



Advances in Granular Computing

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Future of granular computing

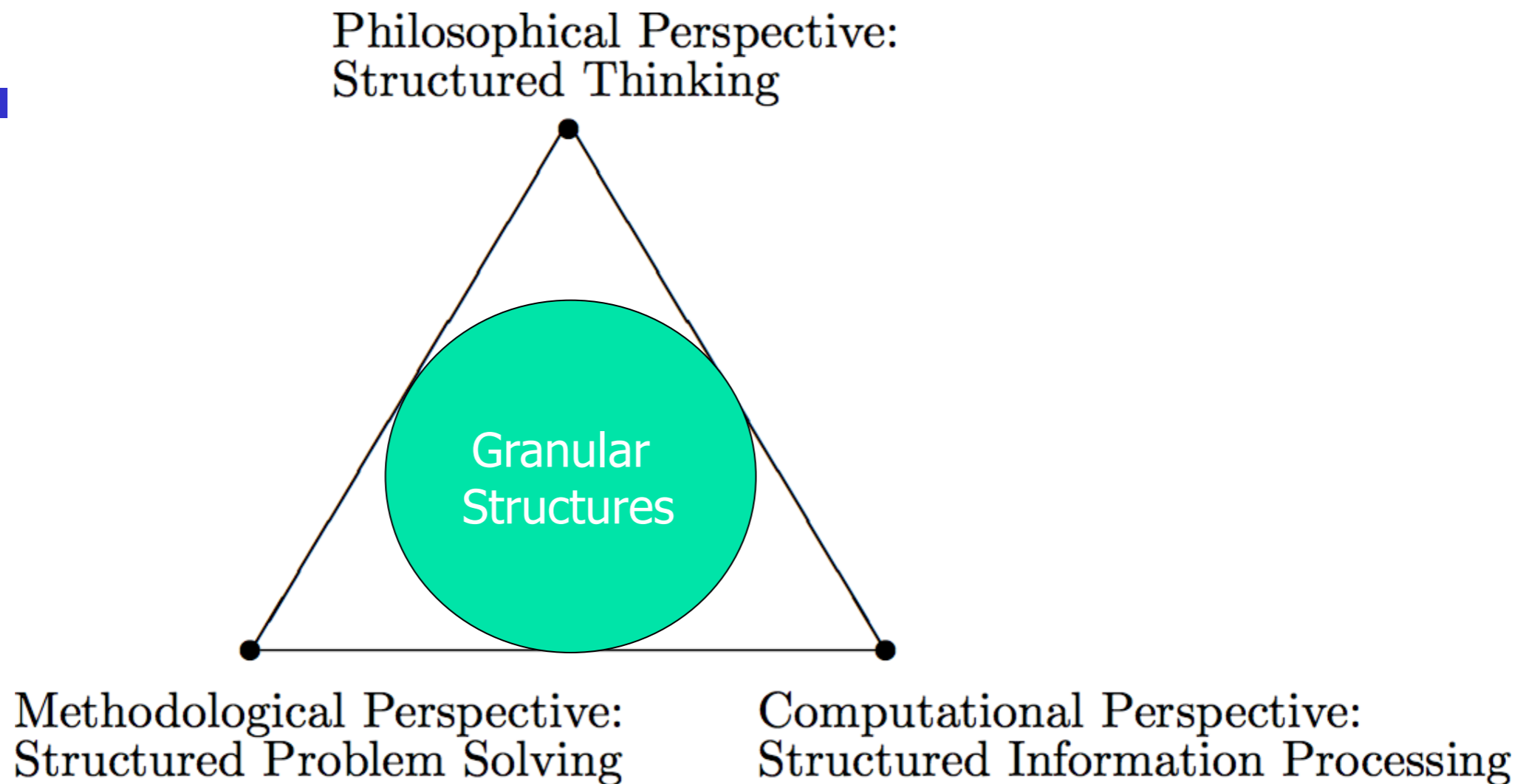
- Personal view of granular computing: triarchic theory of granular computing
- Promoting granular computing research



GrC in nutshell

- Thinking, problem solving, and information processing based on granular structures characterized by:
 - Multiple levels: many levels in a hierarchy.
 - Multiple views: many hierarchies.

