Pendidikan :** **Dra.** Elektronika dan Instrumentasi UGM, **M.Sc** Computer Science University of New Brunswick, Canada.  
Bidang: Spatial Processing, **Ph.D** Computer Science  
University of New Brunswick, Canada Bidang Artificial Intelligence
- **Email :** shartati(at)ugm.ac.id
- **Web Site :** <http://shartati.staff.ugm.ac.id>

# Prof. Sri Harta



- **Research Interests:**
- Intelligent Systems (Knowledge Based Syst., Reasoning Syst., Expert Systems, Fuzzy Systems., Pattern Recognition Syst., Vision Syst., Natural Language Processing)
- Decision Support Systems (DSS), Clinical DSS, GDSS
- Medical Computing
- Computational Intelligence(ANN, Fuzzy Logic, Genetic

**KEGIATAN KERJA SAMA**

# Indonesian and ASEAN Research Collaboration in Mathematics (SouthEast Asian Mathematical Society (SEAMS) School Funded by CIMPA- French

[Unpad.ac.id, 10/08/2016] Laboratorium Matematika Terapan Departemen Matematika FMIPA Universitas Padjadjaran menggelar *South East Asian Mathematical Society (SEAMS) School on "Spatio Tempora, Data Mining, and Optimization Modeling"* di Unpad Training Center Jalan Ir. H. Djuanda No. 4, Bandung, 9 – 19 Agustus.



Foto bersama peserta SEAMS School yang diselenggarakan oleh Laboratorium Matematika Terapan FMIPA Unpad di Unpad Training Center Bandung, 9-19 Agustus 2016 (Foto oleh: Tedi Yusup)\*

## KONSORSIUM KEILMUAN ETNOMATEMATIKA DAN ETNOINFORMATIKA UNTUK PEMETAAN BUDAYA INDONESIA

Hibah Konsorsium Keilmuan dan  
Kerjasama Internasional  
Kemenristekdikti 2016



**WORKSHOP**  
**ETNOMATEMATIKA**  
**DAN ETNOINFORMATIKA**  
**UNTUK PEMETAAN BUDAYA**  
**INDONESIA**

**Pemateri:**  
Prof. Dr. Budi Nurani Ruchjana  
Prof. Dr. L. J. Slikkerveer  
Prof. Dr. Zulkardi  
Dr. Atje Setiawan Abdullah  
Dr. Een Herdiani, S.Sen., M.Hum.  
Dr. Setiawan Hadi  
Kurniawan Saefullah, SE.M.Ec.  
Dr. Komang Dharmawan  
Dr. Amran  
Yopi Andry Lesnussa, M.Si  
Neva Satyahadevi, M.Sc  
Dr. Tarno  
Dr. Anwar Mutakin

# International Collaboration for Mathematics (Commission for Developing Countries International Mathematical Union-European Commission for Erasmus Plus on Capacity Building 2019-2021)



About CDC | CDC Members



Further to my letter to you of 15.8.2018, which I hope that you have received it in good order, I herewith would like to inform you, that all participants of our International INTEM Project Consortium have prepared and uploaded their additional documents required by the Validation Committee of the European Commission in Brussels in order to receive the Grant Agreement for our Project from the Erasmus Plus Programme on Capacity Building in Higher Education (CBHE) in Brussels in due course.

As the Project Consortium of the *Integrated Ecotourism Management in Indonesia Project* (INTEM) encompasses 8 partner institutions/beneficiaries in The Netherlands, Greece and Indonesia, including our *Leiden Ethnoscapes and Development Programme (LEAD)* of Leiden University in The Netherlands - as the project coordinating institution - the *Mediterranean Agronomic Institute of Chania (MAICh)* and the *Advanced School of Tourism Education of Crete (ASTEK)* in Crete, your *Universitas Padjadjaran (UNPAD)*, *Universitas Pendidikan Indonesia (UPI)*, *Sekolah Tinggi Pariwisata Trisakti (STPT)*, the *Indonesian Heritage Society (IHS)*, and the *Martha Tilar Foundation (MTF)* in Indonesia, which all have now provided their required documents, we are now actually preparing to receive and finalise the above-mentioned Grant Agreement.

## Members

### Commission for Developing Countries (CDC) 2015 - 2018

The Commission for Developing Countries (CDC) is a nine-member commission. Its members are elected or appointed for a four-year term by the [IMU General Assembly](#).



Its 2015-2018 members are:



# International Congress Mathematicians 2014, Seoul, Korea Selatan

- NANUM travel grant for mathematicians from developing countries



The International Congress of Mathematicians 2014  
August 13 - 21, 2014, COEX, Seoul, Korea  
<http://www.icm2014.org>

February 27, 2014

Dear Budi Nurani Ruchjana,

1963/12/23, Female,

Fac of Math and Natural Sciences, Padjadjaran Univ, Jl. Raya Bandung Sumedang Km 21 Jatinangor, Sumedang, Indonesia, Republic of

Congratulations once again for being selected to receive the travel grant for NANUM 2014! Below we have listed the terms and conditions regarding your travel to SEOUL ICM 2014. Please take a moment to read the following information carefully.

**Your Travel Grant of ~~₩~~1,300,000 is funded by KIAS and your serial number for registration is ca7aa77c4bfd4549cc0d9c22210ff72f. You can use this code for registration and dormitory reservation.**

## **NANUM 2014 Terms & Conditions**

1. NANUM 2014 Travel grants will be awarded to support attendance at the SEOUL ICM 2014, which will be held in Seoul from August 13 – 21, 2014.

# November 25, 2013

## Guidelines for Evaluation

The evaluation process should be done as the following. Each applicant will be reviewed by two members of the committee. The committee member should check one of the boxes for each application: Strongly recommended (+3), Recommended (+2), or Fail (0). Please keep in mind the following as you evaluate the applications.

- 1) Geographic balance within each region
- 2) Gender balance (we expect approximately 25% to be female mathematicians)
- 3) Consideration should be given to underprivileged areas within a country
- 4) First priority is given to those in countries with GDP under \$7,500, and second priority to those in countries with GDP under \$11,500 (see the attached table for GDPs)
- 5) We hope to balance the grant among senior mathematicians (>10 years after PhD), junior mathematicians ( $\leq 10$  years after PhD), and advanced graduate students (PhD candidates) to 45, 45, and 10%, respectively.
- 6) Mathematicians from developing countries who have tenured or tenure-track positions in the developed countries are not eligible.
- 7) For some regions, since we have reduced your work load by prescreening, the number of applicants is greater than that of candidates. So reviewers are supposed to evaluate applications of candidates only.

