

Taft Conference Proposal Cover Sheet

Conference Title: OHIO RIVER ANALYSIS MEETING

This is an annual regional conference in Analysis (a branch of mathematics), hosted in alternate years by the University of Cincinnati and the University of Kentucky.

Beginning and Ending Dates: Beginning March 9, 2013, at 9:00am
Ending March 10, 2013, at 1:00pm

Conference Chair/Director: Leonid Slavin, Department of Mathematical Sciences

Budget Summary: \$6,000 Travel and lodging expenses for 5 invited speakers
\$15,000 Travel and lodging support for 40-50 conference participants
\$4,000 Hospitality (registration items, refreshments, conference banquet)
Subtotal: \$25,000

Cosponsors & Other Funding Sources: \$10,000 Source: NSF (application pending)
\$7,000 Source: University of Cincinnati(*)
\$2,000 Source: University of Kentucky

Requested Taft Support: \$6,000

(*) UC sources include \$5,000 committed by the Department and the A&S College. Requests to the Office of Research and the Provost are pending.

Location of Events (dates and times): University of Cincinnati. The banquet may be held off-site in Cincinnati depending on budgetary and logistical considerations.

Taft Disciplines: Mathematical Sciences.

Conference Participants (Name, Role, CV):

Each of the first two meetings had 50-60 participants. Of these, roughly 25-30% are UC faculty and graduate students, and a similar number are affiliated with the University of Kentucky; another 25-30% traveled from other universities in the Midwest/Ohio Valley, and the rest from elsewhere in the US and Canada. By rank, the participant groups have been 40% faculty, 20% post-docs, and 40% graduate students. We expect these trends to continue for the coming year.

The five invited plenary speakers are chosen from among the leading researchers in the field nationwide. In the short history of the event, two plenary speakers have been members of the American Academy of Arts and Sciences. Approximately 20 shorter talks (30 minutes) are contributed by faculty and graduate student participants in parallel sessions during the afternoon, covering a broad spectrum of related research interests.

Evaluation Committee: The conference Scientific Committee, consisting of Drs. Peter Hislop, Katharine Ott, and Changyou Wang (University of Kentucky), will serve as the Evaluation Committee.

**APPLICATION TO
THE CHARLES PHELPS TAFT RESEARCH CENTER:
CONFERENCE PROPOSAL**

This application is for the Third Ohio River Analysis Meeting (ORAM) to be held the weekend of March 9-10, 2013 at the University of Cincinnati. Partial Funding commitments are already in place from UC and from the University of Kentucky, a partner institution. An application to the National Science Foundation is currently in preparation.

The application is submitted on behalf of the local organizing committee consisting of Drs. Michael Goldberg, Nages Shanmugalingam, and Leonid Slavin in the Department of Mathematical Sciences.

History and Purpose

The mathematical discipline of Analysis acts as a bridge connecting the concepts and language of Calculus to questions at the forefront of modern research. This keeps it a lively and continually evolving field of study. The Department of Mathematical Sciences maintains an active working group in Analysis, as do many leading universities in the region. The Ohio River Analysis Meeting was conceived at UC in 2010 as a means to increase cooperation between these groups at the institutional level.

ORAM serves a number of overlapping purposes: it is a central forum where researchers and students of Analysis from across the region can communicate their most recent work. It brings influential speakers from farther afield to present the invited addresses. As a regional meeting ORAM encourages the participation of graduate students and postdocs as well as local faculty. By doing all these things ORAM promotes a strong community of mathematicians united by a common field of scholarly interest.

The short list of past headline speakers at ORAM includes a winner of the Bôcher Prize, the American Mathematical Society's highest award in Analysis, and members of both the American Academy of Arts & Sciences and the National Academy of Sciences. We believe that ORAM can continue to attract speakers of national prominence in future events. The geographical mix of participants is more regional, with the largest number coming from Ohio, Kentucky, Indiana, Michigan, and Missouri.

The Department of Mathematical Sciences is proud to be the driving force behind ORAM's creation and the host of its first meeting in January 2011. The Mathematics Department at the University of Kentucky is the other founding partner; they hosted the second meeting in April 2012. There is a well-regarded model of two institutions jointly operating an annual conference, taking turns as the host in alternate years (e.g. the Prairie Analysis Seminar 2001-present, the New Mexico Analysis Seminar 1998-2009). Accordingly, the Third Ohio River Analysis Meeting will be held at the University of Cincinnati in March 2013. Its success this year will establish ORAM as a signature contribution by the University of Cincinnati to the larger mathematical community.

