

Our Reference : UPM/INSPEM/AISMM/IMU/01

Date : 1st April 2016

Prof. Dr. Helge Holden

IMU Secretary
International Mathematical Union
NTNU Trondheim
Norwegen

Dear Professor Helge

APPLICATION FOR THE INTERNATIONAL MATHEMATICAL UNION FULL MEMBERSHIP

With reference to the above matter,

2. On behalf of the Malaysian Academy of Mathematical Scientists (AISMM), I hereby submit the application of Malaysia to become a Full Member (Group I) of the International Mathematical Union. Malaysia became Associate Member of the IMU in 2012. The mathematical activities in Malaysia, as well as the activities organized by our society have shown a very positive evolution during the years, as reported in the attached document
3. We strongly believe that a full membership of Malaysia in the IMU will reinforce the current development and give an important impulse to mathematics in Malaysia and the Asian region.

Thank you.

With best regards



PROF. DR. NOOR AKMA IBRAHIM

Secretary
Malaysian Academy of Mathematical Scientists (AISMM)

APPLICATION FOR IMU FULL MEMBERSHIP

Malaysia is a fast developing country and aspires to be a developed nation by 2020 in all fields including mathematics education.

In this respect, the Government of Malaysia has taken various steps and invested a lot of funds to enhance the field of Mathematics. For instance, from just one public university in 1957, when the country attained its independence, there are now twenty public universities. Five of these universities are accorded the status of Research Universities, four are Comprehensive Universities and 11 are Focused Universities in various fields. Private universities have also been given a thrust and currently there are twenty five private universities. University Colleges have also been set up and the current number is twenty two. All of these have been achieved within a short span of only 55 years. Mathematics are taught in all universities at the undergraduate level. All public universities offer postgraduate programs in mathematics. A number of private universities offer such programs of study.

The Government of Malaysia has also invested in human capital development to train mathematicians and many of them are sent to top overseas universities to acquire PhD or Masters Degree. As a result, the quality of mathematics that is taught in Malaysia is accredited worldwide.

Mathematicians in this country have also established strong collaborative linkages with many international universities. Regular national and international mathematics conferences, seminars and workshops are held in Malaysia to update on current research and to enhance collaborative ties. Research in mathematics is carried out in earnest in most Malaysian universities. A good number of journals are produced locally which attracts contributors from all over the world. High quality research papers are also produced by Malaysian mathematicians that are published in high impact factor journals.

Malaysia has also become a centre for excellent mathematics education, where a big number of overseas postgraduate students enroll in Malaysian universities. There is large enrolment from Middle East countries, Iran, Nigeria, Bangladesh, Indonesia, just to mention a few. The establishment of the Institute for Mathematical Research (INSPEM) in 2002 is also significant development where the institute is entrusted to conduct high-end research in mathematics.

INSPEM consists of 4 research laboratories and 1 service laboratory and is staffed with permanent researchers and associate researchers from all over the country. INSPEM has established strong linkages with many universities and several industries, locally and overseas.

The Government of Malaysia also allocates a reasonable proportion of its annual budget for research and teaching. These funds are available as research grants, scholarships, sabbatical leave allowances, etc.

Further details about mathematics education in Malaysia are provided herein.

1. Number of universities where mathematics is taught – 42

2. List of universities with significant research activities in mathematics:
 - a) Public Universities:
 - i) Universiti Malaya (UM)
 - ii) Universiti Sains Malaysia (USM)
 - iii) Universiti Kebangsaan Malaysia (UKM)
 - iv) Universiti Putra Malaysia (UPM)
 - v) Universiti Teknologi Malaysia (UTM)
 - vi) Universiti Teknologi MARA (UiTM)
 - vii) Universiti Islam Antarabangsa Malaysia (UIAM)
 - viii) Universiti Malaysia Sabah (UMS)
 - ix) Universiti Malaysia Sarawak (UNIMAS)
 - x) Universiti Pendidikan Sultan Idris (UPSI)
 - xi) Universiti Tun Hussein Onn Malaysia (UTHM)
 - xii) Universiti Malaysia Perlis (UniMAP)
 - xiii) Universiti Malaysia Terengganu (UMT)
 - xiv) Universiti Sains Islam Malaysia (USIM)

 - b) Private Universities:
 - i) Universiti Tenaga Nasional (UNITEN)
 - ii) Universiti Teknologi Petronas (UTP)
 - iii) Multimedia University (MMU)
 - iv) Monash University Malaysia (MUSM)