# ICM BRAZIL, 2018

- TIM REVIEWER TRAVEL GRANT ASIA PACIFIC
- **911 applicants**
- **[ICM2018\_OPENARMS\_ASIA\_PACIFIC] OpenArms Travel Grants Program - Asia & Pacific Selection Committee, Open Arms - ICM2018 for Developing Countries**
- Welcome Budi Nurani Ruchjana. Please answer the following questions to complete your application for this program. After your application is made, it can be edited or withdrawn using this same form (accessible from the "Status" menu). Program institutions will have access only to the documents you select on this screen, plus your current Standard Coversheet. Your submission is successful only if you see the "Thank you for your application" screen right after submitting this form. The total size of all the files selected to be uploaded here should be less than 8MB, or you need to upload them into your [Portfolio](#) one by one first. Most unsubmitted data in this form is saved automatically inside your web browser if possible (you can also [save the data onto the server](#) to make it [accessible](#) from another computer after login), and you can come back to submit it later.

<http://www.icm2018.org/portal/en/home>





wonderful  
indonesia



# **WORKSHOP**

## **ETNOMATEMATIKA DAN ETNOINFORMATIKA UNTUK PEMETAAN BUDAYA INDONESIA**

### **Pemateri:**

**Prof. Dr. Budi Nurani Ruchjana**

**Prof. Dr. L. J. Slikkerveer**

**Prof. Dr. Zulkardi**

**Dr. Atje Setiawan Abdullah**

**Dr. Een Herdiani, S.Sen., M.Hum.**

**Dr. Setiawan Hadi**

**Kurniawan Saefullah, SE.M.Ec.**

**Dr. Komang Dharmawan**

**Dr. Amran**

**Yopi Andry Lesnussa, M.Si**

**Neva Satyahadevi, M.Sc**

**Dr. Tarno**

**Dr. Anwar Mutakin**



wonderful  
indonesia



# **WORKSHOP ETNOMATEMATIKA DAN ETNOINFORMATIKA UNTUK PEMETAAN BUDAYA INDONESIA**

**Hotel Sawunggaling-Bandung**

**23-24 September 2016**





LEAD Programme  
Leiden University

PKLN 2018

Code/Field of Science: 123/Computer Science



# ***DATA MINING FOR ETHNO-INFORMATICS PERSPECTIVE IN MAPPING OF ADMINISTRATIVE VILLAGE NAMING IN INDONESIA***

**PROF. DR. L. J. SLIKKERVEER (Ethnoscience)**

**DR. ATJE SETIAWAN ABDULLAH, MS. M.Kom. (0017125402/Spatial Data Mining)**

**PROF. DR. BUDI NURANI RUCHJANA (0023126313/Statistics)**

**DR. MUMUH MUHSIN ZAKARIA, M.Hum. (0025116303/History)**



Scopus ID: 6505947286



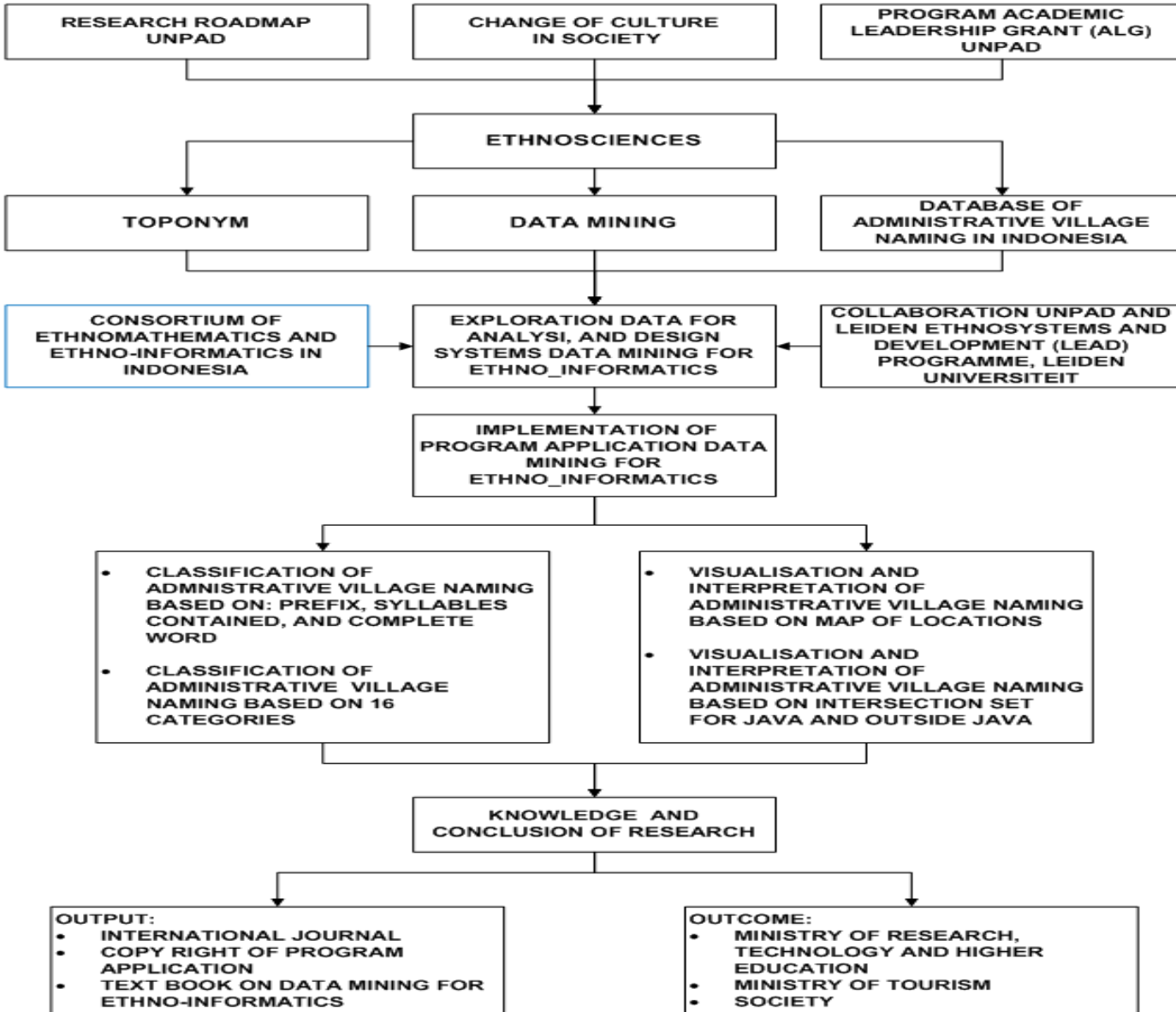
Scopus ID: 55872557900



Scopus ID: 25229331100



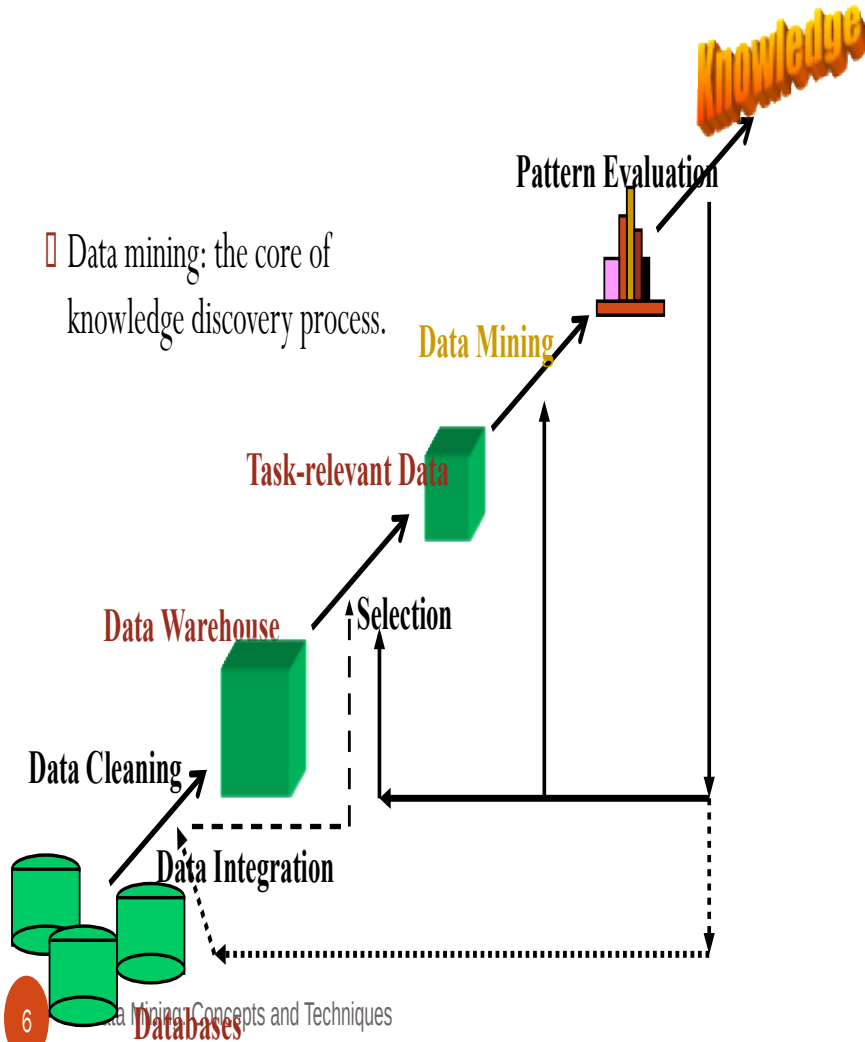
# STAGE OF RESEARCH ON DATA MINING FOR ETHNO-INFORMATICS OF ADMINISTRATIVE VILLAGE NAMING IN INDONESIA



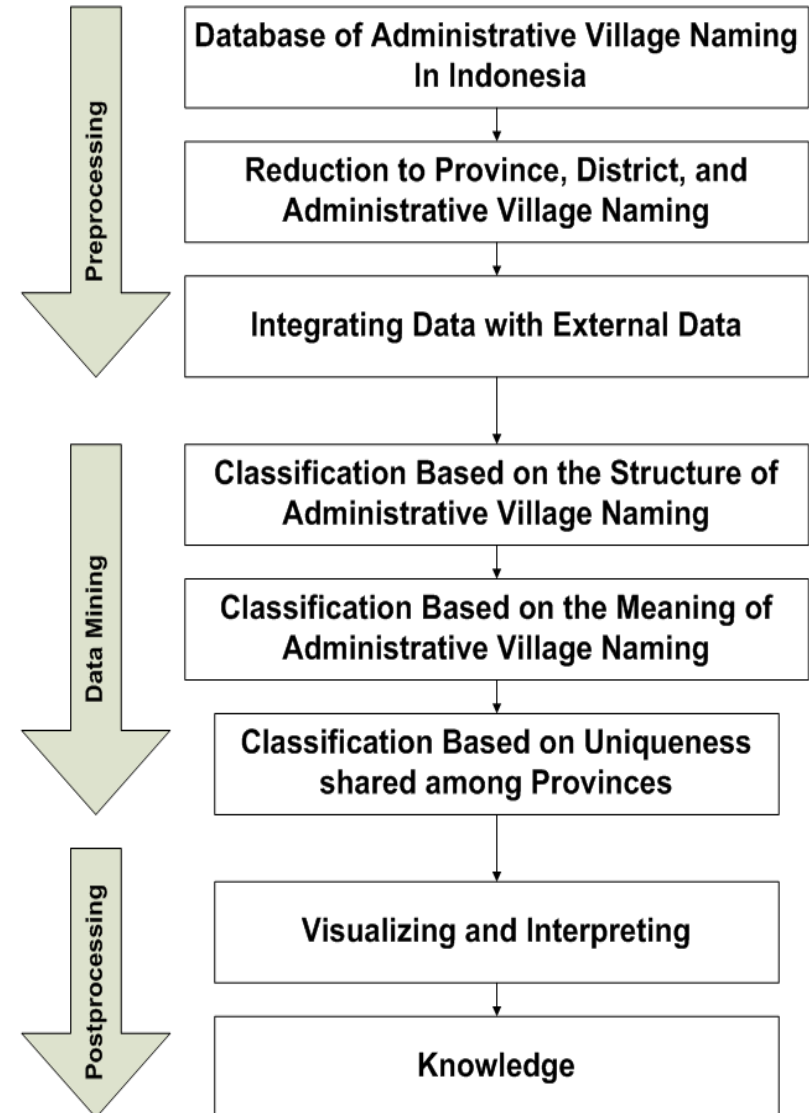
## Data Mining: A KDD Process

Knowledge Discovery in Database—Han and Kamber, 2006

□ Data mining: the core of knowledge discovery process.



