The world’s population is aging dramatically, and in most countries the cost of care is rising rapidly. We need a system which helps to minimize the onset of chronic conditions which are costly to treat and diminish quality of life, rather than one primarily directed towards the care of the sick. Innovative use of new technologies may be the only way to provide care affordably in future, and to scale that care to far greater numbers as our societies adapt to change. Ambient Assisted Living (AAL) can provide a solution. More integration between the health system and life at home and work will benefit everybody, providing better, more holistic lifelong care at lower cost.

This book presents and summarizes the achievements of an accomplished group of researchers around the globe and from diverse technical backgrounds. They use a wide range of approaches to optimize the use of healthcare technology and integrate such technology into human lives in a way that will benefit all. The book is divided into seven main sections: AAL in the health space; Devices and infrastructure to facilitate AAL; AAL in gerontology; Smart homes as a vehicle for AAL; Applications of AAL in rehabilitation; AAL initiatives; and finally; and Novel developments and visions for the area.

Developing technologies which cater for the broad range of individuals in our complex societies is a major challenge which poses many problems. The research described here pushes the boundaries, and will inspire other researchers to continue their exploration of technologies to improve lives.