Format and Content

The conference will feature a full day of activities on Saturday and run until mid-day on Sunday, allowing participants to travel home in the afternoon. There will be two or three plenary talks (1 hour) each morning. Shorter contributed talks (30 minutes) will be given in parallel sessions Saturday afternoon. In total there will be five plenary speakers and we anticipate approximately 20 contributed talks, in line with previous years. In the event of heavy demand for contributed talks we may increase the number of afternoon parallel sessions and/or set aside additional time for contributed talks on Sunday. Ample breaks are provided for coffee and refreshments during each session, and all participants are invited to a conference banquet on Saturday evening following the end of the scientific program.

The roster of invited speakers will represent areas of expertise within the UC Department of Mathematical Sciences, including

- Harmonic Analysis and boundedness of operators
- Geometric Analysis and the calculus of variations
- Analysis of Partial Differential Equations

These subjects are by no means mutually exclusive. In fact it is commonplace for methods developed in one area to find application across a wide range of research questions.

The conference Scientific Committee will advise us on the choice of topics and invited speakers. This year the committee consists of Drs. Peter Hislop, Katharine Ott, and Changyou Wang, all from the University of Kentucky.

Target Audience

The main target audience is the community of active researchers in Analysis in Ohio, Kentucky, and the neighboring states. Particular emphasis is placed on the participation of graduate students and early-career faculty. The first two meetings of ORAM each had 50-60 participants, approximately half from UC and the University of Kentucky, one-third from other universities around the region, and the rest from other locations in the US and Canada. In keeping with our mission to promote research interaction between faculty and students, the distribution by rank has been approximately 40% tenured and tenure-track faculty, 20% postdocs, and 40% graduate students.

Publicity and Impact

ORAM will be announced on the American Mathematical Society's mathematics calendar, which is distributed nationwide and online. Announcements will also be placed on popular subject-specific sites that maintain a calendar of events for the Analysis community. We will generate further regional publicity through the Midwest Partial Differential Equations listserv and our own list of past ORAM participants, as well as by contacting individual mathematics departments within reasonable travel distance of Cincinnati.

As a founder and host of a successful conference, UC will gain recognition for its leadership in the mathematical sciences and bring attention to its strong working group in Analysis. In addition, ORAM provides networking opportunities and exposure to our graduate students, facilitates professional collaboration at all levels, and advertises UC as a destination for top-quality students, visitors, and faculty applicants in the future.

Evaluation Plan

The conference Scientific Committee named above consists of three professors from the University of Kentucky. They will evaluate the conference activities with an eye toward planning the Fourth Ohio River Analysis Meeting (presumably in 2014, in Lexington) and will produce a separate report for the Taft Center.

ORAM 2013 BUDGET

Source of Funds:	
Taft Research Center	\$6,000*
National Science Foundation	\$10,000*
Department, College, Office of Research, Provost	\$7,000**
University of Kentucky Mathematics Department	\$2,000
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Total Working Budget:	\$25,000

* pending

** \$5,000 committed from Department and College,
other requests pending

In its first two years ORAM has been sponsored by contributions from the organizing departments, the host university, and residual grant funds generously donated by individual faculty (with NSF approval). This year we are seeking a dedicated conference grant from the NSF that will pave the way for long-term NSF support in 2014 and beyond.

Summary of Expenses:	
Travel and lodging expenses for 5 invited plenary speakers	\$6,000
Travel support for 20 contributing speakers	\$10,000
Travel support for University of Kentucky faculty and students	\$2,000
Travel support for other conference participants	\$3,000
Conference banquet	\$2,000
Coffee and refreshments	\$750
Registration Materials, Duplication, Student worker(s)	\$1,250
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Total Projected Expenses:	\$25,000

ORAM does not pay an honorarium to invited speakers but does cover their full expenses. Other conference participants receive partial travel support to supplement their funding from other sources. Most of the promotion of the conference will be done electronically at no cost. We will need to hire one or two student helpers for clerical tasks preparing the registration materials in advance of the meeting, and to serve as event staff during the conference itself.

Several of the funding sources for ORAM are dedicated for specific purposes. Participants from the University of Kentucky will support their own travel expenses incurred while attending ORAM. The National Science Foundation grant can only be used for domestic travel expenses; in keeping with the agency mission it will be earmarked primarily to encourage participation by graduate students and postdocs without other means of support. Hospitality items and administrative expenses will be paid for by local funds from the Mathematical Sciences Department and other UC offices.

We plan to use Taft Center funds to cover the cost of the invited plenary speakers.