## Process of Knowledge Discovery in Database of Administrative Village Naming



***Spatio Temporal Data Mining for Mapping Climate  
Change Impacts on Water Resources Management at Java  
Island  
(Year 2015 - 2017)***



SIGNING MoA, GRONINGEN, 2012

# RESEARCH OUTPUT YEAR 2017

| NATIONAL SEMINAR                                                                                                                                                                                                           | INTERNATIONAL SEMINAR                                                                                                                                                                                             | INTERNATIONAL JOURNAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>5 PAPERS</b>                                                                                                                                                                                                            | <b>5 PAPERS</b>                                                                                                                                                                                                   | <b>1 PAPER PUBLISHED, 1 PAPER UNDER REVIEWED, 2 PAPERS DRAFT</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <p>SEMINAR NASIONAL MATEMATIKA<br/>UI-UNPAD, DEPOK, 11 FEBRUARI<br/>2017</p> <p>A.KRIGING METHOD<br/>B.GSTARI-ARCH MODEL USING R<br/>SOFTWARE</p> <p>SEMINAR NASIONAL SAINS DAN<br/>ATMOSFER LAPAN BANDUNG<br/>3 PAPER</p> | <p>INTERNATIONAL SEMINAR ON<br/>BASIC SCIENCE, UB, MALANG,<br/>2017</p> <p>3 PAPERS ICREM ITB, 11-13<br/>AUGUST 2017</p> <p>INTERNATIONAL WORKSHOP ON<br/>DISEASE MAPPING, LANCETER,<br/>12-13 SEPTEMBER 2017</p> | <p>Applied Mathematical Sciences, Vol. 11,<br/>2017, no. 36, 1779 - 1792 HIKARI Ltd,<br/>www.m-hikari.com<br/><a href="https://doi.org/10.12988/ams.2017.74150">https://doi.org/10.12988/ams.2017.74150</a> , Development of Space Time Model<br/>with Exogenous Variable by Using<br/>Transfer Fuction Model Approach on the<br/>Rice Price Data (Nurita Andayani, I<br/>Made Sumertajaya, Budi Nurani<br/>Ruchjana, Nur Aidi)</p> <p>1 PAPER UNDER REVIEW</p> <p>2 DRAFTS TO BE SUBMITTED TO<br/>INTERNATIONAL JOURNAL</p> |
| <b>COPY RIGHT SOFTWARE<br/>OF ESTMATION PARAMETER<br/>GSTARI-ARCH MODEL<br/>NO. 087428</b>                                                                                                                                 | <p><b>2 PAPERS ON NATIONAL<br/>JOURNAL</b></p> <ul style="list-style-type: none"> <li><b>JURNAL MATEMATIKA<br/>INTEGRATIF</b></li> <li><b>JURNAL INFORMATIKA</b></li> </ul>                                       | <p><b>CHAPTER BOOK SPRINGER</b></p> <p><b>DRAFT OF LECTURE NOTE</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

# INTERNATIONAL JOURNAL-PUBLISHED-Q3

Applied Mathematical Sciences, Vol. 11, 2017, no. 36, 1779 - 1792

HIKARI Ltd, [www.m-hikari.com](http://www.m-hikari.com)  
<https://doi.org/10.12988/ams.2017.74150>

## Development of Space Time Model with Exogenous Variable by Using Transfer Function Model Approach on the Rice Price Data

Nurita Andayani\*

Faculty of Pharmacy, Pancasila University, Indonesia  
\*PhD Student in Department of Statistics, Bogor Agricultural University  
Indonesia

I Made Sumertajaya

Department of Statistics, Bogor Agricultural University, Indonesia

Budi Nurani Ruchjana

Department of Mathematics, Padjajaran University, Indonesia

Muhammad Nur Aidi

Department of Statistics, Bogor Agricultural University, Indonesia

Copyright © 2017 Nurita Andayani, I Made Sumertajaya, Budi Nurani Ruchjana and Muhammad Nur Aidi. This article is distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

### Abstract

In modeling sometimes other influence variables can improve the goodness of a model and those variables are called exogenous variables. GSTARMA modeling by involving exogenous variables can use several approaches that can be done to include the influence of exogenous variables within the model. One approach to handle correlated series in exogenous variables but has dynamic model is transfer function model. In this study, the GSTARMA model with exogenous variables by using transfer function approach is called GSTARMA-X Transfer Function model.

www.m-hikari.com/ams/ams-2017/ams-33-36-2017/74150.html

**HIKARI Ltd**  
International Publishers of Science, Technology and Medicine

[ Home | Journals | Books | Paper submission | About us and our mission | News | Contact us ]

**APPLIED MATHEMATICAL SCIENCES**

Site Search:  Go

ISSN 1312-885X (print) ISSN 1314-7552 (online)

ISSN 1312-885X  
Applied Mathematical Sciences  
HIKARI Ltd

Nurita Andayani, I Made Sumertajaya, Budi Nurani Ruchjana, Muhammad Nur Aidi  
Development of space time model with exogenous variable by using transfer function model approach on the rice price data  
Applied Mathematical Sciences, Vol. 11, 2017, no. 36, 1779-1792  
<https://doi.org/10.12988/ams.2017.74150>

Copyright © 2017 Nurita Andayani, I Made Sumertajaya, Budi Nurani Ruchjana and Muhammad Nur Aidi. This article is distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

www.scimagojr.com/journalsearch.php?i=25166&tp=sid&clean=0

**SJR** Scimago Journal & Country Rank

Home Journal Rankings Country Rankings Viz Tools Help About Us

Enter Journal Title, ISSN or

**Applied Mathematical Sciences**

Country [Bulgaria](#)

