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	Sommario/riassunto	The LNCS journal Transactions on Computational Systems Biology is devoted to inter- and multidisciplinary research in the fields of computer science and life sciences and supports a paradigmatic shift in the techniques from computer and information science to cope with the new challenges arising from the systems oriented point of view of biological phenomena. This issue contains four highly detailed papers. The first paper focuses on quantitative aspects of the bgl operon for E. coli. The second contribution deals with ecosystem transitions affecting phenotype expressions and selection mechanisms. The third paper presents the Stochastic Calculus of Looping Sequences (SCLS) suitable for the description of microbiological systems, such as cellular pathways, and their evolution. The final contribution describes the use of biological transactions to make atomic sequences of interactions in