

IRG Activity Report

Date of Submission: 09 / 06 /2011

1. IRG code and name of IRG

- 1) IRG code: IRG - 04 - 2005_____
- 2) Name of IRG: **Scale Free Characteristics of the Traffic Network (SCAFT)**

2. List of research members

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3. Purpose and Mission of IRG

To apply the concepts and methods from the emerging science of complex network and superstatistics to the design and planning of a futuristic globally integrated transportation system.

4. Achievements of IRG in 2010-2011

- 1) Paper, report and book: (Title, Authors, Year, Name of the Journal, etc.)
(Please include the paper(s) submitted to 2011 EASTS conference.)
(You don't need to attach the files.)
Mojarrabi, B. Gwal, A.K. and Mojarrabi, B. (2011) Eigenstructure and Exergy Calculations for Superstatistical Integration of Global Transport and Urban Systems,

to be published in Proceedings of the Eastern Asia Society for Transportation Studies, Vol.8,

2) Seminar, symposium and special session: (Title, Date, Venue & abstract)

3) Group meeting:
(Date, Venue & abstract)

4) Result of application for the research grants:
(Name & result)

5) Promotional activities of your IRG:
(Homepage, Newsletter, Mailing list etc.)

Homepage: www.scaft.info

Professor Gwal attended Univ of Massachussets scientific forum Promoting IRG.

5. Will you continue your IRG's activity after 2011 EASTS conference?

Yes

The focus of our study is:

- 1) To further study Exergy based objective optimization methods for large scale integrated transport systems.
- 2) To compare the dynamics of interacting local structures around the vicinity of two hubs namely Flinders University and Marion shopping center in South Australia.
- 3) To understand the relation between Exergy and Structural Factor of Common Faculty.
- 4) To calculate the eigenvalue Spectral Gap required for optimizing of the cluster merging process within superstatistical cells.

6. Future research plan and including time frame with the following items:

- Possibility to hold seminar and symposium (Date & Venue)
We are considering to build twitter and facebook accounts that are linked to IRG SCAFT web site.
- Special considerations to young researchers