Subject Area and Category [Mathematics](#)  
[Applied Mathematics](#)

Publisher [Hikari Ltd.](#) H Index

Publication type Journals

ISSN 1312885X

Coverage 1984, 2009-2016 (cancelled)

**25**

Quartiles

Applied Mathematics

2008 2009 2010 2011 2012 2013 2014 2015 2016

Q3

OUTPUT: COPYRIGHT , NUMBER 087428

DRAFT OF THE LECTURE NOTE



**REPUBLIK INDONESIA**  
**KEMENTERIAN HUKUM DAN HAK ASASI MANUSIA**

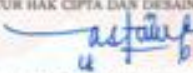
**SURAT PENCATATAN CIPTAAN**

Menteri Hukum dan Hak Asasi Manusia Republik Indonesia, berdasarkan Undang-Undang Nomor 28 Tahun 2014 tentang Hak Cipta yaitu Undang-Undang tentang perlindungan ciptaan di bidang ilmu pengetahuan, seni dan sastra (tidak melindungi kekayaan intelektual lainnya), dengan ini menerangkan bahwa hal-hal tersebut di bawah ini telah tercatat dalam Daftar Umum Ciptaan:

|                                                                                                                  |                                                                                                                                                                                                                                               |
|------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| I. Nomor dan tanggal permohonan                                                                                  | : C00201702219, 31 Mei 2017                                                                                                                                                                                                                   |
| II. Pencipta<br>Nama                                                                                             | : 1. Dr. BUDI NURANI RUCHJANA;<br>2. HOT BOKAR;<br>3. FIQRY REVADHANSYAH;<br>4. Drs. ATJE SETIAWAN ABDULLAH, M.S.;<br>5. GUMUNG DARMAWAN;<br>6. NELSON HAIWOGGLAN;<br>7. Prof. Dr. H. MUSTAM SIREGAR;<br>8. SUTAWANIR;<br>9. ANNISA NUR FALAH |
| Alamat                                                                                                           | : Konsep: Bukit Patanjayan No. 34<br>Kel. Cikadut, Kec. Cimurjan, Kab. Bandung<br>Jawa Barat                                                                                                                                                  |
| Kewarganegaraan                                                                                                  | : Indonesia                                                                                                                                                                                                                                   |
| III. Pemegang Hak Cipta<br>Nama                                                                                  | : UNIVERSITAS PAJADJARAN                                                                                                                                                                                                                      |
| Alamat                                                                                                           | : Jalan Raya Bandung-Sumedang Km.21<br>Kec. Jatinangor, Kab. Sumedang, Jawa Barat 45365.                                                                                                                                                      |
| Kewarganegaraan                                                                                                  | : -                                                                                                                                                                                                                                           |
| IV. Jenis Ciptaan                                                                                                | : Program Komputer                                                                                                                                                                                                                            |
| V. Judul Ciptaan                                                                                                 | : PENGEMBANGAN MODEL GENERALIZED SPACE<br>TIME AUTOREGRESSIVE INTEGRATED-<br>AUTOREGRESSIVE CONDITIONALLY<br>HETEROSCEDASTICITY (OSTARI-ARCH)                                                                                                 |
| VI. Tanggal dan tempat diumumkan<br>untuk pertama kali di wilayah<br>Indonesia atau di luar wilayah<br>Indonesia | : 10 Januari 2017, di Bandung                                                                                                                                                                                                                 |
| VII. Jangka waktu perlindungan                                                                                   | : Berlaku selama 50 (lima puluh) tahun sejak pertama<br>kali diumumkan.                                                                                                                                                                       |
| VIII. Nomor pencatatan                                                                                           | : 087428                                                                                                                                                                                                                                      |

Pencatatan Ciptaan atau produk Hak Terkait dalam Daftar Umum Ciptaan Indian merupakan pengesahan atas isi, arti, maksud, atau bentuk dari Ciptaan atau produk Hak Terkait yang dicatat. Menteri tidak bertanggung jawab atas isi, arti, maksud, atau bentuk dari Ciptaan atau produk Hak Terkait yang terdaftar. (Pasal 72 dan Penjelasan Pasal 72 Undang-undang Nomor 28 Tahun 2014 Tentang Hak Cipta)

a.n. MENTERI HUKUM DAN HAK ASASI MANUSIA  
REPUBLIK INDONESIA  
DIREKTUR JENDERAL KEKAYAAN INTELEKTUAL  
u.n.  
DIREKTUR HAK CIPTA DAN DESAIN INDUSTRI

  
Dr. Drs. Erni Widhyastuti, Apt., M.Si.  
NIP. 196003181991032001

# Penerapan Gstat Berbasis R untuk Geostatistika dengan Pendekatan Spasial Data Mining



Oleh:  
**Budi Nurani Ruchjana,**  
**Atje Setiawan Abdullah,**  
**Annisa Nur Falah**

$$\begin{aligned}
 \hat{z}(x_0) &= 2 \sum_{i=1}^n \lambda_i \gamma(x_0, x_i) - \sum_{i=1}^n \sum_{j=1}^n \lambda_i \lambda_j \gamma(x_i, x_j) \\
 &= 2 \sum_{i=1}^n \lambda_i \gamma(x_0, x_i) - \sum_{i=1}^n \lambda_i \gamma(x_0, x_i) + \mu_0 = \sum_{i=1}^n \mu_i f_i(x_0) \\
 &= \sum_{i=1}^n \lambda_i \gamma(x_0, x_i) + \mu_0 + \sum_{i=1}^n \mu_i f_i(x_0) \quad (1.102.65)
 \end{aligned}$$

$$\begin{aligned}
 E \left[ \sum_{i=1}^n \lambda_i z(x_i) z(x_0) \right] &= E[z(x_0)] E[z(x_0)] \\
 &= \sum_{i=1}^n \lambda_i E[z(x_i) z(x_0)] - E[z(x_0)] E[z(x_0)] \\
 &= \sum_{i=1}^n \lambda_i E[z(x_i) z(x_0)] - E \left[ \sum_{i=1}^n \lambda_i z(x_i) \right] E[z(x_0)] \\
 &= \sum_{i=1}^n \lambda_i E[z(x_i) z(x_0)] - \sum_{i=1}^n \lambda_i E[z(x_i)] E[z(x_0)] \\
 &= \sum_{i=1}^n \lambda_i (E[z(x_i) z(x_0)] - E[z(x_i)] E[z(x_0)])
 \end{aligned}$$