The Triarchic Theory of Granular Computing





Granular computing philosophy

- Reductionist thinking
- Systems thinking
- Levelism thinking



Granular computing methodology

- Structured processing
- Structured programming
- Structured writing
- Structured ...



Granular computing process

- Modes of granular computing
 - Top-down
 - Bottom-up
 - Middle-out
 - Meet-Middle
- Top-down progressive computing
- ...



Promoting Granular computing Research

- Granular computing may be better approached as a new field of interdisciplinary and multidisciplinary study.

Granular computing in China

- Duoqian Miao, China
- Guoyin Wang, China
- Qing Liu, China
- T.Y. Lin, USA
- Yiyu Yao, Canada



Granular computing in China: Quotient Spaces and Granular Computing

- Yan Ping Zhang, China
- Guoyin Wang, China
- Duoqian Miao, China
- Yiyu Yao, Canada
-



Granular computing in China: Uncertainty and Granular Computing

(TP-5573.0101)

不确定性 与 粒计算

内容简介

粒计算是系统研究粒化思维方式及其方法论的一门新学科，经过十多年的发展，在粒计算与多学科交叉研究过程中，正逐步形成其特有的研究体系和内容。本书介绍了粒计算与不确定性交叉研究的最新进展。全书由国内外相关领域的华人学者撰文8章，内容涉及粒计算方法论、云模型、商空间模型、不确定性问题处理的覆盖模型与方法、模糊粗糙集、模糊粒空间的结构、粗糙模糊集的信息粒度与结构、粒计算中的不确定性分析等。

不确定性 与 粒计算

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Advances in granular computing 2011

- Duoqian Miao, China
- Witold Pedrycz, Canada
- Andrzej Skowron, Poland
- Yiyu Yao, Canada
- Bo Zhang, China

- 15 Papers



Advances in granular computing 2011

- Cognitive and psychological foundations of granular computing,
- Mathematical foundations of granular computing,
- Philosophical foundations of granular computing



Advances in granular computing 2011

- Algorithms of granular computing,
- Applications of granular computing,
- Methodology of granular computing,
- Models of granular computing,
- Modes of granular computing



Advances in granular computing 2011

- Granular computing and artificial intelligence,
- Granular computing and cluster analysis,
- Granular computing and fuzzy sets,
- Granular computing and knowledge discovery and data mining,
- Granular computing and imprecise probability,
- Granular computing and interval computing,
- Granular computing and machine learning,
- Granular computing and multiscale analysis,
- Granular computing and problem solving
- Granular computing and rough sets,



Advances in granular computing 2011

- Granular information processing,
- Granular problem solving,
- Granular thinking,
- Uncertainty and granular computing,
- Uncertainty measures and granularity



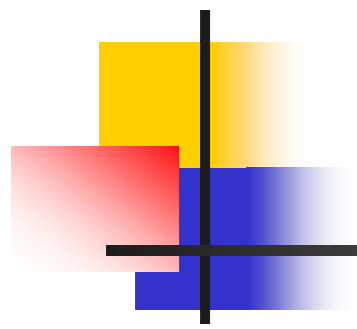
Advances in granular computing 2012

- Workshop in under planning
 - Your inputs are very much appreciated.
 - Your suggestion are very much needed.
 - Your participation is very essential.
- Special Volume on Advances in Granular Computing in LNCS TRS
 - Thanks to Professors A. Skowron, J. Peters and S. Ramanna for support.
 - Please contribute!



Advances in granular computing 2013

- Conference is under planning
 - Promote to a full conference
 - Please input, contribute, and participate!



Thank you!