Welcome to ETAPS'13 main conferences!

After the first weekend, today the main conferences begin. Welcome to all new delegates! Tonight, there will be the welcome reception (included in the conference fee), where also the 15 years of ETAPS will be celebrated. The location is in one of the most important and beautiful squares of Rome: *Piazza del Quirinale*, where the President of our Republic lives. You can see the square in the above picture, with the arrow pointing at the entrance of *Palazzo Pallavicini-Rospigliosi*, the venue of the event. The palace and garden were obtained by G.Vasanzio and C.Maderno in 1611-16 by building upon existing sites, some dating back to ancient Rome. You can reach the venue by public transport (see the back part of this sheet or the ETAPS'13 booklet), but you can also have a pleasant walk, following the same path as the bus. On the way, you can find the church of S.Maria della Vittoria (containing the beautiful sculpture *Estasi di S.Teresa*, a masterpiece of G.L.Bernini) and the *4 Fountains* square, a unique point in Rome where you can see three Obelisks (one in every direction) and 4 baroque fountains.

A thematic journey into Rome: Squares

Apart from Piazza del Quirinale, Rome is full of beautiful squares: *Piazza del Campidoglio* by Michelangelo, that hosts (a copy of) the statue of Marco Aurelio; *piazza Navona*, built over the stadium that emperor Domitian created for the Jupiter fests (now hosting two baroque masterpieces: the fountain by Bernini and the church of S. Agnese by F. Borromini); *piazza di Spagna*, one of the most famous in the world, also for its neighborhood with the main shopping streets;

piazza Campo dei Fiori, full of people, colours and night life;

piazza Venezia, with the beautiful Renaissance palace and the monument called 'Vittoriano' built at the end of the XIX century, on top of which there is a terrace with a breathtaking view of the city; *piazza della Rotonda*, hosting the impressive roman building called Pantheon.
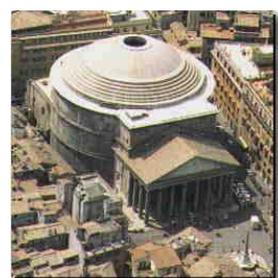
Other remarkable squares are: *piazza Bocca della Verità* (with the "Mouth of Truth", the sculpture acting as a lie detector), *piazza Barberini*, *piazza Colonna*, *piazza del Popolo* (in the church of S.Maria del Popolo you can find two masterpieces by Caravaggio), *piazza della Minerva* (with a pretty obelix over a small elephant), *piazza Farnese*, *piazza S. Giovanni*, *piazza della Repubblica* (with its charming lighting) …

And, of course, *piazza San Pietro*, but this will be described in ETAPS Daily number 5.

Today's program:

Timetable:
8:00 - 9:00: registration
9:00 – 9:30: opening
9:30-10:30: FoSSaCS invited talk
10:30-11:00: coffee break
11:00-12:30: parallel sessions
12:30-14:00: lunch
14:00-15:30: parallel sessions
15:30-16:00: coffee break
16:00-18:00: parallel sessions

Scientific Events:
Invited talk (Hofmann): Aula Magna (campus)
FoSSaCS: room A1
POST: room A2
TACAS: room B1

Social Event:
Welcome reception

Weather forecast:

	9-13	13-17	17-22
Mon	🌧	🌧	🌧
Tue	⛅	⛅	⛅
Wed	☀	⛅	☀

SAPIENZA
UNIVERSITÀ DI ROMA

Report on the Tutorials

Yesterday, we had 3 exciting tutorials (given by John Mitchel, Martin Fränzle and Ralf Küsters), covering three trendy hot topics in computer science. We now report a short discus-sion that we had with the speakers about their presentations.

Web based teaching provide a great opportunity for democratization of higher education. Do you think that teaching tools based on social net-working and web technology can pre-serve (or even improve) the quality of traditional methods?

