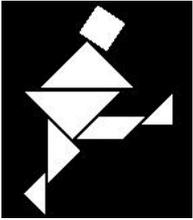Call for Papers

5th International Conference on
Generative Programming and Component Engineering

October 22-26 2006, Portland, Oregon, USA

co-located with OOPSLA'06

http://www.gpce.org/06

Sponsored by ACM SIGPLAN, in cooperation with ACM SIGSOFT

Scope Generative and component approaches are revolutionizing software development similar to how automation and components revolutionized manufacturing. *Generative Programming* (developing programs that synthesize other programs), *Component Engineering* (raising the level of modularization and analysis in application design), and *Domain-Specific Languages* (elevating program specifications to compact domain-specific notations that are easier to write, maintain, and analyze) are key technologies for automating program development.

GPCE provides a venue for researchers and practitioners interested in foundational techniques for enhancing the productivity, quality, and time-to-market in software development that stems from deploying standard componentry and automating program generation. In addition to exploring cutting-edge techniques for developing generative and component-based software, our goal is to foster further cross-fertilization between the software engineering research community and the programming languages community.

Submissions 10 pages in SIGPLAN proceedings style (sigplan-conf.cls) reporting research results and/or experience related to the topics above (PC co-chairs can advise on appropriateness). We particularly encourage original high-quality reports on applying GPCE technologies to real-world problems, relating ideas and concepts from several topics, or bridging the gap between theory and practice.

GPCE Tutorials extending over a half or a full day that give a deeper or broader insight than conventional lectures. Tutorial proposals are due **February 24, 2006**.

GPCE Workshops providing intensive collaborative environments, where generative and component technologists meet to discuss and resolve challenging problems in the field. Workshop proposals are due **February 24, 2006**.

Program Committee

Elisa Baniassad	Fabio Kon
Don Batory	Karl Lieberherr
Ira Baxter	Joe Loyall
Shigeru Chiba	Mira Mezini
Charles Consel	Calton Pu
Krzysztof Czarnecki	Tim Sheard
Aniruddha Gokhale	Yannis Smaragdakis
Jeff Gray	Michael Stal
George Heineman	Peter Thiemann
Zhenjiang Hu	Eelco Visser
H.-Arno Jacobsen	(others TBA)

Important dates

Feb 24, 2006:	Tutorials and workshop proposals due
Apr 30, 2006:	Abstracts due
May 5, 2006:	Papers and demonstrations due
Jun 28, 2006:	Notification

Topics GPCE seeks contributions in software engineering and in programming languages related (but not limited) to:

Generative programming

- Reuse, meta-programming, partial evaluation, multi-stage and multi-level languages, and step-wise refinement
- Semantics, type systems, symbolic computation, linking and explicit substitution, in-lining and macros, templates, and program transformation
- Runtime code generation, compilation, active libraries, synthesis from specifications, development methods, generation of non-code artifacts, formal methods, and reflection

Generative techniques for

- Product-line architectures
- Distributed real-time and embedded systems
- Model-driven development and architecture

Component-based software engineering

- Reuse, distributed platforms, distributed systems, evolution, patterns, development methods, deployment and configuration techniques, and formal methods

Integration of generative and component-based approaches
Domain engineering and domain analysis

- Domain-specific languages (DSLs), including visual and UML-based DSLs

Separation of concerns

- Aspect-oriented and feature-oriented programming,
- Intentional programming and multi-dimensional separation of concerns

Industrial applications

General chair
Stanislaw Jarzabek
Program committee chairs
Douglas Schmidt & Todd Veldhuizen
Publicity chair
Eelco Visser
Workshops/Tutorials chairs
Christa Schwanninger & Arno Jacobsen