Preface

New technologies and experimental methods in the field of life sciences have enabled researchers to create huge amounts of data in extremely short times. In turn, analysing this data demands a rise of compute power, storage, and transmission. An enormous number of complex and sophisticated algorithms and tools have been developed to aid research. The demand for compute power and storage is met with a rise in provision of infrastructure and High-Performance Computing facilities and has resulted in the popularity of novel utility computing infrastructures, such as grid and cloud computing. Despite the increasing available resources, the broad uptake of these facilities and infrastructures is not following the same pace. The main reasons for this lie in the complexity of the human-computer interface to these computing infrastructures.

An approach to offer easy and intuitive access to computing infrastructures irrespective of their location is a Science Gateway. Science Gateways are frameworks (or toolsets) which incorporate applications, data and tools to enable running applications on grid infrastructures. They also provide services to support, upload, search, manage and download (or share) applications and data. The gateways are integrated via portals or sets of applications. Gateways enable user communities to use compute and data resources through a common graphical user interface in an easy and intuitive way. As a result, users can focus on their applications instead of learning and managing the complex underlying infrastructure.

IWSG-Life'11 brought together scientists from the field of life sciences, bioinformatics and computer science. The aim was to exchange experience, formulate ideas and introduce up-to-date technological advances in molecular and systems biology in the context of Science Gateways. The workshop included two invited talks, 11 short presentations based on submitted abstracts, and 7 full papers. These full papers are included in the current workshop proceedings.

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For further information please visit the workshop website at http://www.cpc.wmin.ac.uk/iwsg2011.

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