Yes, there are many ways to improve on-campus education for enrolled stu-dents using these tools. For example, we can move lecture material to video and free up class meeting time for more interactive activities. This is sometimes called the *flipped classroom* because the lecture becomes homework online and the class time is used for activities that used to be homework. Many students like this; we have received good student reviews for flipped classrooms. If we break a long lecture up into shorter video segments and include questions or exercises in them, this gets even better. For example, in-stead of a lecture on programming, an instructor can give short examples by video and then ask students to try these program-ming techniques right away in an online programming envi-ronment. Since we are just beginning to develop and try ap-proaches like this at scale, I am sure we will discover and eva-luate many more ways to improve education via online tools.

Do you think that e-learning can help to reduce the educa-tion gap between industrialized and developing countries?

E-learning can definitely provide much better access to education in developing countries. At the same time, I expect we will see better education in industrialized countries too. While this is likely to reduce the education gap, I think it's more important that everyone will move forward. The world will be a better place if education is more widely accessible and more effective in all countries, including underserved populations in industrialized countries.

Cyber-physical systems are increasingly present in our everyday life. Could you foresee how they will further modify our life in the next future?

Really foreseeing their impact would re-quire a prophet. Too manifold are the pos-sible applications to predict which ones will catch. It is however pretty obvious that having remote physical processes wi-thin the sphere of control of hand-held, wearable, or even in-body devices will change the way we interact with physical environment. Extending perception far beyond its current horizon by forwarding and fusing data from the host of networked sensors present in the environment could give us unprecedented situation awareness, which would help in the many tasks where controllability is confined by the obser-ation horizon. For example in road traffic, seeing far ahead or around corners would not only permit far more efficient and safe road traffic, it could easily render quite a few of the current road traffic regulations redundant. Add cooperation and self-adaptation of technical systems and you obtain hitherto unknown behavioral flexibility of physical items at all scales. One may consider this scenario tempting or scary, depending on whether we manage to make it safe, secure, predictable to the humans, ...

Which are the major challenges in the next future in your opinion? Interaction, safety?

Here, everything is about interaction; hence, getting interaction straight (at all aggregation levels and over diverse range of time frames) is the real challenge. Interaction in cyber-physical systems is inherently heterogeneous, involving local or networked control loops, service compositions, cooperation protocols, but also humans in the loop. This forces us to accept and seamlessly integrate a diversity of models during system design and analysis. Some of these models are well-established in engineering and computer science, others have to be imported from other disciplines. Reasoning about heterogeneous models incorporating such components provides a challenge, in partic-ular given the inherent epistemologycal limits to their validity. Another major challenge is that certain systems will have to operate autonomously over extended periods of time. We do thus need technologies, design tools and analysis techniques facilitating cyber-physical systems which can adapt to funda-mental changes in environmental conditions, mission goals, and system health that come with extended autonomous operation.

Increasing security and trust in e-voting could lead to a citizen broader participation to elections and in general to political life?

The experience with e-voting systems so far shows that such systems do not necessarily increase the voter turnout. E-voting systems can basically take two forms. One is that the voter still has to go to a polling station in order to vote using a voting machine. The other is that voters can vote over the Internet, and hence, from home. The latter option can, at least nowadays where Internet voting might be considered to be a cool new option, attract young people. So parties which mostly attract young people might therefore be in favour of such systems.

Could e-voting be a step towards a sort of "Democracy 2.0"', where citizens may actively participate in many decisions, a sort of virtual "polis"', the ancient Greek city states?

Internet voting (the second option above) maybe. Having quite frequent referendums on various political topics could be pos-sible. However, while in several countries voting using machines and voting over the Internet is a reality already, it is still a very long way to making such systems sufficiently secure and reliable, without having to trust the voting authorities entirely.

How to reach the Reception Venue

This map provides a different path (w.r.t. the one in your booklet) to reach the venue of the reception. You can either do it on foot, by a 1 hour walk, or by bus (see the rightmost directions).

Route calculation
18/3/2013 18:44

Departure from roma viale regina margherita , 287
walk 400 meters
go to stop NOMENTANA/REGINA MARGHERITA ⓘ
take Line No 60 (P.ZA VENEZIA) to 4 stops 60 every 4 min.
get off at stop NAZIONALE/QUIRINALE ⓘ
walk 300 meters
to roma via xxiv maggio , 43
distance covered (metres) 3300 meters