

Report on a
Noncommutative Geometry Workshop

June 21-24, hosted by the Centre for Noncommutative Geometry and Topology at the University of New Brunswick, Fredericton. We had 4 guest speakers: Michael Artin (MIT), Michel Lapidus (UC-R), A.P. Balachandran (Syracuse), and Pavel Hajac (Polish Academy of Sciences). Artin, Lapidus, and Balachandran gave a series of 3 lectures each, Hajac gave one lecture of 1 1/2 hours. The lectures were followed by a lively discussion period, on the 24th. The workshop was attended by 16 students from Canada and the USA (plus one or two young professors).

We thank AARMS, the Department of Mathematics at UNB, the Dean of Science at UNB, and the VP-Research at UNB for financial support.

Schedule:

Thursday (June 21)

10:30am-11:30am Artin
1pm-2pm Balachandran

Friday (June 22)

10:30am-11:30am Artin
1pm-2pm Balachandran
2:30pm-3:30pm Lapidus
4pm-5pm Hajac

Saturday (June 23)

10:30am-11:30am Artin
1pm-2pm Lapidus
2:30pm-3:30pm Lapidus

Sunday (June 24)

10:30am-11:30am Balachandran
1pm-2pm discussion period

Artin described results on domains of Gelfand-Kirilov dimension 0 and 1 and discussed conjectures on graded domains of dimension 3.

Balachandran discussed the Moyal plane, and non-commutative geometry in physics, especially in the search for a theory of quantum gravity.

Lapidus discussed fractal dimension by spectral methods, applications to number theory, and the inverse spectral problem for self-similar fractals.

Hajac discussed new results on the join construction for compact quantum groups.