

## Foreword

In contemporary world, it is evident importance of multidisciplinary approach for creating new values in science. Maybe the most well-known case as an illustration of that claim was story about how cybernetics as discipline begun.

Arthur Rosenblueth, neurophysiologist, was initiator and moderator of interdisciplinary team which task was to move borders out of known areas in different scientific disciplines. As a result of that collaboration new horizons have been discovered, known as *no man's land* and beginning of cybernetics. Building the bridges between the established sciences, results with something new, something which expands new way of thinking, and brings new opportunities in developing science of the new era.

In the book *Handbook of Research on Emergent Applications of Optimization Algorithms*, Prof. Vasant and the authors did the similar thing, they have made bridges between optimization techniques and different scientific fields like economy, electrical engineering, biology, computer vision, game theory, medicine, energetics, metallurgy and many more.

Common denominator for enumerated scientific fields are optimization techniques from basic to advanced which their inspiration has been found in biological processes like: ant colony optimization, particle swarm optimization algorithm, cuckoo algorithms, binary differential evolution.

*Handbook of Research on Emergent Applications of Optimization Algorithms* also makes bridges between different scientific fields made of optimization techniques. Each of the chapter on innovative way shows how optimization algorithm and innovative approach in their application changes point of view, and how to be more efficient in each of mentioned area.

It is worth mentioning that evolutionary approach in optimization became key factor for solutions in different areas if we are talking about contemporary approach in optimization. Biological systems became main inspiration for different optimization solutions, and this book are also in line with this trend.

In this book, each author of the chapter gave personal scientific contribution in way of personal vision and adoption of known optimization techniques on innovative way, which will be for sure inspiration for the other authors in different areas. This kind of books, belong to inspirational works, which spreads the scientific horizons.

Uncommon solutions in usage of known techniques in different scientific areas for sure are good starting position for some new *no man's land* which can be fertile ground for some new scientific seed. Some of that seeds placed on that ground, could produce maybe some new fruits, like it was the case long time ago when cybernetics was born.

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