

Preface

In medical decision making, it is very important to take into account experience of medical doctors – and thus, to supplement traditional statistics-based data processing techniques with methods of computational intelligence, methods that allow us to take this experience into account.

In some cases, the existing computational intelligence techniques – often, after creative modifications – can be efficiently used in biomedical applications. However, biomedical problems are difficult. As a result, in many situations, the existing computational intelligence techniques are not sufficient to solve the corresponding problems. In such situations, we need to develop new techniques – and, ideally, first show their efficiency on other applications, to make sure that these techniques are indeed efficient. The fact that these techniques are efficient in so many different areas makes us hope that they will be useful in biomedical applications as well.

We hope that this volume will help practitioners and researchers to learn more about computational intelligence techniques and their biomedical applications – and to further develop this important research direction.

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