

Report of the evaluation committee on the scholarly activity of the Mathematics Institute of Silesian University in Opava

Members of the committee. The evaluation committee consisted of the following persons. Their research fields are given in italics.

- Prof. RNDr. Oldřich Kowalski, DrSc., Mathematical Institute, Charles University, Prague, Czech Republic
differential geometry, especially Riemannian and affine geometry
- Prof. Dr. Ludwig Reich, Institut für Mathematik, Karl-Franzens-Universität Graz, Austria
differential equations in the complex domain, functional equations, iteration theory
- Prof. RNDr. Lubomír Snoha, DrSc., Department of Mathematics, Matej Bel University, Banská Bystrica, Slovak Republic (chair),
dynamical systems, especially topological dynamics and low dimensional dynamics

Scope of the evaluation. The evaluation applies to the institute's conception of research activity in general as well as to the individual faculty members of the three departments of the institute. The previous evaluation was in 2007, therefore a special attention is paid to the period of time 2007-2012. Exempt from the evaluation are graduate students, both full-time and part-time, and two visiting professors and one postdoc on project-funded visiting positions (their materials were nonetheless provided for the use of the evaluation committee in connection with the first goal of the evaluation described below). In the opinion of the evaluation committee, the persons who have only part-time positions are not eligible for the evaluation either (especially since they also have heavy teaching loads). The committee nevertheless includes some comments on such persons into the report.

The goal of the evaluation. The committee was asked to provide:

- an overall assessment of the conception of the institute's research activity, including possible specific recommendations towards conceptional or organizational changes for its further development;
- assessment of the individual faculty members of the above-mentioned research part of the institute from the point of view of their contribution towards the excellence of the research activities of the institute publication productivity and quality, level of international collaboration, or their overall perspective ("scientific promise") for further development of the research activity of the institute. The envisaged outcome in this part of the evaluation is a ranking of the evaluated faculty members into several categories (whose number is left to the committee's judgement – at least three, according to their performance, from the best to the worst).

Evaluation method. The members of the Committee individually studied, in advance, the documentation provided by the Institute resp. the individual researchers, as well as databases on the web. The meeting of the committee at the Mathematical Institute at Opava was held on April 17-18, 2012. The members of the committee discussed their views and then interviewed the researchers and the management of the institute. After the interviews, the Committee discussed the scores and comments. Then the final assesment was made and a preliminary version of the report was written. The text of the report was finalised through e-mail exchange in the next days.

In order to systematically grade the scientific quality of their research, the committee adopted, after a discussion, the following scale for ranking the individuals:

- **1 (Excellent)** Research at a high international level, of international interest with broad impact within its field and with substantial ratio of high quality publications, also in internationally leading journals. The researcher is internationally known as one of the leading experts at least in a subfield of his/her interest. The researcher publishes with good frequency, also at present. It is expected that the high quality and the frequency of outputs will be preserved in next years.
- **2 (Very good)** Research at an international level with impact within its field and with a reasonable ratio of high quality publications in internationally well-known journals. The researcher has an international reputation within the field. The researcher publishes with good frequency, also at present. It is expected that the quality and the frequency of outputs will be preserved in the next years.
- **3 (Good)** Research that is of good standard and impact and at least partially published in well-known journals. An adequate scientific contribution is required (also after the previous evaluation in 2007). There is a hope for improving the situation in near future.
- **4 (Acceptable)** Research with infrequent research outputs of good standard during a longer period of time, the research activity of the individual researcher contributes to the effort of the Institute in the field of science only to a limited extent.
- **5 (Insufficient)** Very low number of research publications during last 10 years. The research activity of the researcher contributes to the effort of the Institute in the field of science only to a negligible extent.

