Chapter 8.7

Integrating Security and Software Engineering: Future Vision and Challenges

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ABSTRACT

The previous chapters of this book have presented promising approaches in the secure software engineering field. However, the field is still in its infancy and a number of challenges still need to be answered. The main aim of this chapter is to list and discuss nine challenges that we find important for the advance of the secure software engineering field. The main idea behind each challenge is presented in a short sentence followed by a discussion, which indicates why the challenge is important. In some cases, the discussion provides some ideas of how the challenge could be met.

INTRODUCTION

It has been widely argued in the literature, and throughout this book, that although the need to integrate security within software engineering practices has been identified at least for the last three decades, up to few years ago most of the efforts to solve such problem were random approaches initiated from individual researchers. However, and as it is evidence from the chapters of this book, the last few years the number of researchers working towards approaches to solve this problem has increased substantially. This evolving situation is the result of two main factors. Firstly, the broad awareness of the need to secure software systems has resulted in the identification of the situation as a key challenge for software and security engineers. Secondly, the appearance of specialised research events, which emphasise the need to integrate security issues within the software system development practice (see for example www.sreis.org and http://www.jmu.edu/iiia/issse/).