1.	Record Nr.	UNINA9910786500803321
	Autore	Rosenbloom Paul S
	Titolo	On computing : the fourth great scientific domain / / Paul S. Rosenbloom
	Pubbl/distr/stampa	Cambridge, Mass., : MIT Press, ©2013
	ISBN	0-262-30436-8
		1-283-74157-1
		0-262-30528-3
	Descrizione fisica	1 online resource (333 p.)
	Disciplina	004
	Soggetti	Computer science - Philosophy
		Computer science - Research
		Computer science
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	Description based upon print version of record.
	Nota di bibliografia	Includes bibliographical references and index.
	Nota di contenuto	5 Relational Macrostructures and Analyses5.1 Mixed Worlds; 5.2 Pursuing Science; 5.3 Research Institutes; 5.4 Academic Computing; 6 Computing as a Great Scientific Domain; 6.1 Great Scientific Domains; 6.2 Computing; 6.3 Best Inventions of the Year; 7 Conclusion; Notes; Index
	Sommario/riassunto	Computing isn't simply about hardware or software, or calculation or applications. Computing, writes Paul Rosenbloom, is an exciting and diverse, yet remarkably coherent, scientific enterprise that is highly multidisciplinary yet maintains a unique core of its own. In On Computing, Rosenbloom proposes that computing is a great scientific domain on a par with the physical, life, and social sciences. Rosenbloom introduces a relational approach for understanding computing, conceptualizing it in terms of forms of interaction and implementation, to reveal the hidden structures and connections among its disciplines. He argues for the continuing vitality of computing, surveying the leading edge in computing's combination with other domains, from biocomputing and brain-computer interfaces to crowdsourcing and virtual humans to robots and the intermingling of the real and the virtual. He explores forms of higher order

coherence, or macrostructures, over complex computing topics and organizations, such as computing's role in the pursuit of science and the structure of academic computing. Finally, he examines the very notion of a great scientific domain in philosophical terms, honing his argument that computing should be considered the fourth great scientific domain. Rosenbloom's proposal may prove to be controversial, but the intent is to initiate a long overdue conversation about the nature and future of a field in search of its soul. Rosenbloom, a key architect of the founding of University of Southern California's Institute for Creative Technologies and former Deputy Director of USC's Information Sciences Institute, offers a broader perspective on what computing is and what it can become.