**Assessment of the individual faculty members
of the research part of the Institute**

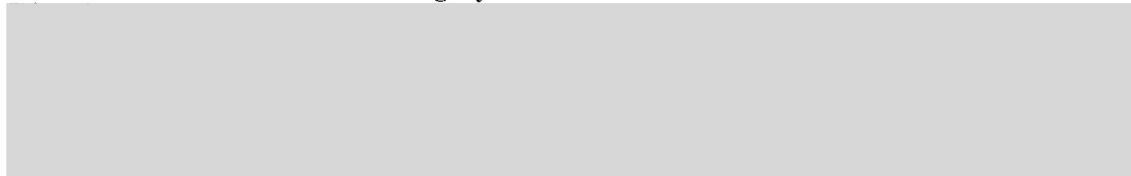
Department of Geometry and Mathematical Physics

Doc. RNDr. Tomáš Kopf, PhD. (head of the department) – **category 4**

Doc. RNDr. Michal Marvan, CSc. – **category 2**

Doc. RNDr. Artur Sergeyev, PhD. – **category 1**

RNDr. Hynek Baran, PhD. – category 3

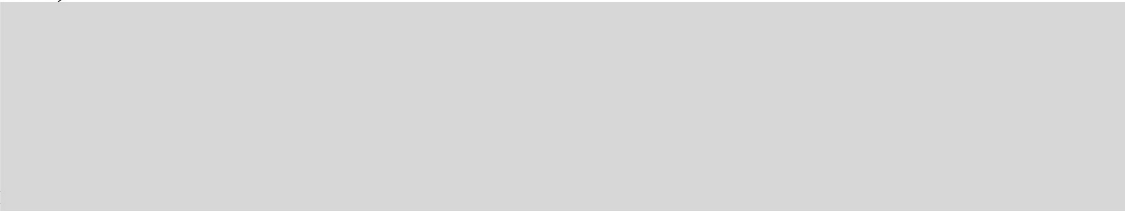


RNDr. Oldřich Stolín, PhD. – category 5

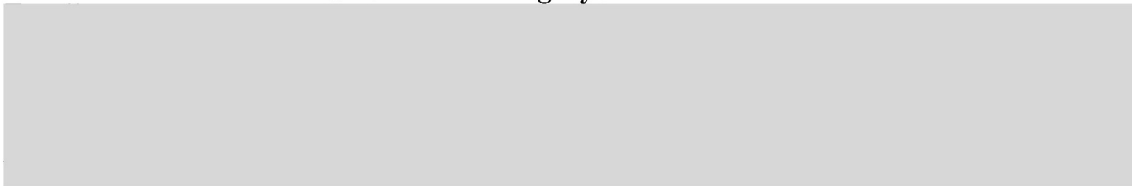


Department of Functional Analysis and Differential Equations

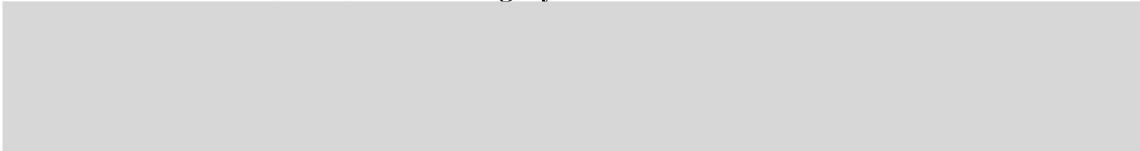
visiting prof. Vladimir Iosifovič Averbuch, DrSc. (head of the department, part time job, 70%)



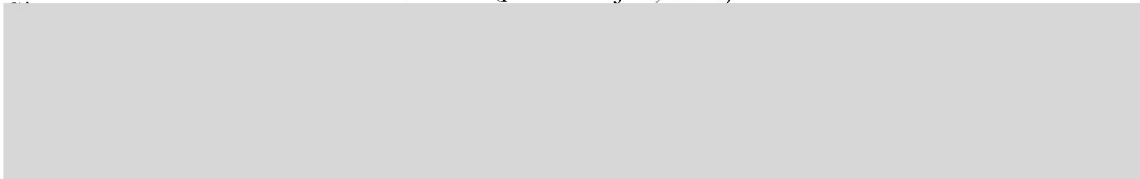
Prof. RNDr. Miroslav Engliš, DrSc. – category 1



Doc. RNDr. Jana Kopfová, PhD. – category 2



Doc. RNDr. Kristína Smítalová, CSc. (part time job, 50%)



