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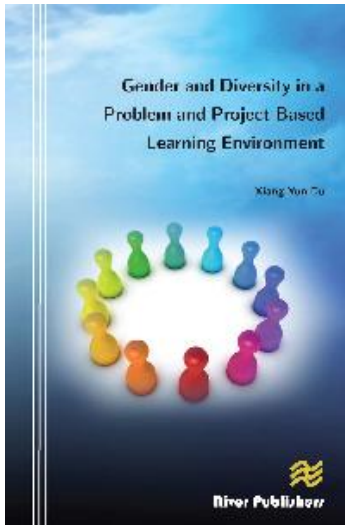
## Gender and Diversity in a Problem and Project Based Learning Environment

**Author:** Xiangyun Du, Associate Professor, Department of Learning and Philosophy, Aalborg University

**ISBN:** 9788792329844

**Available From:** December 2011

**Price:** € 75.00



### Description:

Problem and Project Based Learning (PBL) has been well used as an educational philosophy and methodology in the construction of student centered and contextualized learning environment. PBL is also regarded as an effective method in producing engineering graduates who can not only meet the needs of professional competences, but also are prepared for new challenges in the globalized and technological context. However, can PBL be a solution to the challenge of a general lack of university students studying engineering and technology in many countries? The book reports an ethnographical study on the learning experiences of engineering students in the PBL environment in Denmark. This book also attempts to question the issue of diversity in engineering education via the exploration of whether or in which ways the PBL environment is friendly to diverse groups of learners such as women.

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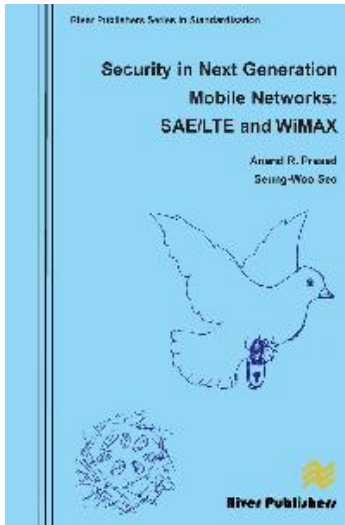
## Security in Next Generation Mobile Networks: SAE/LTE and WiMAX

**Author:** Anand R. Prasad, NEC Corporation, Japan and Seung-Woo Seo, Seoul National University, South Korea

**ISBN:** 9788792329639

**Available From:** August 2011

**Price:** € 85.00



### Description:

Starting from voice services with simple terminals, today a mobile device is nothing sort of a small PC in the form of smart-phones. The result has been a huge increase in data-services giving mobile communication access to critical aspects of human society / life. This has led to standardization of SAE/LTE (System Architecture Evolution / Long Term Evolution) by 3GPP and IEEE 802.16e / WiMAX. Together with penetration of mobile communications and new standardization come new security issues and thus the need for new security solutions. This book provides a fresh look at those security aspects, with main focus on the latest security developments of 3GPP SAE/LTE and WiMAX. SAE/LTE is also known as Evolved Packet System (EPS).

The intended audience for this book is mobile network and device architects, designers, researchers and students. The goal of the authors, who have a combined experience of more than 25 years in mobile security standardization, architecture, research, and education, is to provide the book's readers with a fresh and up-to-date look at the architecture and challenges of EPS and WiMAX security. This book includes 6 chapters, where the first 3 chapters are intended to be introductory ones, and the remaining 3 chapters provide more in-depth discussions. The book starts with Chapter 1 where we give a background of Next Generation Mobile Networks (NGMN) activity and requirements. Following explanation of NGMN, Chapter 2 provides an overview of security, telecommunication systems and their requirements. Chapter 3 provides some background on standardization. Chapter 4 discusses the EPS (or SAE/LTE) security architecture developed by 3GPP. In particular, this chapter covers the authentication and key agreement method for SAE/LTE together with newly defined key hierarchy. This chapter also addresses the challenging aspects of SAE/LTE interworking and mobility with UMTS together with the necessary key-exchange technologies. The focus of Chapter 5 is WiMAX (IEEE 802.16) security. Chapter 5 provides an in-depth discussion of the WiMAX security requirements, the authentication aspects of PKMv2, and the overall WiMAX network security aspects. In Chapter 6 we briefly cover security for (i) Home(evolved)NodeB (H(e)NB) is the Femto solution from 3GPP), (ii) Machine-to-Machine (M2M) security and (iii) Multimedia Broadcast and Multicast Service (MBMS) and Group Key Management.

### Contents:

Preface;

- Introduction to next generation mobile networks (NGMN) and security requirements;
- Security basics;
- Standardization process in 3GPP and IEEE/WiMAX;
- SAE/LTE Security;
- Security in IEEE 802.16e / WiMAX;
- Security for other systems like M2M and 3GPP Femto; Abbreviations; Index.

