

International Conference  
**New perspectives in the theory of function spaces and their applications**  
Mathematical Research and Conference Center Będlewo/Poland  
*September 17-23, 2017*

**Second Announcement**

Dear Colleague,

we have received your preregistration for the above conference with great pleasure.

The aim of the conference is to concentrate on new developments and results in the theory and its applications. The topics we have in mind are:

- new smoothness and regularity concepts,
- high-dimensional approximation and integration,
- approximation of solutions to operator equations,
- existence and regularity of solutions of (non)-linear PDE,
- compactness and concentration phenomena in function spaces,
- function spaces in complexity.

We intend to bring together many young and established scientists from various fields and from countries all over the world to present their latest results, to exchange new ideas and to step forward collaboration.

The conference is co-organised and sponsored by the Stefan Banach International Mathematical Center, the Warsaw Center of Mathematics and Computer Science, the Friedrich Schiller University Jena and the Adam Mickiewicz University Poznań.

We thank you for your interest and would like to give some further information.

**1. Lectures**

The programme of the conference consists of invited lectures (50 minutes) and further talks given by the participants. The main lectures are the following (preliminary titles):

- **Marcin Bownik**, *University of Oregon / USA*  
"Smooth orthogonal projections and decomposition of function spaces on Riemannian manifolds"
- **Monique Dauge**, *Université de Rennes 1 / France*  
"Convergence of asymptotic series in singular perturbation problems"
- **Lars Diening**, *University of Bielefeld / Germany*  
"Nonlinear Calderon-Zygmund theory"
- **Jacek Dziubański**, *Wrocław University / Poland*  
"Hardy spaces associated with semi-groups of linear operators"
- **Aicke Hinrichs**, *Johannes Kepler University Linz / Austria*  
"Discrepancy and Integration in Function Spaces"
- **Thomas Kühn**, *University Leipzig / Germany*  
"Optimal approximation of smooth functions on high-dimensional domains"
- **Pierre Gilles Lemarié-Rieusset**, *Université d'Évry / France*  
"A new approach to parabolic Morrey spaces for PDE's"
- **Pencho Petrushev**, *University of South Carolina / USA*  
"Hardy spaces associated with non-negative self-adjoint operators"

- **René L. Schilling** , *TU Dresden / Germany*  
“Function Spaces as Probability Spaces”
- **Andreas Seeger**, *University of Wisconsin, Madison / USA*  
“Square functions with independent increments and Sobolev spaces on the real line”
- **Winfried Sickel**, *Friedrich-Schiller-University Jena / Germany*  
“Approximation of Mixed Order Sobolev Functions: Asymptotics, Preasymptotics, and  $d$ -Dependence”
- **Hans Triebel**, *Friedrich-Schiller-University Jena / Germany*  
“The use of function spaces in hydrodynamics and chemotaxis”
- **Jan Vyříral**, *Charles University Prague / Czech Republic*  
“From function spaces to machine learning”
- **Dachun Yang**, *Beijing Normal University / China*  
“Pointwise and Ball Average Characterizations of Function Spaces”

We received many further applications for talks and try to arrange the program as convenient as possible. But surely we cannot avoid parallel sessions taking place in the afternoons. Moreover, a small number of talks will be selected in advance and granted an extended length.

We ask all participants (who have not yet done this) to send us titles & abstracts of their talks **by June 15, 2017** (titles) and **by August 15, 2017** (abstracts), at latest. There will also be an opportunity for ad hoc -seminars.

The lecture rooms will be equipped with overhead projector, data projector + laptop, and a small board.

You can have a look at the (preliminary) list of participants and (in due time) on the corresponding abstracts via our web-site.

## 2. Venue

The Conference will take place in the

### **Mathematical Research and Conference Center Będlewo/Poland**

<https://www.impan.pl/en/activities/bedlewo-conference-center/about-center>

situated in a beautiful countryside not far from Poznań.

