

## Interview with George Necula

ETAPS Friday was started by George Necula, the invited speaker of CC'06, with his talk "Using Dependent Types to Port Type Systems to Low-Level Languages". After the talk ETAPS asked him some questions on his work for enforcing common safe programming practices in C, how industry deals with safety issues, and which stage he hopes to be on in future.

ETAPS: Why are you working on safety issues of the programming language C?

GN: When I taught the Software Engineering class at Berkeley we gave the students the choice of the language and all of them used languages that are considered unworthy by the research community, such as Python, Java Script, Php, etc. And regarding C, many companies use it, but most researchers shy away from C. I think that this divergence between the research languages and the real world is increasing. I want to change the fact that you only can take advantage of this research results if you are using the same language as they are working on.



ETAPS: Do you think that programmers in industry are ready for adapting their programs for safety?

GN: I'm seeing very encouraging signs from industry. They are ready to relax a bit their performance constraints on system programs in order to increase safety. However, what they do not seem to be ready for, is to rewrite system code. If you want to make an impact in industry you also need to think about incremental approaches not just fundamental revolutions. At the same time, precisely the constraints you have, rise to very interesting scientific problems.

ETAPS: What are your hopes for the future of safety in system programming?

GN: What I'm hoping to see in the future is that we have languages and techniques that allow us to write software just as efficient and flexible as today's software, but with guaranteed safety. For ex-

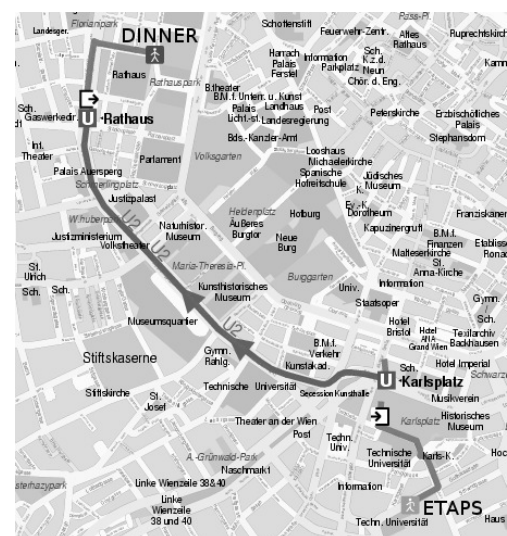
ample, memory safety, the most simple safety property of all, should be taken as granted in future. I consider lack of memory safety just as basic as memory parity had been in hardware; and just as the hardware people have figured out how to prevent or hide memory parity errors, we should make it such that memory errors are not visible anymore. I hope to reach a stage when if your computer crashes it means you have to repair your hardware.

## Joint Workshops Post-Conference Dinner

The dinner takes place at restaurant "Wiener Rathauskeller", Lanner Saal, Rathausplatz 1, 1010 Vienna, at 7:30 PM.

In 1899, Rathauskeller was inaugurated by then Mayor of Vienna Dr. Karl Lueger with a toast to "His Imperial and Royal Apostolic Majesty, Emperor Franz Josef I", and to this day it is known as the home of "good taste".

Getting there: The fastest way to get there is by public transportation. From the ETAPS location walk to Karlsplatz. From Karlsplatz take Underground U2 (direction Schottenring) to station Rathaus. Take exit Rathaus. *Rathauskeller* is located in the Rathaus within a two minute walk (see picture for the exact location of the entrance to the restaurant).



If you want to be guided to the dinner location: **Meeting time is 7:00 PM** at the registration desk.

## Sightseeing in Vienna

Close to the dinner location at Ring Boulevard, the *Burgtheater* is situated. In 1741 Empress Maria Theresia handed over an unused dance-parlour to a theatre-company. In 1888, the company moved into a closeby house designed and erected by Gottfried Semper and Carl von Hasenauer. The beautiful facade is adorned with statues of famous writers like Dante, Shakespeare, Goethe, Schiller, and allegoric figures. *Burgtheater* is one of the best theaters of German-speaking countries.







Also located in the first district is the *Hofburg*. Originally a medieval castle, it was extended to a magnificent residence when the Habsburg's power increased. That's why one can find almost any architectural style, from gothic to art nouveau. For more than 600 years, beginning with the Habsburg Rudolf I (1276) until Emperor Karl I (1918), it was the seat of the Austrian dynasty. In total there are

2,500 rooms in this stone-labyrinth. Situated next "Heldenplatz" (square of heroes) is very impressive, too. Equestrian statues of Archduke Karl and Prince Eugene of Savoy attest to Austria's glorious past.

*The Museum of Applied Arts* shows European arts and crafts from the Middle ages to the present. Highlights are: works from the Wiener Werkstätte (Joseph Hoffmann), 20th century architectural models, Stoclet frieze (Gustav Klimt), bentwood furniture (Michael Thonet). Location: first district on the Ring Boulevard near Stadtpark.

## Weather Forecast

Today	Sun	Mon	Tue
			
Partly Cloudy	Showers	Partly Cloudy	Partly Cloudy
Low 7°C High 17°C	Low 6°C High 14°C	Low 5°C High 12°C	Low 5°C High 12°C