RNDr. Petra Kordulová, PhD. – category 3

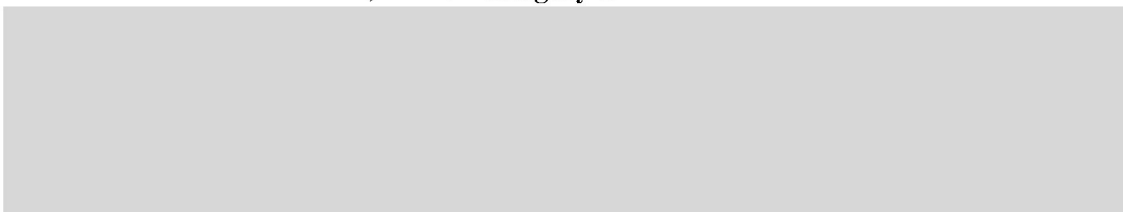


Department of Real Analysis and Dynamical Systems

Doc. RNDr. Marta Štefánková, PhD. (head of the department) – **category 1**



Prof. RNDr. Jaroslav Smítal, DrSc. – **category 1**



Doc. RNDr. Zdeněk Kočan, PhD. – **category 2**



RNDr. Karel Hasík, PhD. – **category 4**



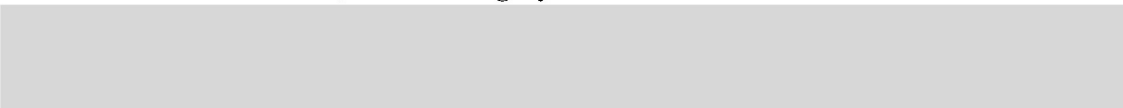
RNDr. Veronika Kurková, PhD. – **category 3**



RNDr. Michal Málek, PhD. – **category 2**



RNDr. Michaela Mlíchová, PhD. – **category 2**



Overall assessment of the conception of the institute's research activity

The research activity of the Mathematics Institute and the overall results obtained since the last evaluation in 2007 are very good. Among the researchers there are two outstanding

internationally well known mathematicians, Miroslav Engliš and Jaroslav Smítal and two very good younger mathematicians, Artur Serdyeyev and Marta Štefánková.

The average publication activity is good and most of the members of the research part of the Institute are regularly attending conferences and visiting relevant institutions abroad, very often as invited guests. Some of the papers written by the members of the Institute appear even in leading world journals with high impact factor. There is a good number of citations of the publications of members of the institute.

The research cooperation with mathematicians from outside is high and visible in the publications. The evaluation committee recommends to support especially longer visits (a semester or longer) of researchers to universities or research institutions abroad with the aim of bringing joint publications and new topics for the research. This would help, in general, to avoid that some researchers keep too long to a too narrow subject.

Conversely, the Institute should have possibility (without too much bureaucracy) to invite people for longer stays. Currently there are two such visiting professors here, namely Sergei Trofimchuk and Iosif Krasil'shchik who already begin scientific collaboration with members of the Institute. It would be good to find, in the future, sources for organizing graduate schools, in particular for doctoral students and young researchers, by means of inviting outstanding lecturers from outside who would give detailed courses.

The number of research directions reflected also by the names of the departments is appropriate for an institute of this size. Therefore we believe that the present structure of the Institute with three research departments is appropriate. In each of these departments one can find excellent and good mathematicians which guarantees a success of the research work in the future. We recommend that the departments do not differ too much in number of active researchers. This recommendation does not exclude that the Institute could be reorganized in the future.

In order to maximize research outputs of highest possible quality, the management of the Institute should think about the possibility to make larger differences between researchers from the point of view of their teaching loads.

The evaluation committee appreciates that the Institute has regularly, twice a year, „outside meetings“ where, among others, researchers and PhD students are strongly invited to report on their newest results. We believe that possible critical remarks that they have to face there are stimulating for their work.

Opava, April 25th, 2012



Prof. RNDr. Oldřich Kowalski, DrSc.



Prof. Dr. Ludwig Reich



Prof. RNDr. Lubomír Snoha, DrSc.