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Wissenschaftlerinnenkolleg  
Internettechnologien **WIT**

Institut für Softwaretechnik  
und Interaktive Systeme

Das Wissenschaftlerinnenkolleg Internettechnologien der Fakultät für Informatik der TU Wien lädt gemeinsam mit der Österreichischen Computer Gesellschaft zu folgendem Vortrag ein:

## WIT-Kolloquium

### Transforming the Culture of Computing: The Carnegie Mellon Experience

#### Lenore Blum

Distinguished Career Professor  
School of Computer Science  
Carnegie Mellon University



Wann: Montag, 29. Mai 2006  
17:00 - 18:00 +

Wo: Technische Universität Wien  
Neues Elektrotechnisches Institutsgebäude  
1040 Wien, Gußhausstraße 27-29  
EI 9, Erdgeschoß

#### Abstract

Since 1999, Carnegie Mellon has seen a substantial increase in the numbers of women entering and completing its undergraduate computer science program. Perhaps even more significant has been the transformation in the culture of computing at Carnegie Mellon.

In this talk, I will discuss the nature of these changes, how they came to be, how we are adapting our program to increase the participation of women in IT at the graduate level and beyond --and ideas and implications for other venues. I will also discuss a key result of our research (at odds with much of the prevalent gender research in this area): Gender differences in computer science tend to dissolve --that is, the *spectrum* of interests, motivation and personality types of men and of women becomes *more alike than different* -- as the computing environment becomes more balanced.

This finding is emerging from our ongoing studies of the evolving culture of computing at Carnegie Mellon as our undergraduate computer science environment becomes *more balanced* in three critical domains: gender, the mix of students and breadth of their interests, and the professional experiences afforded all students. In contrast, studies conducted within imbalanced environments, including those carried out at our own institution from 1995-1999, point to strong gender differences. We believe that recommendations for curricular changes based on presumed gender differences are misguided and may help reinforce, even perpetuate stereotypes. Fundamental misconceptions about computer science, (in particular, the equating of computer science with programming), rather than gender differences, are a root cause of gender under-representation as well as the current crisis in the field, i.e. the diminishing interest in computer science on the part of *all* students.

## Bio

Lenore Blum received her Ph.D. in mathematics from M.I.T. in 1968 (the famous year Princeton University first allowed women to enter their graduate program - and other amazing revolutionary events !!!). She then went to UC Berkeley as a Postdoctoral Fellow and Lecturer in Mathematics. In 1973 she joined the faculty of Mills College where in 1974 she founded the Mathematics and Computer Science Department (serving as its Head or co-Head for 13 years). In 1979 she was awarded the first Letts-Villard Chair at Mills.

In 1988 Lenore joined the Theory Group of the newly formed International Computer Science Institute (ICSI) in Berkeley. From 1992 to 1996 she also served as Deputy Director of the Mathematical Sciences Research Institute (MSRI) in Berkeley. Straddling the historic handover of Hong Kong from Britain to China on July 1, 1997, Lenore spent two years, 1996-1998, at the City University of Hong Kong (CityU) as Visiting Professor of Mathematics and Computer Science. Here she completed her book, Complexity and Real Computation, with colleagues and co-authors Felipe Cucker, Mike Shub and Steve Smale.

In the fall of 1999, Lenore and her husband Manuel had the great good fortune to join their son Avrim on the faculty of the School of Computer Science at Carnegie Mellon University where Lenore is Distinguished Career Professor of Computer Science. Along with Guy Blelloch, she is also co-Director on the NSF-ITR x ALADDIN Center for ALgorithm ADaptation Dissemination and INtegration. The primary goal of ALADDIN is to improve the process of incorporating powerful algorithms into application domains. Lenore is well known for her work in increasing the participation of girls and women in mathematics and scientific fields. She was instrumental in founding the Association for Women in Mathematics (serving as its President from 1975 to 1978), the Math/Science Network and its Expanding Your Horizons conferences for high school girls (serving as co-Director from 1975 to 1981) and served as co-PI for the Mills Summer Mathematics Institute for undergraduate women. At Carnegie Mellon she has been faculty advisor to the Women@SCS and a member of the President's Diversity Advisory Council. In 2005 she was recipient of the Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring (PAESMEM).

Amongst professional service and honors: Lenore was Vice President of the American Mathematical Society (1990-92), is currently chair of the AMS Program Committee and was Chair of Section A (Mathematics) of the AAAS (1998-99). In 1979 she was elected Fellow of the AAAS. In June 1999, on the 25th anniversary of the founding the Math/CS Department at Mills College, she was awarded Doctor of Laws, honoris causa.

Biographies of Lenore Blum can be found in Notable Women of Mathematics , Women in Mathematics: The Addition of Difference , the Agnes Scott web site , the The MacTutor History of Mathematics archive , the delightful book Women and Numbers for grade school girls. For more information about Lenore and her family see Pittsburgh Post-Gazette article, Dad, mom join son to form a potent computer science team at CMU.

Her homepage is available at <http://www.cs.cmu.edu/~lblum>

ALADDIN Center : <http://www.aladdin.cs.cmu.edu>

Women@SCS: <http://women.cs.cmu.edu>

## Kontaktperson an der TU Wien

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## Unterstützung

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## Anmeldung

Wir bitten um Anmeldung unter <http://wit.tuwien.ac.at/events>

## Hinweis

Vortrag in englischer Sprache; Teilnahme kostenlos! Im Anschluss an den Vortrag gibt es bei einem Buffet die Gelegenheit zum informellen Meinungsaustausch.



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