DOTTORATO DI RICERCA / PhD PROGRAM IN
INFORMATION TECHNOLOGY AND ELECTRICAL ENGINEERING

Seminar announcement

Friday 23rd June 2023, Time: 16:30 - 17:30
Aula Seminari, Floor 1, Building 3, DIETI - Via Claudio, 21 - NAPOLI

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Traffic Engineering with Segment Routing: optimally dealing with most popular use-cases

Abstract: Source Routing as enabled by Segment Routing (SR) allows controlling forwarding paths by specifying a list of detours (or segments) to deviate the packets along arbitrary routes. Computing the list of segments to encode a path is a challenging task (in particular when the number of segments has to be minimized) that has not been yet properly addressed.

In our work, we finally tackle this challenge. We show that, conversely to what is often proposed in the literature, the segment list computation must be tied within the path computation to solve this task correctly and efficiently. Thus, we design a flexible framework, GOFOR-SR, that can wrap SR around usual path computation algorithms to output minimal segment lists encoding the solutions. Our generic formal model supports many use cases with diverse optimization strategies and contains the first incremental algorithm that encodes a path into a minimal list of segments of any type. GOFOR not only eases the optimal integration of SR into varied path computation algorithms but also offers various path diversity models, all for a linear overhead.

Lecturer short bio: *Pascal Mérindol is an associate professor in the network research group at the ICube laboratory of the University of Strasbourg, France. He received his PhD degree from the same University in 2008, and then spent two years as a Postdoctoral Researcher in the University catholique de Louvain, Belgium. His main research topics are Routing and Internet Measurements. He has co-authored more than 40 papers in highly visible international journals and conference proceedings.*

For information: Prof. Valerio Persico (DIETI, UniNA) – valerio.persico@unina.it *(organizer)*