

Preface

NeuroIS is a field in Information Systems (IS) that makes use of neuroscience and neurophysiological tools and theories to better understand the development, adoption, and impact of information and communication technologies. The *Gmunden Retreat on NeuroIS* is a leading academic conference for presenting research and development projects at the nexus of IS and neurobiology (see <http://www.neurois.org/>). This annual conference has the objective to promote the successful development of the NeuroIS field. The conference activities are primarily delivered by and for academics, though works often have a professional orientation. The conference is taking place in Gmunden, Austria, a much frequented health and summer resort providing an inspiring environment for the retreat. In 2009, the inaugural conference was organized. Established on an annual basis, further conferences took place from 2010–2014.

The genesis of NeuroIS took place in 2007. Since then, the NeuroIS community has grown steadily. Scholars are looking for academic platforms to exchange their ideas and discuss their studies. The *Gmunden Retreat on NeuroIS* seeks to stimulate these discussions. The conference is best characterized by its “workshop atmosphere.” Specifically, the organizing committee welcomes not only completed research, but also work in progress. A major goal is to provide feedback for scholars to advance research papers, which then, ultimately, have the potential to result in high-quality journal publications.

NeuroIS examines topics lying at the intersection of IS research and neurophysiology and the brain sciences. Specifically, NeuroIS studies comprise conceptual and empirical works, as well as theoretical and design science research. It includes research based on all types of neuroscience and neurophysiological methods, spanning techniques such as functional magnetic resonance imaging (fMRI), electroencephalography (EEG), transcranial magnetic stimulation (TMS), near infrared spectroscopy (NIRS), brain lesion studies, quantitative and molecular genetics, hormone assessments, galvanic skin response, heart rate, eye-tracking, and facial electromyography.

Analyses of the existing NeuroIS literature shows that contributions often address the following topics, among others: employment of neuroscience and

neurophysiological methods and tools to study technology adoption, mental workload, website design, virtual worlds, technostress, emotions in human–computer interaction, ecommerce, social networks, information behavior, trust, IT security, usability, avatars, music and user interfaces, multitasking, memory, attention, IS design science, risk, knowledge processes, and business process modeling and enterprise systems. Moreover, software prototypes of NeuroIS applications, which use bio-signals (e.g., EEG, skin conductance, pupil dilation) as system input, are also a core topic in the field, and many NeuroIS researchers believe that this topic of neuroadaptive information systems is one that holds significant potential, both from a theoretical and practical viewpoint. Also, the discourse on methodological and ethical issues and evaluation of the status of the NeuroIS field has been the subject of discussion in the extant literature.

This year is the first time that we publish the proceedings in the form of an edited volume. A total of 29 research papers are published in this volume, and the diversity in topics, theories, methods, and tools of the contributions in this book constitutes a major strength of the NeuroIS field. It will be rewarding to see what insights the future NeuroIS research will reveal about the interplay between neurobiology and the development, adoption, and impact of information and communication technologies.

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