

2027 · SEVILLE · 14-17 JUNE

OPEN-SOURCE DESIGN CHALLENGE

A better design, made with open-source tools on an open PDK.

COMPETE for the $1,000 AWARD AND THE OPEN SILICON AWARD

For the first time, SMACD 2027 holds an **Open-Source Design Challenge**, open to **everyone**: students, researchers, independents and companies.

```
# what we will do with your entry
$ git clone https://.../your-entry && cd your-entry
$ less README.md
  ✓ open PDK  ✓ open tools  ✓ GDS  ✓ DRC/LVS clean
$ make reproduce  # optional, and it earns you points
```

$1,000
+ the Open Silicon Award:
your design fabricated in the next IHP open-source MPW run, via the ODE4EC-AMS project.

01 SUBMIT
A 4-page SMACD paper and a public repository.

02 WE CHECK IT
Our team re-runs whatever you made reproducible.

03 YOU PRESENT IT
Paper, then the judges' questions. No live demo.

04 WIN
$1,000 and your design in IHP silicon.

HOW TO ENTER

Submit a paper (standard SMACD 2027 guidelines) and a **public repository** showing what you did, with open-source tools on an open PDK. It **must** contain a README.md with the design, tools, PDK (and commit) and claimed results, plus clean DRC and LVS reports. Add whatever demonstrates your work: schematics or RTL, netlists, GDS, verification reports, a command or CI workflow that reproduces your results, an optional container.

No public repository, no win. GDS plus clean DRC/LVS reports is enough to enter; the more others can reproduce, the better you score.

TOPICS OF INTEREST

Analog, RF, digital and mixed-signal designs within the scope of SMACD 2027. Generators are welcome as a means: we judge the design(s) they produce; a generator as such belongs in the EDA Competition.

HOW WE JUDGE

A Judging Committee selects a **single winner**. **Step 1:** our team checks your repository and re-runs what you made reproducible (facts, not scores); check it from a clean clone before you submit. **Step 2:** you present the paper and answer the judges' questions. Criteria:

- **Design achievement** — is the circuit good?
- **Reproducibility** — how much of your result can others re-run?
- **Open Defence** — do you know your own flow?
- **Tool use and openness** — open end to end, upstream fixes.
- **Documentation and community value** — could a stranger reuse it?

THE RULES

- **Open tools only**, schematic or RTL to a DRC- and LVS-clean GDS; proprietary tools only to cross-check, declared.
- **Open PDK only**: any open-source PDK (IHP SG13G2, Sky130, GF180MCU...).
- **Silicon in IHP SG13G2 or SG13CMOS5L**, as the run requires: a winner in another PDK ports the design. The winning design must fit within 5 mm² (IHP padframe included). A winning design may be used for evaluation within ODE4EC-AMS.
- **Publish it**: Apache-2.0 or CERN-OHL sources, CC-BY-4.0 docs.
- **Accepted entries** are presented in a special session and published in the proceedings.
- **Reproduced entries** earn the SMACD Reproducibility Seal.

IMPORTANT DATES

Paper & repository	**Feb. 19, 2027**
Notification	**April 9, 2027**
Camera ready	**April 30, 2027**
Early registration	**April 30, 2027**

CHALLENGE CO-CHAIRS
Rafael Castro-López, *IMSE-CNM, ES* · Marko Kosunen, *Aalto University, FI*

ORGANIZED BY

IMSE-cnm Instituto de Microelectrónica de Sevilla | CSIC | Universidad de Sevilla

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CONTACT
info@smacd-conference.org
www.smacd-conference.org

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Chips JU

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