

Call for Contributions

Submission:

1. **Inform the Chairs:** with the Title of your Contribution

2. **Submission URL:**

<https://www.iariasubmit.org/conferences/submit/newcontribution.php?event=ICSEA+2019+Special>

Please select Track Preference as **REGEN**

Special track

REGEN: Automatic Code (Re)Generation in an MDA/MDE Environment

Chair and Coordinator

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along with

ICSEA 2019, The Fourteenth International Conference on Software Engineering Advances

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<https://www.iaria.org/conferences2019/ICSEA19.html>

Model-driven engineering (MDE) and Model-driven architecture (MDA) are widely accepted and touted techniques for software design and development. These techniques focus mainly on creating and exploiting domain models, which are conceptual models of the topics and/or requirements related to a specific problem. Hence, they both highlight and aim at abstract representations of the knowledge and activities that govern a particular application domain.

Closely related with model-driven techniques is code generation. The vision of MDE/MDA allows for the specification of a system as an abstract model, which may be realized as a concrete implementation (program) for a particular computing platform (e.g. Java). Thus, an application that has been successfully developed via a pure MDE/MDA approach could theoretically be ported to a newer release Java platform (or even a .Net platform) in a deterministic manner. Nevertheless, significant questions remain as to real-world practicalities during translation. An often cited criticism is that the conceptual models, such as UML diagrams, just lack the detail which is needed to contain the same information as is covered with the program source. Some developers even claim that "*the code is the design*".

The goal of REGEN is to explore conceptual models, and/or the required improvements or additions to such models, in order to enable the automated generation of a concrete software implementation in a deterministic way. Moreover, REGEN also seeks to explore and study the automatic and deterministic *regeneration* of such a concrete software implementation for new (versions of) computing platforms. An interesting point in this regard is the handling of dedicated custom or manual code, which was written on top of the automatically generated code, during the regeneration process.

Topics include, but not limited to:

- Studying ambiguities for code generation in current conceptual modelling languages.
- Studying and resolving ambiguities for code generation in existing domain models.
- Automatic generation of concrete software implementations from conceptual models.

- Automatic regeneration of software from domain models in other technology platforms.
- Regeneration of implementations for new platforms while preserving custom code.
- Regeneration using improved code generators while preserving custom code.

Important Datelines

Inform the Chair (see Contacts below): as soon as you decide to contribute

Submission: Sep 18, 2019

Notification: Oct 17, 2019

Registration: Oct 27, 2019

Camera-ready: Oct 27, 2019

Contribution Types

- Regular papers [in the proceedings, digital library]
- Short papers (work in progress) [in the proceedings, digital library]
- Posters: two pages [in the proceedings, digital library]
- Posters: slide only [slide-deck posted on www.iaia.org]
- Presentations: slide only [slide-deck posted on www.iaia.org]
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Paper Format

- See: <http://www.iaia.org/format.html>

- Before submission, please check and comply with the editorial rules: <http://www.iaia.org/editorialrules.html>

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Registration

- Each accepted paper needs at least one full registration, before the camera-ready manuscript can be included in the proceedings.
- Registration fees are available at <http://www.iaia.org/registration.html>

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