CALL FOR PAPERS

The *Deutsche Vereinigung für Mathematische Logik und für Grundlagen der Exakten Wissenschaften* (DVMLG), the *Polskie Towarzystwo Logiki i Filozofii Nauki* (PTLiFN), the *Association Computability in Europe* (ACiE) and the *European Association for Computer Science Logic* (EACSL) jointly organize a workshop on

Logical Approaches to Barriers in Computing and Complexity
http://www.cs.swan.ac.uk/greifswald2010/

Greifswald, 17-20 February 2010

The workshop is sponsored by the *Stiftung Alfried Krupp Kolleg Greifswald*, and takes place at the *Alfried Krupp Wissenschaftskolleg* in Greifswald, Germany:

> http://www.wiko-greifswald.de/events/cal/article/6/logical-approaches.html

IMPORTANT DATES:
   Submission of extended abstracts: 7 November 2009
   Notification of authors: 15 December 2009
   Deadline for final revisions: 5 January 2010

Computability theory and complexity theory have their origins in logic. Famous names such as Gödel, Turing, Cook, and Kolmogorov connect these areas of computer science to foundations of mathematics. The fundamental goal of this area is to understand the limits of computability (that is analysing which problems can be solved on current and future computers in principle) and effective computability (that is understanding the class of problems which can be solved quickly and with restricted resources) where the most famous open problem is the P=NP-problem. Logic provides a multifarious toolbox of techniques to analyse questions like this, some of which promise to provide deep insights in the structure of limit of computation.

In our workshop, we shall focus on the following aspects: logical descriptions of complexity (e.g., descriptive complexity, bounded arithmetic), complexity classes of abstract, algebraic and infinite structures, barriers in proving complexity results, and Kolmogorov complexity and randomness.

KEYNOTE SPEAKERS: Alessandra Carbone (Paris, France), Lance Fortnow (Evanston, IL, U.S.A.), Erich Grädel (Aachen, Germany), Pascal Koiran (Lyon, France), Leszek Kolodziejczyk (Warsaw, Poland), Antonina Kolokolova (St.John's, NL, Canada).

SPECIAL SESSION: There will be a special session on *Complexity in Arbitrary Structures* organised by Christine Gaßner (Greifswald, Germany) and Martin Ziegler (Paderborn, Germany). Details about the special session can be found on the website
> http://www.math-inf.uni-greifswald.de/biomathematik/gassner/SpecialSession.htm

SUBMISSIONS: The Programme Committee cordially invites all researchers in the area of the workshop to submit their extended abstracts (in PDF-format, at most 4 pages) for presentation at the workshop. Further details about submissions can be found on our website. Accepted abstracts will be printed in an abstract booklet which will be distributed to the participants of the workshop. Since women are underrepresented in mathematics and computer science, we emphatically encourage submissions by female authors.

Submission of abstracts of published and presented work is also possible, since the abstract booklet is non-archival. Quality and quantity of submissions permitting, we plan to invite the authors of unpublished papers to submit a full version to a post-proceedings volume after the workshop.