**AAAG MONTHLY MEETING & SEMINAR SERIES**

**SEMESTER II, 2014/2015**

|  |  |
| --- | --- |
| Date/Day : | Thursday, 4 June 2015 |
| Time : | 8:30 am – 10:30 am |
| Venue : | Main Meeting Room, Department of Mathematical Sciences, Faculty of Science (C22-310) |

**TENTATIVE SCHEDULE**

|  |  |
| --- | --- |
| **Time** | **Speakers** |
| 8:30 – 9:00 am | **Prof. Dr. Nor Haniza Sarmin, AAAG RGL**  **“AAAG KAI JAN-MAY 2015”** |
| 9:00 – 9:30 am | **Assoc. Prof. Dr Mukhiddin Muminov**  **“ON SPECTRAL PROPERTIES OF A SCHRODINGER OPERATOR ON LATTICE AND ITS SOME OPEN PROBLEMS”** |
| 9:30 – 10.00 am | **Siti Afiqah Mohammad**  **“THE HOMOLOGICAL FUNCTORS OF BIEBERBACH GROUPS WITH QUATERNION POINT GROUP”** |
| 10:00 – 10:30 am | **Refreshment** |

**Organized by**

**Applied Algebra and Analysis Group (AAAG),**

**Frontier Materials Research Alliance**

**Universiti Teknologi Malaysia, Johor Bahru, Johor**

[**www.ibnusina.utm.my/AAAG**](http://www.ibnusina.utm.my/AAAG)

**ABSTRACT**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**ON SPECTRAL PROPERTIES OF A SCHRODINGER OPERATOR ON LATTICE AND ITS SOME OPEN PROBLEMS**



**Assoc Prof Dr Mukhiddin Muminov**

Department of Mathematical Sciences, Faculty of Science

Universiti Teknologi Malaysia

81310 UTM Johor Bahru, Johor

[mukhiddin@utm.my](mailto:mukhiddin@utm.my)

**Abstract**

We consider two and three -particles of Schrodinger operators on lattice. We discuss some obtained results of spectral properties of these operators, also we will give some unsolved and open spectral problems of these operators.

**Keywords:** Schrodinger operators; spectral properties

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**ABOUT THE SPEAKER**

**ASSOC. PROF. DR. MUKHIDDIN MUMINOV**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Mr. Mukhiddin Muminov is currently an Assoc. Prof. at Universiti Teknologi Malaysia (UTM). Mukhiddin has ten-twenty years experiences as an academic staff at Samarkand State University (Uzbekistan). Since 1998, he has PhD Qualification in Physics and Mathematics (Mathematical analysis, Institute of Mathematics, Academy of Sciences of Uzbekistan).

His research areas of expertise are Mathematical Physics, Functional Analysis, Scattering theory, Spectral analysis of the linear operators. He also has interest in the area of a boundary value problems in differential equations.

Since 1997 He participated several Research projects in European and local (Uzbekistan). He has more than 30 research papers published in Prestigious World journals. Currently, he has research contacts with German, Spain, Brazil and Russian researchers. He has participated in two research (FRGS) projects in Malaysia.

His recent publication is in Scopus journal as stated below:

**Mukhiddin I. Muminov**, Tulkin H. Rasulov, “On the eigenvalues of a 2x2 block operator matrix”, *Opuscula Math*, 2015. 35 (3): 371-395.

**ABSTRACT**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**THE HOMOLOGICAL FUNCTORS OF BIEBERBACH GROUPS WITH QUATERNION POINT GROUP**



**Siti Afiqah binti Mohammad**

Department of Mathematical Sciences, Faculty of Science

Universiti Teknologi Malaysia

81310 UTM Johor Bahru, Johor

[afiqahmohammad91@gmail.com](mailto:afiqahmohammad91@gmail.com)

Supervisor:

**Prof Dr Nor Haniza Sarmin**

Department of Mathematical Sciences, Faculty of Science

Universiti Teknologi Malaysia 81310 UTM Johor Bahru, Johor

[nhs@utm.my](mailto:nhs@utm.my)

**Abstract**

The homological functors of a group including the nonabelian tensor square, the exterior square, the Schur multiplier, and the symmetric square were originated in the homotopy theory as well as in algebraic K-theory. This research is about the computations of the homological functors of all Bieberbach groups with quaternion point group of order eight. A Bieberbach group is a torsion free space group. It is also an extension of a free abelian group of finite rank by a finite group. In this talk, the research background, literature review, research methodology and the status of the research will be presented.

**Keywords:** Homological Functors; Bieberbach groups; Quaternion point group

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_