

Report on the RAGAAD colloquium
Algebra Geometry and Algorithms for young mathematicians in Africa
Niamey (Niger) Université Abdou Moumouni. February 21-25, 2005

The meeting took place at the Departement of Mathematics of the Abdou Moumouni University. It was supported by ICTP (Math. group), ICTP (OEA), GIS SARIMA, Fondation Schlumberger, Ministère de l'enseignement secondaire, supérieur, de la science et de la technologie, Assemblée Nationale du Niger, Chambre de Commerce, University Abdou Moumouni, CNUT,

Scientific aspects.

Promoted by the RAGAAD, a Regional D.E.A. (Diplome d'Etudes Approfondies), (option Algebra and Geometry) started in Abdou Moumouni University in October 2004. There are 6 students, 3 from Niger and 3 from other African countries (Mali, Guinee, Tchad).

The aim of the meeting was to present some possible subjects for a "memoire de D.E.A." and possible further research for the students. Each speaker was requested to give a hour and half talk starting as a survey talk on a domain and ending with a quick presentation of a recent research work on that subject.

There were 16 talks: 8 talks presented by teachers from 6 subsaharian african countries and 1 from Magreb, 7 by european teachers (France, Italy, Sweden) and one by prof. Bangaya who was born in Rwanda and lives in U.S.A. Three of these african teachers were from Niamey University.

Talks were given in french and in english, some ones in both languages.

Most teachers followed the indications, even if some presentations were shorter than expected and some lacked adequate survey aspects.

The scientific level was, in our opinion, very good on the whole and a lot of subjects were touched, including abstract algebra, differential geometry, algebraic geometry, complex and real analytic geometry, algorithms in linear algebra, metric estimates in real algebraic geometry, sums of squares, combinatorics

There were about 65 people, attending the meeting, mostly young people. They represented 14 african countries (Algérie, Benin, Burkina Faso, Camerun, Congo, Côte d'Ivoire, Guinée, Mali, Morocco, Mauritanie, Niger, Nigeria, Senegal, Tunisie), and 4 countries from outside Africa (France, Italy, Swedom, U.S.A.). The six DEA students in Niamey attended the whole workshop. Six from the fifteen members of the local Math. Departement participated to the meeting (i.e. the totality of people active in research in algebra and geometry).

Each teacher was requested to provide material (including the proposed paper and related articles) in 15 copies that were distributed among the african delegations.

Concerning the D.E.A. students, after the end of the meeting, on Monday February 28, they were requested to present an ordered list of preferences on the papers presented in the meeting.

After a short discussion each student got an advisor who will follow him while preparing the D.E.A. Memoire. Also a local tutor was found to help each one in Niamey University. Contact with

the foreign advisor will be kept by e-mail.

When possible, the first one in each student list was selected as advisor, according with the rule that each advisor should not get more than one student

The selected advisors are: J. Abdeljaoued, F. Acquistapace, F. Broglia, M. Coste, H. Lombardi, M.-F. Roy. The local advisors in Niamey are M. Bazanfare, D. Garba Bellko, O. Moussa, M. Idi Salou.

Note that 2 teachers from subsahrian Africa (Côte d'Ivoire et Niger) were also indicated by the students. and were not selected by the criteria above since they did not appear as ranked high enough in the students list.

Institutional aspects and national relevance of the meeting.

Both an opening and a concluding Ceremony took place.

To the first one participated the President of the National Parliament, the Minister of Education, one of the coordinators of the RAGAAD, the Rector of Abdou Moumouni University, the Dean of the Faculty of Science, and the Director of the Dept. of Mathematics. Prof. Katambe (Niamey University) was the chairman. During her intervention, one of the RAGAAD coordinators, Prof. M.-F. Roy, asked for a larger support of the Government both from the financial and the institutional

point of view in the development of higher education in Niger at doctoral level. She also asked for a financial contribution to the meeting itself. The President of the Parliament was very interested and expressed his views of education as an important way to come out from under-development. Note that the President of the Parliament declared mathematics was his first specialization.

At the second ceremony, the vice rector of the university, the dean of the faculty, Theodore Tapsoba from Burkina Faso (the other RAGAAD coordinator) and Cyprien Gnanvo from Benin made speeches. A report of the activities and several recommendations (among them the need of local support for the DEA in the future) was read. The attache culturel of the french embassy made a short visit at the end of the workshop to congratulate the organizers and promise a support to the math departement in 2005 (cooperation Rennes Niamey).

Both Ceremonies were reported in the television news with remarkable emphasis. Also, an interview of the french RAGAAD coordinator was transmitted.

During the workshop the responsables for the different countries of the RAAGAD meet twice to discuss passed and further activities and to listen to difficulties or necessities presented by the students.

Among the activities a course of English was proposed, to be done before one of the next Ragaad meeting planed in South Africa.

The activities of the I.S.P. in Sweden were presented.

Local Organisation of the RAGAAD meeting.

Participants were hosted in hotels, students houses or bed and breakfast. The local organisers

provided transport from the airport to places of accomodation and from places of accomodation to the University and back.

Lunches were taken by all the participants to the workshop, including technical staff, at one of the University restaurants. Menus were well prepared and adequate. Cafe and soft drinks were included.

A shuttle bus was provided to the restaurant and back.

There was a coffee breaks in the morning and fresh mineral water during the conferences and afternoon break.

The punctuality in the conference program and in the bus service and the restaurant were perfect.

Internet access was provided from 1 to 3 p.m. each day, on Campus. Participants got a folder with a block notes, a pen and a copy of the program with abstracts.

The final conference dinner in Grand Hotel was characterized by excellent local food and a warm friendly atmosphere.

Mahaman Bazanfare, Fabrizio Broglia, Issoufou Katambe, Marie-Francoise Roy