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Sommario/riassunto	<p>We welcome you to the proceedings of the First International Workshop on Complex Faults and Failures in Large Software Systems (COUFLESS 2015) co-located with the 37th International Conference on Software Engineering (ICSE 2015) held in Firenze, Italy. With a highly selective program committee, each submitted paper received at least three reviews and those papers that passed the competitive selection made it into the proceedings. We hope that you enjoy reading them and the ideas presented in these papers will help you further develop this important area of research. Modern software systems process and output information in quantities that would have been unthinkable only a few years ago. Not only has the volume of information being handled increased, it has also grown more complex, as have the applications - many collaborating components of large, distributed applications may individually process information from diverse sources that must all be transformed and properly ordered to produce accurate and timely results. Many of the faults in these applications occur as a result of complex conditions that accrue within the applications and a significant time lag between fault activation and failure is due to error states that cross between the components of these applications and the databases. These faults, to which we refer as Mandelbugs, are difficult</p>

to isolate and their failures are hard to reproduce. The theory of Mandelbugs is not well developed. Since a software system is often viewed as a single program with input data, theories and tools for fault localization in distributed systems lacks important properties. For example, debugging distributed components involves correlating messages that these components send to one another. Mandelbug debugging is difficult due to the lack of understanding of interactions among different components. Another ramification of the software increasing complexity is the difficulty in improving the system's response time. Under these complex environments, there is a large variability on the response time, which is causing thousands of disruptions per second (scale of milliseconds) according to Google results. These types of phenomena can be also considered to Mandelbug-based anomalies. Under this new reality in software engineering, COUFLESS 2015 has been proposed as an appropriate venue to discuss the advances to deal with complex faults and failures.

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