

Report by Renaud Leplaideur on Cimpa school “Aspects of Dynamical Systems”, Kathmandu Nepal November 3rd-16th

# 1 Scientific Report

## 1.1 Quantitative indicators

### 1.1.1 Participants

- 30 students or young doctors from neighborhood countries were invited (with travel and living expenses supported by the school) and 2 more people with travel expenses at their own charge. Only one fully supported student did not attend the conference, and one partially-supported. Hence, in term of participation this is one of the biggest school organized by CIMPA.
- Among foreign participants, 13 are female which represent almost 50%.
- Foreign (neighborhooding) participants came from Bangladesh (1), Buthan (3), India (9), Indonesia (1), Iran (1), Pakistan (9), Philippines (2), Thailland (3).
- 33 Nepalese students or professors from 12 different campuses or institutions attended the lectures (among them 5 females). Again, this means that the number of people attending the courses is very large.

### 1.1.2 Lectures

- The school’s duration was 2 weeks. The first week was essentially devoted to basic/primary level courses on dynamical systems and ergodic theory. The second week was devoted to more high level courses.
- 28 talks of 1:30 hour each has been given, plus 8 exercises sessions at the end of the afternoon of 1:00 hour each.
- The spectrum of lectures is quite large:
  1. a series of 2 mini-courses in Complex Dynamics (4 lectures by A.P.J. Singh from India and 5 lectures by W. Bergweiler from Kiel-Germany),
  2. a series of 2 mini-courses on Group actions (4 lectures by Dani and 4 lectures by R. Shah),
  3. a series of 3 mini-courses on smooth ergodic theory (4 lectures by S. Luzzatto from ICTP-Italy, 4 lectures by J. Aaronson from TelAviv Univ. -Israel and 5 lectures R. Leplaideur from Univ. Brest-France).
- All invited participants attended all the lectures and exercises sessions, perhaps less for the Nepalese participants due to constraints (teaching, help for organization).

## 1.2 Qualitative Indicators

- Lectures in Complex dynamics agree with local competences (Prof. Uprety who delivered one talk and Prof. A.J. Singh who was the local organizer for the school). Group-action dynamics were taught by Indian professors which represents a chance of good cooperation in the future, especially for PhD-students co-orientation.
- Lectures in smooth ergodic theory presented new viewpoints on Dynamical Systems to the Nepalese students and also perhaps to other foreign participants.
- Except one, all the Pakistanis participants are from the same city (Lahore) where lecturers and organizers for this CIMPA school (Leplaideur, Luzzatto and Waldschmidt) are involved to create a kernel of people working in Dynamical systems (via ASSMS). We expect that all these students will continue to work on this topic together.
- Notes of lectures are obtainable on local web site for the school.
- All the feedbacks from students go in the same direction. First week's lectures were easier than second week's, which is coherent with the purpose. We expect students to continue to work by their own to read notes.
- Conversely, all the speakers enjoyed the students, their interests and smart questions.

## 1.3 Expecting consequences

- As said above, we expect the creation of some kernel in Lahore. We suggested to participants to organize there a weekly seminar, for instance reading notes of the courses from this School.
- Continuation via future invitation of some lecturers for delivering longer courses at TU or in Lahore (for instance).
- The local organization committee was brand new. It has shown some weaknesses, in particular sometimes some lack of anticipation but globally things ran well. Local people intend to renew the event, doing better and benefiting this first experience. It would be good for local cooperations in that region <sup>1</sup> that this event becomes recurrent.

## 2 Logistic report and some financial facts

- The hotel offered conditions sensibly less comfortable than the ones promised. There was not at all 24h/day hot water, perhaps not even water. Internet was not working in the rooms and was very often down in the common room. Food was not varied and despite the price had been negotiated for vegetarian or non-vegetarian meals, there was rarely meat.

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<sup>1</sup>and also because it is a way for mathematicians from India and Pakistan to meet each others.

- The financial negotiation with the hotel was finally led the last week and was actually not very pleasant. As bargaining is part of the local culture, it gave somehow the unpleasant feeling that the owner of the hotel was expecting to extract from western funds as much as possible. In addition, the exact amount actually payed by local organizers is unknown even if some estimate had been given. In case of renewal for the even, we recommend either to find another hotel or to get a clear negotiation with written engagements much before the event.
- The final budget is among 15k€ payed by CIMPA, 4k€ payed by ICTP and 2k€ payed by IMU. Personal grants have payed tickets for 4 European speakers (around 1.3k€ each). We estimate the local support around 2.5k€.