ETAPS DAILY

Thursday | Tutorial

Main Conferences Time Table

900 -1000 : invited talks

1000 -1030 : coffee break

1030 -1230: parallel sessions

1230-1400: lunch

1400-1600: parallel sessions

1600-1630: coffee break

1630-1800: parallel sessions

What's on today

Today's **invited speaker** is Catuscia Palamidessi, whose talk title: is *Extended Differential Privacy and Applications to Location Privacy*

Abstract: In this talk, we review the notion of Differential Privacy, its implications in terms of Bayesian Adversary, and we discuss typical implementations from the point of view of their optimality with respect to utility. Then, we consider an extension of differential privacy to general metric domains, and the consequences for the optimality results. Finally, we show an instantiation to the case of location privacy, leading to the notion of geo-indistinguishability. We conclude by illustrating some research direction that may be interesting for the ETAPS community.

Tutorial by Daniel J. Bernstein University of Illinois at Chicago, USA Technische Universiteit Eindhoven, Netherlands
Title: *The death of optimizing compilers.*
Abstract: In the ancient days, computers were slow, and compilers
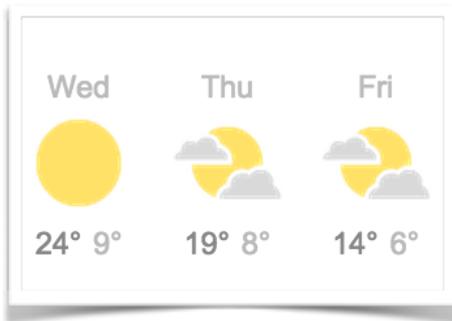
EastEnders

People's Palace. Originally opened in 1887 by Queen Victoria, the People's Palace was built to provide cultural activities to the people of east London. The original Palace sat where the Queens' Building is located today and included a large concert hall called 'the Queen's Hall', a library (now known as The Octagon), Winter Garden, swimming pool, gymnasium, gardens and tennis courts. The People's Palace brought culture, entertainment and education to enrich the lives of the local people; more prosaically, it was a distraction from the gin-palaces of the day. Entertainment included everything from donkey and art shows, to dances and concerts.

1936 - The new People's Palace

In the early hours of February 26 1931, the Queen's Hall was completely destroyed by a fire and the Palace was rebuilt and reopened in 1936 in its current location, adjacent to the Queens' Building.

The building was built of Portland Stone and red brick in art-deco style with its imposing façade featuring reliefs by Eric Gill –a striking addition to Mile End Road.

In keeping with the spirit and purpose of the original Palace, it was built as a theatre, cinema and music hall and was run successfully on that basis for a number of years. But following a decline in revenues the Queen Mary purchased the Palace in 1954.

[**source:** qmgreathall.co.uk]

were stupid, and the software engineer's solemn duty was to manually squeeze every last cycle out of the software. Today the situation is quite different, but not in the direction one might expect.

Have computers become so fast that nobody cares about optimization any more? Certainly not: most users still spend time waiting for computers. As computation has become cheaper, users have correspondingly expanded the volume of data that they are handling, and optimization remains a critical challenge for the occasional "hot spots" in the code.

Most programmers today never touch these hot spots. The reduced cost of computation means that more and more code runs freezingly cold, freeing up more and more programmers to ignore performance. However, the hot spots still exist. This tutorial will focus on how these hot spots are handled in the real world.

Have compilers become so smart that they automatically turn clean high-level code for these hot spots into optimized code, removing the need for humans to be optimization experts? The reality, unfortunately, is very much the opposite: general-purpose "optimizing" compilers are falling farther and farther behind the actual capabilities of modern processors. This tutorial is an introduction to (1) what current and near-future processors are capable of; (2) how modern high-speed software libraries actually work; and (3) the increasing dominance of domain-specific tools to engineer high-speed software. This tutorial is designed to be fully comprehensible to audience members who are not optimization experts.

Thanks to all participants to the banquet. These are the award winners:

EATCS: Konstantinos Mamouras *Synthesis of Strategies and the Hoare Logic of Angelic Nondeterminism*

EASST: Mirco Giacobbe, Calin Guet, Ashutosh Gupta, Thomas Henzinger, Tiago Paixao and Tatjana Petrov.: *Model checking gene regulatory networks*

EAPLS: Pierre Neron, Andrew Tolmach, Eelco Visser and Guido Wachsmuth. *A Theory of Name Resolution*