

# MetaDeeP'14 Chairs' Welcome

The widespread adoption of 'Design Patterns' heralded a revolution in the software industry, offering a catalog of designs that cut across lower-level concerns such as choice of programming language, platform etc.

In a similar manner, we anticipate that the identification of "cross-cutting abstractions" within metaheuristic theory and practice will afford new and unifying perspectives on a field that has become dominated by metaphor and is in danger of increasingly fragmentation.

Despite this being the first MetaDeeP workshop, we are happy to say that there were a total of 15 submissions, of which 10 have been accepted. Each submission was reviewed by at least two program committee members. One of the main goals for this initial Workshop is to attempt consensus on what the metaheuristics community might usefully obtain from a pattern-based approach. To this end, the range of presentation topics is intentionally diverse, and includes:

- Metaheuristic applications of pre-existing design patterns (e.g., Composite, Template Method).
- New patterns specific to metaheuristics (e.g., Representative, Repair, Tagging).
- Methodological case studies (statistical testing and interactive fitness measures).

The longer-term motivation behind the Workshop is twofold:

1. Educational: In adopting a 'pattern-based' perspective, we're additionally seeking to decompose good research practice by cutting 'horizontally' across frameworks and methodologies, looking to abstract out aspects that have yet to be folded back into the mainstream. This can be seen as serving an educational purpose: "how best to convey the practicalities of metaheuristic engineering to the uninitiated?".

2. Facilitating automation: the "Problem Statement" aspect of the design pattern format essentially gives heuristic preconditions for the application of a pattern. This lends itself well to the process of component selection/generation. Since this is an essential part of the automated design of metaheuristics, what we'd really like is to be able to convey this heuristic information declaratively (i.e., so that even a computer can understand it). The ultimate goal is to use this information to help reformulate metaheuristic design as a problem of (potentially dynamic) software component assembly.

Above all, we envision this initiative as primarily bottom-up, driven by ideas and needs of the community rather than by any arbitrary assumptions. A panel discussion will follow the paper presentations and we will attempt to provide a platform for the range of opinions expressed by those present.

Thanks are due to all who submitted papers. We encourage everyone with an interest in "metaheuristics in the large" to attend and help shape the future of this exciting new initiative.

**Jerry Swan**

*University of Stirling, UK*

**Krzysztof Krawiec**

*Poznan University of Technology,  
Poland*



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**General Chairs:** Jerry Swan (University of Stirling, UK)  
Krzysztof Krawiec (Poznan University of Technology, Poland)  
John Woodward (University of Stirling, UK)  
John Clark (University of York, UK)  
Chris Simons (University of the West of England, UK)

**Program Chairs:** Jerry Swan (University of Stirling, UK)  
Krzysztof Krawiec (Poznan University of Technology, Poland)  
John Woodward (University of Stirling, UK)  
John Clark (University of York, UK)  
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