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## Future Trends and Challenges for ICT Standardization

**Editor:** Ramjee Prasad, Founding Chairman of GISFI & Director CTIF, Denmark

**ISBN:** 9788792329387

**Available From:** February 2010

**Price:** € 70.00



### Description:

This book comes in response to the Future Trends and Challenges for ICT Standardization. The technological areas covered are:

- the need, importance and management of radio spectrum,
- the development of future radio access technologies,
- the convergence of telecommunications and broadcasting,
- the possibilities and challenges brought by the Internet of Things (IoT),
- the environment sustainability through the use of Green ICT,

The book aims at identifying the importance of ICT standardization for strengthening the Indian industrial and business sector through Global ICT Standardization Forum for India (GISFI-[www.gisfi.org](http://www.gisfi.org)). Further, it outlines the major challenges and trends in the ICT development worldwide, while mapping the Indian efforts on the background of the overall progress.

The motivation behind this book is that a more informed context is made available to ensure sustainable scientific and economic growth.

Finally, the book puts forward the best research roadmaps, strategies and challenges contributed by engineers from the industry, academia, and Government. It addresses the benefits to the entire society resulting from standardization.

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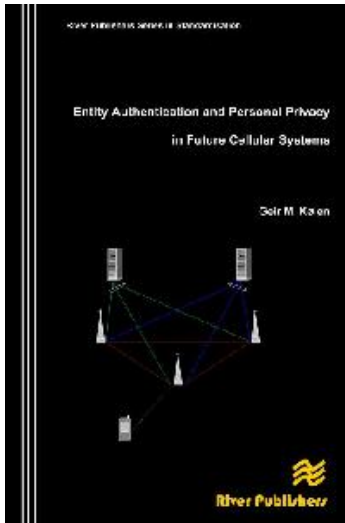
## Entity Authentication and Personal Privacy in Future Cellular Systems

**Editor:** Dr. Geir M. Koien, Telenor R&I, Norway and University of Agder, Norway

**ISBN:** 9788792329325

**Available From:** September 2009

**Price:** € 85.00



### Description:

There are now (Q1 2009) more than 4 billion cellular subscribers in the world and this number is constantly growing. With this in mind it should be clear that use of mobile communication has already become both pervasive and ubiquitous. It has become a global commodity really. Entity Authentication and Personal Privacy in Future Cellular Systems aims at explaining and examining access security as it is found in mobile/cellular systems. A thorough investigation of how access security and personal privacy is handled in the 3GPP system is conducted. This includes both the 2G systems GSM/GPRS and the 3G system UMTS. The emerging fourth generation LTE architecture is also examined. The first part of the book deals exclusively with presenting access security as found in the 3GPP system. Particular attention is given to the authentication and key agreement procedures. The 3GPP systems have evolved and the access security architecture in LTE is substantially more advanced and mature than what you would find in GSM/GPRS, but even the LTE security architecture has its limitations. In part two of the book we go on to examine what is missing from the current cellular access security architectures. Some of the shortcomings found in GSM/GPRS and later UMTS have been partially addressed in LTE, but the burden of backwards compatibility has meant that many issues could not easily be resolved. Free from those restrictions, we shall see that one can provide substantially improved subscriber privacy and enhanced entity authentication, while also avoiding the delegated authentication control that all 3GPP systems have.

The design of authentication protocols is discussed in depth, and this would also include looking into the role of formal verification in the design of security protocols.

#### Errata

**ERRATA SECTION 3.3.8**

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**ERRATA SECTION 3.3.8 notes**

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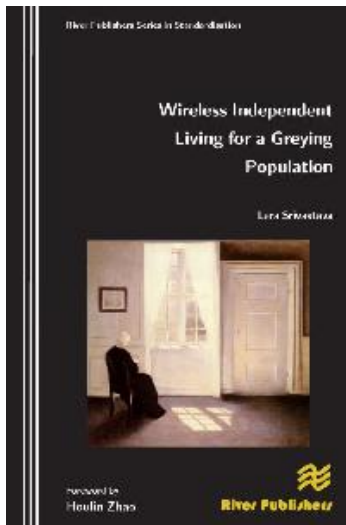
## Wireless Independent Living for a Greying Population

**Author:** Lara Srivastava, CtiF, Aalborg University/International Telecommunications Union

**ISBN:** 9788792329226

**Available From:** April 2009

**Price:** € 85.00



### Description:

It is widely known today that not only are the aged ageing, or the old getting older, but they are also increasing in number the world over. At the same time, proper care and support for our aged is increasingly at risk. Without some form of support, the quantitative extension of life cannot be matched by a qualitative one. This may mean that the opportunity provided by a longer life is squandered, and life itself, of course, is nothing if not opportunity. Societies find that self-sufficiency and independence not only contribute to individual well-being, but are also economically desirable due to the resultant increase in productivity.

The challenges of daily living for a growing population of the aged form the basis of the independent living platform, the AGE@HOME platform, which is described in this book. The platform combines both existing and emerging technologies suitable for the home. Its use and application is considered in the wider context of Web 2.0, the internet of things, and other elements of the burgeoning digital world. It is time that a holistic and multi-disciplinary approach to this constantly enlarging area of human existence is taken.

This book is written for researchers and designers of wireless tools, analog and digital circuits as well as academics who are active in the various fields of Human Sciences.

### Foreword

*"This book appears at the right moment when several developments have made age and its consequences an important element of human existence. It makes for informative reading, being based on considerations related to independence for the aged and the application of emerging technologies to enhance this independence....."*

*From the foreword by:*

*Houlin Zhao*

*Deputy Secretary-General of the  
International Telecommunication Union*

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