- v) University of Nottingham in Malaysia (UNIM)
 - vi) Universiti Tun Abdul Razak (UTAR)
 - vii) Curtin University Sarawak Campus, Malaysia (Curtin Sarawak)
3. Estimated Number of Professors in Mathematics in Malaysia
50
 4. Estimated Number of Research Mathematicians in Malaysia:
600
 5. List of Mathematical Societies in Malaysia
 - a) Malaysian Mathematical Sciences Society (PERSAMA)(680 members)
 - b) Malaysian Society for Cryptology Research (MSCR)(70 members)
 - c) Malaysia Institute of Statistics (ISM)(100 members)
 - d) Management Sciences and Operations Research Society (MSORM)(100 members)
 - e) Malaysian Academy of Mathematical Scientists (AISMM)(30 members)
 6. List of Well-known Mathematicians in the world wide mathematical community
 - a) Prof. Dato' Dr. Kamel Ariffin Mohd. Atan (INSPEM, Universiti Putra Malaysia)
 - b) Prof. Dato' Dr. Rosihan Md. Ali (Universiti Sains Malaysia)
 - c) Dato' Dr. Mohamed Suleiman (INSPEM, Universiti Putra Malaysia)
 - d) Prof. Dr. Ishak Hashim (Universiti Kebangsaan Malaysia)
 - e) Prof. Dr. Adem Kilicman (Universiti Putra Malaysia)
 - f) Prof. Dr. Isamiddin Rakhimov (Universiti Putra Malaysia)
 - g) Prof. Dr. Nor Haniza Sarmin (Universiti Teknologi Malaysia)
 - h) Prof. Dr. Maslina Darus (Universiti Kebangsaan Malaysia)
 - i) Prof. Dr. Ong Seng Huat (Universiti Malaya)
 - j) Prof. Dr. Suzeini Abdul Halim (Universiti Malaya)
 - k) Prof. Dr. Sahahrir Md. Zain (Universiti Kebangsaan Malaysia)
 - l) Assoc. Prof. Dr. Mat Rofa Ismail (Universiti Putra Malaysia)

6. Estimated Number of mathematical publications produced by mathematicians in Malaysia:
3,500 journal papers per year

7. List of Mathematical journals published in Malaysia:
 - a) Bulletin of the Malaysian Mathematical Sciences Society.
(Published by: Malaysian Mathematical Science Society)
 - b) Malaysian Journal of Mathematical Sciences
(Published by: Institute for Mathematical Research, Universiti Putra Malaysia)
 - c) Pertanika Journal of Science and Technology
(Published by: Universiti Putra Malaysia)
 - d) Journal Teknologi
(Published by: Universiti Teknologi Malaysia)
 - e) Journal of Physical Sciences
(Published by: Universiti Sains Malaysia)
 - f) Journal of Science and Mathematics Education in South East Asia
(Published by: RECSAM, Penang)
 - g) Journal of Science and Technology
(Published by: Universiti Tun Hussein Onn Malaysia)
 - h) Journal KALAM
 - i) Journal of Science and Mathematics
(Published by: Universiti Pengurusan Sultan Idtris)
 - j) Matematika
(Publisher: Universiti Teknologi Malaysia)
 - k) Sains Malaysiana
(Publisher: Universiti Kebangsaan Malaysia)
 - l) Malaysian Journal of Science
(Publisher: Universiti Malaya)

8. For the non-mathematicians, the following publications provide light reading materials on mathematics:
 - a) Discovering Mathematics
(Published by: Malaysian Mathematical Sciences Society)
 - b) MathsDigest
(Published by: Institute for Mathematical Research)

9. Malaysian mathematicians are actively involved in organizing conferences, seminars and workshops on mathematics. Appendix 1 lists down of Seminars and Conferences organized by Malaysian institutions

10. Malaysian-Italian Centre of Excellence for Mathematical Sciences (MICEMS) has officially been inaugurated in Malaysia. It will be spearheaded by the Institute for Mathematical Research (INSPEM) in UPM and the Department of Mathematical Sciences “Giuseppe Luigi Lagrange” in Politecnico di Torino (Polito), Italy to collaborate in international activities and expertise in Science and Mathematics at research institutes. MICEMS is the first institution in Malaysia that will give focus on research in the field of Mathematical Sciences such as algebra structure, functional analysis, mathematical physics, statistics and applications for the industry and the society.