| Point | X    | Y    | Z    |
|-------|------|------|------|
| 1     | 0.00 | 0.00 | 0.00 |
| 2     | 0.01 | 0.01 | 0.01 |
| 3     | 0.02 | 0.02 | 0.02 |
| 4     | 0.03 | 0.03 | 0.03 |
| 5     | 0.04 | 0.04 | 0.04 |
| 6     | 0.05 | 0.05 | 0.05 |
| 7     | 0.06 | 0.06 | 0.06 |
| 8     | 0.07 | 0.07 | 0.07 |
| 9     | 0.08 | 0.08 | 0.08 |
| 10    | 0.09 | 0.09 | 0.09 |

| Point | X    | Y    | Z    |
|-------|------|------|------|
| 11    | 0.10 | 0.10 | 0.10 |
| 12    | 0.11 | 0.11 | 0.11 |
| 13    | 0.12 | 0.12 | 0.12 |
| 14    | 0.13 | 0.13 | 0.13 |
| 15    | 0.14 | 0.14 | 0.14 |
| 16    | 0.15 | 0.15 | 0.15 |
| 17    | 0.16 | 0.16 | 0.16 |
| 18    | 0.17 | 0.17 | 0.17 |
| 19    | 0.18 | 0.18 | 0.18 |
| 20    | 0.19 | 0.19 | 0.19 |

# OUTPUT RESEARCH AT YEAR 2016

| NATIONAL SEMINAR                                                                                                                          | INTERNATIONAL SEMINAR                                                                                                              | INTERNATIONAL JOURNAL                                                                                                                                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10 PAPERS                                                                                                                                 | 12 PAPERS                                                                                                                          | 2 PAPERS ACCEPTED, 2 PAPERS SUBMITTED                                                                                                                                                                                                           |
| SEMNAS PENDIDIKAN MATEMATIKA, UNINUS BANDUNG, 6 AUGUST 2016, INVITED SPEAKER                                                              | INTERNATIONAL SEMINAR ON BASIC SCIENCE, UB, MALANG, 2-3 MARCH 2016, INVITED SPEAKER                                                | IJAMAS—2 PAPERS ACCEPTED<br>International Journal of Applied Mathematics and Statistics.<br><a href="http://www.ceser.in/ceserp/index.php/ijamas">http://www.ceser.in/ceserp/index.php/ijamas</a><br>ISSN 0973-1377 (Print); 0973-7545 (Online) |
| SEMNAS FMIPA UNPAD, JATINANGOR 27-28 OCTOBER 2016<br>(INVITED SPEAKER AND 4 PAPERS OF UNDERGRADUATE STUDENTS)<br>WORKSHOP STKIP SILIWANGI | ASIAN MATHEMATICAL CONFERENCE (AMC), 25-29 JULY 2016, BNDCC BALI<br>7 PAPERS OF IEEE PROCEEDINGS INDEXED BY SCOPUS, REVIEW PROCESS | ARPN JOURNAL-2 PAPER SUBMITTED<br>ARPN Journal of Engineering and Applied Sciences<br><a href="http://www.arpnjournals.com">http://www.arpnjournals.com</a><br>E-mail: <a href="mailto:arpn@arpnjournals.com">arpn@arpnjournals.com</a>         |
| SEMNAS MATEMATIKA UNSIL, 2 INVITED SPEAKERS                                                                                               | ICAS , DEPT . STAT UNPAD, 27-28 SEPTEMBER 2016 (2 PAPERS, MAGISTER STUDENTS)                                                       |                                                                                                                                                                                                                                                 |
| KONFERENSI NASIONAL MATEMATIKA XVIII, PEKANBARU, 2-3 NOVEMBER 2016                                                                        | ICCITIA 1-2 DECEMBER , AMSTERDAM, 2 PAPERS , PROCEEDINGS INDEXED BY WEB SCIENCE INDEX                                              | COPY RIGHT SOFTWARE ESTIMATION<br>PARAMETER GSTAR MODEL USING OLS METHOD                                                                                                                                                                        |

# Research Innovation and Exchange Staff, Social Media Analytics (RISE\_SMA) 2019-2022



## KONSORSIUM INTERNASIONAL RESEARCH INNOVATION AND STAFF EXCHANGE\_SOCIAL MEDIA ANALYTICS (RISE\_SMA)



- SKEMA: HORIZON 2020  
MARIE SKLODOWSKA-CURIE RESEARCH AND INNOVATION STAFF EXCHANGE (MSCA-RISE)
- NOMOR PROPOSAL: 823866 (USULAN TAHUN 2018)
- PERIODE: TAHUN 2019-2022
- DIDANAI: H2020 EUROPEAN UNION FUNDING FOR RESEARCH AND INNOVATION
- KETUA: PROF. DR. STEFAN STIEGLITZ (UDE, UNIVERSITAET DUISBURG-ESSEN, GERMANY)

| No. | Organization Name                             | Country         | Name                 |
|-----|-----------------------------------------------|-----------------|----------------------|
| 1   | UNIVERSITAET DUISBURG-ESSEN                   | Germany         | Stefan STIEGLITZ     |
| 2   | UNIVERSITEIT LEIDEN                           | The Netherlands | Michael EMMERICH     |
| 3   | UNIVERSITETET I AGDER                         | Norway          | Tim MAJCHRZAK        |
| 4   | KRISTIANSAND KOMMUNE                          | Norway          | Sigurd PAULSEN       |
| 5   | VIRTIMO AG                                    | Germany         | Christoph FUCHSS     |
| 6   | QUEENSLAND UNIVERSITY OF TECHNOLOGY - QLD QUT | Australia       | Axel BRUNS           |
| 7   | UNIVERSITAS PADJADJARAN                       | Indonesia       | budi nurani RUCHJANA |
| 8   | THE UNIVERSITY OF SYDNEY                      | Australia       | Deborah BUNKER       |
| 9   | UNIVERSIDADE DO VAIEDO                        | Brazil          | Adriana AMARAL       |



