Databases are not yet ready-to-go "shrink-wrapped" software. Today's database systems require application developers to tune a vast array of controls for optimal performance. Unfortunately, only a few of the database administrators and developers can fully fathom the impact and realize the benefits of such controls. More often than not, an application developer is overwhelmed by the complexity of the "control panel" a database system presents. Therefore, an important technical challenge is to simplify the task of tuning a database system to reduce the total cost of ownership of databases, without compromising efficiency. The importance of this challenge is bigger than ever before, since today's database systems are an integral component of a *diverse* set of applications. Thus, databases should be *self-tuning* and adjust themselves to the characteristics of each application. This will surely be an important step in making database systems ubiquitous.

This issue of the bulletin showcases the state-of-the art in the area of self-tuning databases. We have complemented the discussion of self-tuning technology with case studies of *tuning important applications* to illustrate the challenges in tuning today's database systems. The first article, by Gerhard et al., introduces a framework for self-tuning memory management in relational databases. The article by Schiefer and Valentin highlights how a DB2 Universal Database server can be configured to suit application needs. The article by my colleagues and myself presents the self-tuning technology that has been incorporated in the Microsoft SQL Server product. In the next article, Subramanian and Krishnamurthy outline the challenges in optimizing the performance of object-relational database systems. The last two papers serve as case studies of tuning database applications. The article by Kemper, Kossman, and Zeller shows how the performance of a SAP R/3 application may be tuned against a database. Finally, the article by Shasha discusses how time series queries need to be tuned on relational databases.

I hope the articles in this issue will inspire you to study the challenges in building self-tuning and ready-to-go database systems. Incidentally, this is now time to say goodbye to you as an associate editor of the bulletin. This has been a rewarding experience for me. I sincerely hope that you have found the issues that I edited as interesting as I do.