11. Several Memoranda of Understanding have been signed between the Institute for Mathematical Research and foreign mathematical institutions. These are for the purposes of establishing networkings and collaborative research between the institutions. Our partners include:
 - a) University of Massachusetta, USA
 - b) Institute of Mathematics, Vietnamese Academy of Science and Technology (IMVAST)
 - c) Biomathematics and Statistics, Scotland (BioSS)
 - d) Candeo Resources Sdn. Bhd.
 - e) National Hydraulic Research Institute of Malaysia (NAHRIM)
 - f) Yildiz Technical University, Turkey
 - g) Institute of Mathematics, Uzbek Academy of Science, Uzbekistan

- h) University of Auckland, New Zealand
- i) Oxford Centre for Industrial and Applied Mathematics (OCIAM), University of Oxford,
United Kingdom
- j) Leap Energy Partners Sdn. Bhd.
- k) Politecnico di Torino, Italy
- l) CyberSecurity Malaysia

Adhering Organization

As required by the statute of IMU the Malaysian Adhering Organization is as follows:

Name and Address:

The Malaysian Academy of Mathematical Scientists.

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1. Annual National Simposium of Mathematical Sciences (SKSM) (Started since 1986)(latest: SKSM24 (2016))
2. Biannual International Conference on Research and Education in Mathematics (ICREM) (Organized since 2003 by Institute for Mathematical Research UPM, where it first began. ICREM5 in 2011 was organized by our Indonesian Partner ITB in Bandung, ICREM6 in 2013 was organized by our Vietnamese Partner IMVAST, Ho Chi Minh)(latest: ICREM7 (2015))
3. National and Biannual International Conferences on Cryptology (Started since 2007)(latest: Cryptology2016 (2016))
4. Annual Expository Quantum Lecture Series (EQuaLS) (Started since 2007)(latest: EQuaLS2016 (2016))
5. International Conference on Research and Mathematical Biology (ICMCB 2011)
6. International Conference on Mathematics Education and Research (ICMER 2010)
7. International Workshop on Mathematical Analysis (IWOMA)
8. Workshop on Disease Modelling (2008)
9. Day of Algebra Seminar (DoA)(Started since 2008)(latest: DoA7 (2016))
10. International Conference on Mathematical Biology (2007)
11. Expository Lecture Series on Fluid Dynamics (2005)
12. Lecture Series in Regression Diagnostics (2006)
13. International Workshop on Mathematical Analysis (2010)
14. National Seminar of Institute of Statistics Malaysia (2011)
15. Workshops on Mathematical Principles of Electromagnetic Prospecting (2011)
16. International Conference on Financial Mathematics and Numerical Optimization (FMNO) (2012)
17. A Short Course on Exploratory Data Analysis (2012)
18. Workshop on Theory of Dynamical Systems & Control Problems (2012)
19. Workshop on Numerical Analysis and Mathematical (2012)
20. Workshop on Risk Simulator (2012)
21. Workshop on Advancements in Cryptanalytic Techniques for Elliptic Curves Cryptosystem (2012)
22. Seminar on Philosophy and Mathematics Education 2012 (2012)
23. Workshop on Sequences Spaces and Convergency Problems (2012)

24. Asia-Pacific Conference and Workshop in Quantum Sciences (APCWQIS2012) (2012)
25. International Conference on Mathematical Applications in Engineering (ICMAE)(Started since 2012)(latest: ICMAE2014 (2014))
26. Joint Seminar On Statistics In Hydraulics (JoSSH)(Started since 2013)(latest: JoSSH II (2015))
27. Seminar and Workshop on Numerical Analysis (SAWONA)(Started since 2013)(latest: SAWONA 2016 (2016))
28. Lecture Series in Operations Research: Forecasting Methods and Applications (2013)
29. Biannual Statistics and Operational Research International Conference (SORIC) (Started since 2013)(latest: SORIC2015 (2015))
30. International Conference on Mathematical Sciences and Statistics (ICMSS) (Started since 2013)(latest: ICMSS2016 (2016))
31. International Conference on Science and Mathematics Education (CoSMEd 2013)
32. Biannual International Conference and Workshop on Mathematical Analysis (ICWOMA)(Started since 2014)(latest: ICWOMA 2016 (2016))
33. Regional Fundamental Science Congress (FSC)(Started since 2014)(latest: FSC 2015 (2015))
34. International Conference on the Analysis and Mathematical Applications in Engineering and Science (2014)
35. *Seminar Kebangsaan Pemantapan dan Penghayatan Matematik (SKPPM)* (Started since 2015)(latest: SKPPM2016 (2016))
36. Conference on Agriculture Statistics (CAS2015)(2015)
37. South East Asian Mathematical Society (SEAMS) School: Algebras and Their Applications (2015)
38. *Kem Matematik INSPEM bersama Sekolah Menengah Sains Tun Azlan Shah (SERATAS)*(Started since 2014)(latest: KMI-SERATAS 2016(2016))
39. Universiti Putra Malaysia Mathematics Olympiad 2016 (UPMO 2016)