## START PAGE

## Marie Skłodowska-Curie Actions

Research and Innovation Staff Exchange  
(RISE)

Call: H2020-MSCA-RISE-2017

## PART B



**RISE\_SMA**  
SOCIAL MEDIA ANALYTICS  
FOR SOCIETY AND CRISIS COMMUNICATION

## BENEFICIARIES

Universiteit  
Leiden

UNIVERSITEIT LEIDEN

Virtimo



## PARTNER



European Commission <EC-NO-REPLY-GRANT-  
MANAGEMENT@nomail.ec.europa.eu>

9:28 PM (15  
hours ago)

to Maria, Anna, Sandra, Stefan, Atje, Adriana, Axel, Deborah, Jean, Michael, Knut, Christoph,  
Kirsten, Anna, Kjetil, Kristian, Ismar, Anke, Tim, Angela, Sigurd, me, Lukas

## Europa / Participant Portal notification

Dear Coordinator,

Your above proposal has been ranked. The Evaluation Result Letter is available on the proposal page of the Participant Portal. Log on to the Participant Portal > My Area > My Proposal(s) (  
<https://ec.europa.eu/research/participants/portal/desktop/en/proposals/index.html>) and click the Follow-up (FO) button.

Regards,  
Participant Portal Grant Management Service|

<http://ec.europa.eu/education/participant/s/portal/desktop/en/organisations/search.html>

|                              |                         |
|------------------------------|-------------------------|
| Name of Institution          | : Universitas Pajajaran |
| Business name                | : UNPAD                 |
| Active and still valid since | : 2012-now              |
| Registration number          | : 260KMK052008          |

## 1 Excellence

**RISE\_SMA at a glance:** RISE\_SMA creates an interdisciplinary, international network combining world-leading scholars and excellent practitioners to enable an outraging knowledge sharing and to develop solutions for the next level in social media analytics (SMA).

Social media have become an ever-important part of daily life of millions and influences the way people get and share information [1–5]. Advanced theoretical approaches and methods of analysing social media data are especially relevant for the two areas, addressed in RISE\_SMA: **(1) society and (2) crisis communication**. In the last years, the communication in social media gained massive impact on **society** and citizen's decision-making, offering potential for new forms of public discourses, but also challenging societal cohesion by the upcoming of fake news and social bots. In addition to that, it became obvious that social media communication plays an increasing role for citizens and emergency service agencies during **crisis situations** in order to find or share information, for example during natural disasters or human-made crisis such as terror attacks.



**RISE\_SMA**  
SOCIAL MEDIA ANALYTICS  
FOR SOCIETY AND CRISIS COMMUNICATION

In both fields, an immense amount of new social media data is continuously generated, requiring deep knowledge in **social media analytics** in order to get meaningful insights. At the same time, they face similar problems such as a lack of comprehensive theoretical concepts and instruments. Methods and tools are needed to enable citizens, governments,

media, and companies to derive potentials from social media and to manage upcoming risks.

