

Search Computing

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Abstract:

"Who are the strongest European competitors on software ideas? Who is the best doctor to cure insomnia in a nearby hospital? Where can I attend an interesting conference in my field closest to a sunny beach?" This information is available on the Web, but no software system can accept such queries nor compute the answer. We hereby propose search computing as a new multi-disciplinary science which will provide the abstractions, foundations, methods, and tools required to answer these and many similar queries. While state-of-art search systems answer generic or domain-specific queries, search computing enables answering questions via a constellation of dynamically selected, cooperating, search services. Search computing requires innovation in software principles, languages, interfaces, and protocols, as well as contributions from other sciences such as mathematics, operations research, psychology, sociology, economical and legal sciences.

Bio:

Stefano Ceri is professor of Database Systems at the Dipartimento di Elettronica e Informazione (DEI), Politecnico di Milano; he was visiting professor at the Computer Science Department of Stanford University between 1983 and 1990. He is vice-chairman of Alta Scuola Politecnica, a school of excellence for master-level students which is jointly organized by Politecnico di Milano and Politecnico di Torino. He is an associated editor of several international journals, co-editor in chief of the book series "Data Centric Systems and Applications" (Springer-Verlag), author of over 250 articles on International Journals and Conference Proceedings, and co-author of nine international books.

His research interests are focused on extending database technology to incorporate data distribution, deductive and active rules, object orientation, and XML query languages, as well as on design methods for data-intensive WEB sites, stream reasoning, and search computing. He is co-inventor of WebML, a model for the conceptual design of Web applications, and co-founder of Web Models, a startup of Politecnico di Milano focused on WebML commercialization by means of the product WebRatio. He has been responsible of several EU-Funded Projects projects, including being awarded in July 2008 an IDEAS Advanced Grant, funded by the European Research Council (ERC), on "Search Computing" (2008-2013).