

Program DYNAMICAL SYSTEMS: GEOMETRIC STRUCTURES AND RIGIDITY

Time: July 7 --July 26, 2008

Place: Banach Center at Bedlewo, Poland

The program will include summer school (first two weeks) and research workshop. (third week).

The participants of the school will be encouraged to stay for the workshop.

Workshop participants will be encouraged to arrive during the second week of the program to attend the later, more advanced lectures in the courses. Facility will function during the weekends.

SCIENTIFIC COMMITTEE;

A. Katok (Penn State) (Chair)

G. Forni (Toronto)

G. Margulis (Yale)

F. Przytycki (IMPAN Warsaw)

R.Spatzier (Michigan)

ORGANIZING COMMITTEE:

F.Przytycki (IMPAN) (Chair)

K.Fraczek (Torun)

B.Kalinin (South Alabama)

A.Katok (Penn State)

M.Rams (IMPAN)

SUMMER SCHOOL (July 7--21)

Tentatively each course will consist of six double-length lectures (two 45-minute parts with a break).

As a rule, the first week will be dedicated to background and foundations and the second to more advanced topics of interest to both students and experts.

Each school participant will be expected to attend four or five courses.

COURSES AND LECTURERS (subject to modification and possible change):

1.Group representation methods in dynamics of homogeneous actions

G. Forni, L. Flaminio

2. Cocycles in dynamics: geometric methods

V. Nitica

3. Differentiable rigidity of group actions

R. Spatzier, D. Damjanovic

4. Rigidity in holomorphic dynamics of one variable (probably will be split in two):

Weixiao Shen, S. van Strien and O. Kozlovski

5. Rigidity in dynamics of several complex variables

N. Sibony, T. C. Dengh

6. Global measure rigidity for non-algebraic actions

B. Kalinin, F. Rodriguez Hertz

7. Smooth conjugacy in hyperbolic dynamics

A. Gogolev, M. Guysinsky

8. Harmonic analysis, number theory and dynamics

I. Laba

THE WORKSHOP (July 21--25)

will feature about 25 one-hour talks on more advanced aspects of these and related subjects by leading experts in the field.

THE BEDLEWO BANACH CENTER FACILITY and its surroundings:

The Conference Center of the renowned Banach Center is located at Bedlewo (pronounced Bendlewo), 30km from Poznan, at the edge of the one of the most picturesque spots in Poland outside the mountains: The Wielkopolski (Great Poland) National Park.

The Center is located on the grounds of the estate of one of the greatest Polish historical noble families--the Potockis.

Its centerpiece is the 19th century palace which has been maintained at a reasonable degree of repair and is presently used as the dining hall, the bar, the music facility and as a supplementary place for discussions.

Both the living quarters and the lecture rooms are located in a nearby complex, partly reconstructed from the stables, the carriage shed and the servants' quarters and partly built anew. The living quarters are all very good and a fairly large number of suits can be rated as excellent.

There is space for up to 120 participants.

There are two fully--fledged lecture rooms, one sitting about 80 people and the other with space for 120 but long and narrow and it would also be comfortable for 80 or 90 so that the part in the very back should not be used.

Two more rooms can be also used for lectures, otherwise one being the banquet hall, that other a discussion room.

Due to the size of the facility smaller events are doubled. As explained above there are adequate facilities for running two parallel events. The summer school is planned for 50 to 60 participants. For the week of July 7 there will be the parallel event in "Phenomena in high dimension" which in fact may be of interest for the school participants, with people like Jean Bourgain participating.

For the second week it is likely and for the third week definitely the program will have the whole center for itself.

Computer facilities are adequate. Internet connection will be upgraded by the time of the program.

The grounds are parklike and quite big and merge into a forest leading to a lake. Nearby village has little to recommend and bus service from there is not adequate. The institute will organize transportation of participants to and from Poznan on arrival and departure. Taxi to Poznan is available at about \$30 and can be shared by three or four people. Poznan (population 600000) is one of the most attractive cities in Central Europe.

FUNDING: Basic funding comes from the Banach Center.

The Center sets the charge for participation at the very low level compared to US and EU costs and contributes one third of these charges.

Funding for the remainder of local expenses and for travel expenses is expected to come from a variety of EU, Polish and US sources.

RELATED EVENTS:

This program is planned as the centerpiece of a "Modern dynamics summer in Central-Eastern Europe" which will also include a general dynamical systems conference

in Bedlewo on the week preceding the program (June 30 --July 5) on the occasion of the sixtieth birthday of Michal Misiurewicz and a week-long conference in Romania (exact location to be determined) either in the week immediately after the Bedlewo workshop (July 28--August 2) or a week later (August 4--9). The program of the Romania conference will be related to that of the Bedlewo workshop but will include several other directions including an interface with C*-algebras.