**PENGABDIAN KEPADA MASYARAKAT**

# KAMPUNG ADAT-CIPATUJAH





# KOLECER DAN BEDOG SEBAGAI ALAT UKUR



# ETNOMATEMATIKA DALAM PERSPEKTIF BUDAYA SUNDA

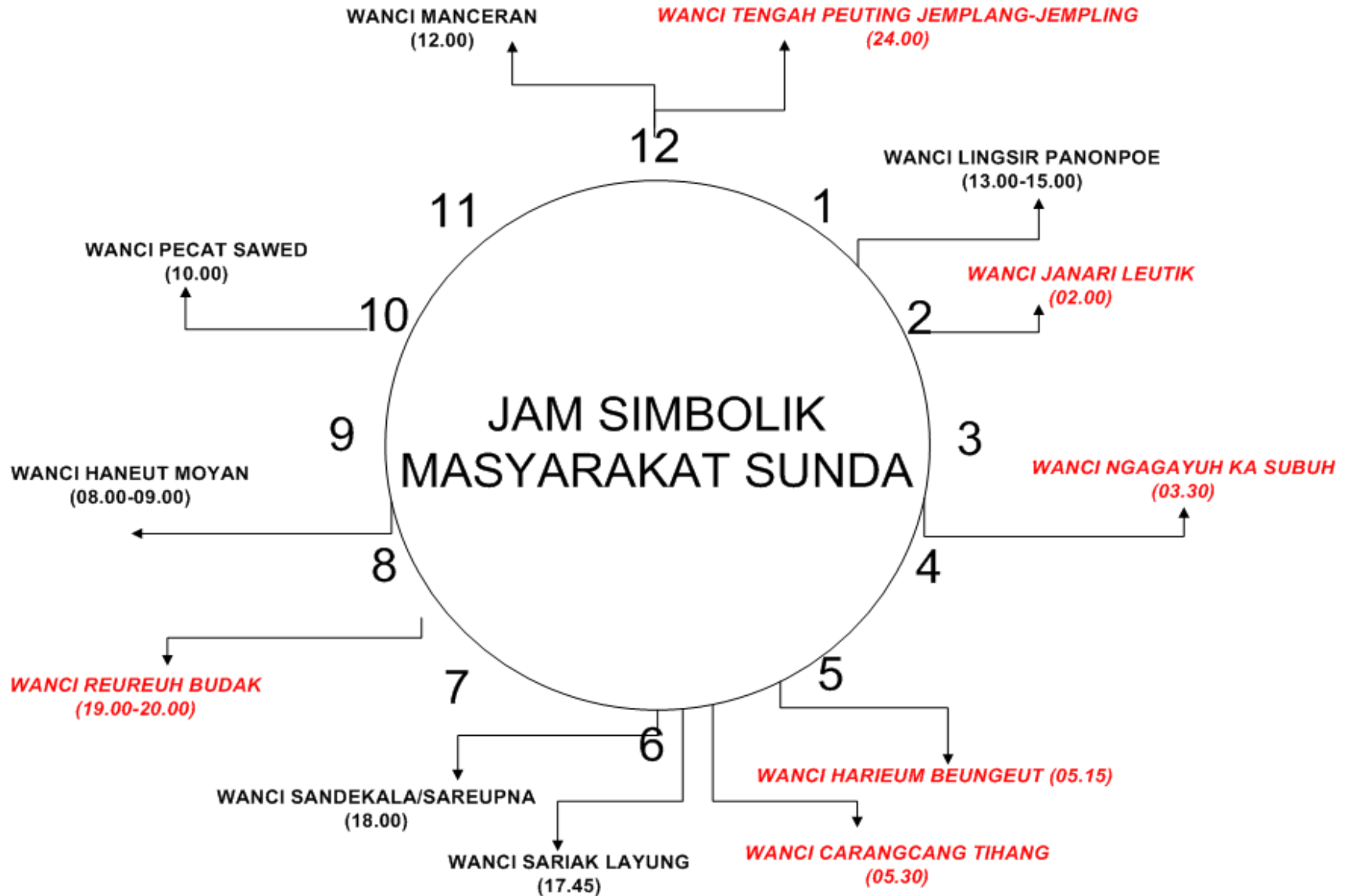
*TIM ALG 2017*

*atjesetiawan@gmail.com, bnurani@gmail.com*

*PUSDI ETNOSAINS FMIPA UNIVERSITAS PADJADJARAN*

- ❑ Etnomatematika adalah ilmu yang mempelajari hubungan antara matematika dan budaya, biasanya tidak diekspresikan secara tertulis, tetapi digunakan secara praktis sehari hari dalam kehidupan masyarakat, yang dapat mencirikan kelompok budaya tertentu
- ❑ Tujuan etnomatematika adalah memberikan kontribusi tentang pemahaman budaya dan matematika, dan hubungan keduanya

## JAM SIMBOLIK MASYARAKAT SUNDA



# Contoh Biaya menggarap Sawah Sistem Nengah

## Contoh Biaya menggarap Sawah Sistem

| NO | KEGIATAN              | SATUAN             | COST    | JUMLAH TENAGA | TOTAL BIAYA |
|----|-----------------------|--------------------|---------|---------------|-------------|
| 1  | NGAWULUKU+NGANGLER    | BATA               | 200,000 | 100000        | 200000      |
| 2  | TEMPAT PABINIHAN      | 100 BATA 10 KILO   |         | 10            | 100 KG      |
| 3  | TEBAR                 |                    |         |               |             |
| 4  | NGAGALENGKEUN         | 100 BATA 2 ORANG   | 60,000  | 20            | 1200000     |
| 5  | NAMPINGAN             | 1 HARI             | 60,000  | 2             | 120000      |
| 6  | NGANGLER              |                    |         |               | 200000      |
| 7  | NGAGONAN/NGARARATA    | 100 BATA 1 ORAG    | 60,000  | 10            | 600000      |
| 8  | NYAPLAK               | 300 BATA 2 ORANG   | 60,000  | 6             | 360000      |
| 9  | TANDUR                | 100 BATA 5 ORANG   | 60,000  | 50            | 3000000     |
| 10 | MUPUK                 | 1KG/BATA=50KG      | 50      | 999           | 49500 KG    |
| 11 | NGALALANAK/NGASRUD 2X | 100 BATA/1 ORANG   | 60,000  | 10            | 600000      |
| 12 | GEMUK                 | 1KG/BATA=50KG      | 50      | 999           | 49950 KG    |
| 13 | NYEMPROT 2X           | 100 BATA 3TENG     | 35,000  | 30            | 1050000     |
| 14 | PANEN/DIBEULAH DUA    | BURUH NGILO        |         |               |             |
|    |                       | NGALA 1KTL 10 KILO | 10 KG   | 80            | 800KG       |
|    |                       | MIKUL 1KTL 4KG     | 4 KG    | 80            | 320KG       |
|    |                       | MITRA 7KG 100BATA  | 7 KG    | 10            | 70 KG       |
|    | TOTAL BIAYA           |                    |         |               |             |

GABUNG SAWAH BEBEDAHAN 100 BATA 8 KWINTAL 80 KWINTAL 8000 KG

# PkM Bidang Etnosains





# REFERENCES (EXAMPLE)

- Abdullah, A. S. 2009. Implementation of Spatial Data Mining using SAR-Kriging Model to Predict a Quality of Education in Indonesia. Unpublished. Dissertation. Yogyakarta: Universitas Gadjah Mada.
- Armstrong, M. 1988. *Basic Linear Geostatistics*. New York.
- Anselin, L., 1988, *Spatial Econometrics: Method and Models*, Kluwer Academic Publisher, the Netherlands.
- Besag, J. 1974. *Journal Royal Statist. Soc. B*, 36, 197-242.
- Boer , R. , 2012: Towards a Climate Smart Agriculture System ( Climate Resilience Agriculture ) , CCROM SEAP - IPB , 21hal .
- Box, G. E. P and Jenkins, W. L. 1976. *Time Series Analysis, Forecasting and Control*. Holden-Day. Inc., San Fransisco.
- Cliff, A.D., and Ord, K., 1975, Model Building and The Analysis of Spatial Pattern in Human Geography, *Journal Royal Statistics. Soc. B*, Vol. 37, p. 297-348.
- Cressie, N., 1993, *Statistics for Spatial Data*, John Wiley & Sons., Inc., New York.

- Ruchjana, B. N. 2013. *Space Time Modeling, A Development Study on Theory and Applications*. Paper Poster at 16th European Women Meeting. Bonn-Germany.
- Ruchjana, B. N. 2013. *Theory and Applications of Spatial Time Model*. Asian Mathematical Conference. Korean Mathematical Society. Busan-South Korea.
- Sekhar, S., Kazar, B. M. and Lilja, D. J., 2003, *AHPCRC Spatial Data Mining Tutorial on Scalable Parallel Formulations of Spatial Autoregression (SAR) Models for Mining Regular Grid Geospatial Data*, EECS Department, University Minnesota.
- Svetlana A. Borovkova, H.P. Lopuhaä, H. P. and Budi N. Ruchjana. 2008. Consistency and asymptotic normality of least squares estimator in generalized STAR model. *Statistica Neerlandica* Vol. **62**, NR. 4, pp 402-508.
- The Meteorology , Climatology , and Geofisika ( BMKG ) , 2009: Weather Forecast (accessed on February 24, 2014).
- [http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4\\_syr.pdf](http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr.pdf)

TERIMA KASIH