## 3. Registration

You will receive a separate Email within the next days where we ask you to confirm and complete your details for the registration. As soon as you reply to this email to us

**[npfsa2017@uni-jena.de](mailto:npfsa2017@uni-jena.de)**

your registration becomes binding and we shall reserve the accommodation according to your wishes then. You should reply to this confirmation message by

**June 15, 2017**

at latest.

Please note, that we cannot guarantee that everyone who applied for a single room can have it, because the total number of rooms is restricted (and we shall have a lot of participants). So please read your confirmation message carefully ! We apologise for any inconvenience this may cause you in advance.

## 4. Lecture Notes

We plan to offer all speakers of this conference the possibility to send us their material, slides etc. afterwards (preferably in **pdf**). Alternatively also a (closely linked) paper would be welcome.

We collect all this material (or links to your personal web pages) and “publish” it on a special web page of this conference such that participants can download the files.

You may contact us if you have any question.

## 5. Costs & Payment

The accommodation is arranged in single and double rooms with full board (*buffet breakfast, lunch and dinner*). The price, including also the conference fee, shuttle service, conference excursion, and conference dinner, is **300 €** per person for the whole week. The deadline for transferring the money to our conference account is

**August 15, 2017.**

A reduced price of **280 €** (single room) and **265 €** (double room) applies to participants who pay

**before June 15, 2017.**

In any case it must be paid by bank transfer only and in advance, where bank charges have to be paid by the registrant.

After doing the bank transfer, please send us an email (npfsa2017@uni-jena.de) with a copy of the bank remittance slip (and retain it for your records). The details of the conference account (for payment in EUR) are:

Account name	:	<b>Instytut Matematyczny PAN</b>
Code	:	<b>your name + NPFSA-2017</b>
Bank	:	<b>Bank Gospodarstwa Krajowego</b>
SWIFT	:	<b>GOSKPLPW</b>
Account (IBAN)	:	<b>PL 80 1130 1017 0020 1467 1520 0008</b>

The owner of the account and its address is:

*Instytut Matematyczny PAN, Śniadeckich 8, 00-656 Warszawa, Poland.*

The address of the bank is:

*Bank Gospodarstwa Krajowego, Al. Jerozolimskie 7, 00-955 Warszawa, Poland.*

If you have any further questions, or you need an invoice, please indicate the details to be mentioned there (institutional address) in a separate email to us.

## 6. Conference Schedule

The arrival is on Sunday evening (September 17, 2017) followed by a joint dinner. The lectures are scheduled on Monday, Tuesday, Wednesday morning, Thursday and Friday. Saturday (September 23, 2017) is the official day of departure.

Wednesday afternoon is reserved for a hiking trip, you will find further information on it in due time on our web page.

We shall have a special workshop dinner, most likely on Wednesday evening.

## 7. Travel information

Poznań, only a few kilometres away from the conference site, has an airport and direct fast train connections to Berlin, Warsaw and other big cities. We organise a shuttle service from Poznań airport/Poznań main station to the venue.

For making the arrangements as smooth as possible, we ask you to inform us about your exact arrival time in Poznań or Będlewo in your earliest convenience.

## 8. Summary of the deadlines

- June 15, 2017** complete and return the confirmation email for your registration (*which you will get within the next days*)
- June 15, 2017** latest submission of the title of your talk
- June 15, 2017** conference fee at reduced rate
- August 15, 2017** deadline for the conference fee (regular rate)
- August 15, 2017** latest submission of abstracts for talks

## 9. Latest news

You may visit our conference web-site

<http://npfsa2017.uni-jena.de/>

regularly to find out the latest news (preliminary list of participants, programme etc.).

The last announcement with further details will be mailed by the end of August 2017.

We hope to see you in Będlewo in September this year!

### *Organising Committee*

Dorothee D. Haroske (Jena)  
Henning Kempka (Jena)  
Hans-Jürgen Schmeisser (Jena)  
Leszek Skrzypczak (Poznań)  
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Anna Kamont (Gdańsk)  
Erich Novak (Jena)  
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