

UNIC-CASS Mentoring Session



Progress Questionnaire Results

Presented by: D-to-T mentoring team

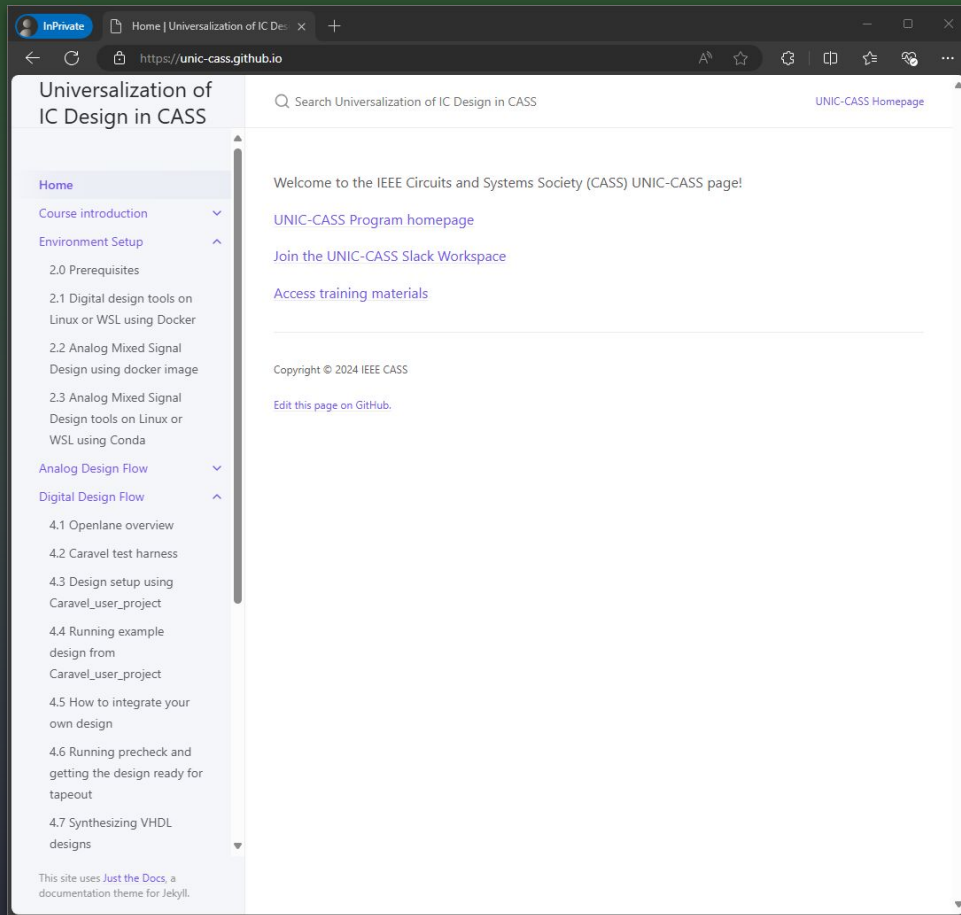
October 2nd, 2024



UNIC-CASS Page

Do not miss the educational material at

<https://unic-cass.github.io/>



Join the Open-EDA Community

UNIC-CASS Slack

https://join.slack.com/t/unic-cass/shared_invite/zt-1xxifr0ow-n8dpt0qNBxb4J50g8MEvmw

open-source-silicon Slack

https://join.slack.com/t/open-source-silicon/shared_invite/zt-1zopfd1gk-ul2eSINXB54xN9RCowGa4g

Outline

- 1. About the Progress Questionnaire**
- 2. General Results**
- 3. Digital-Specific Results**
- 4. AMS-Specific Results**
- 5. Feedback from DTs**
- 6. Next Milestones**

Progress Questionnaire

Track Team Progress Towards Tape-out

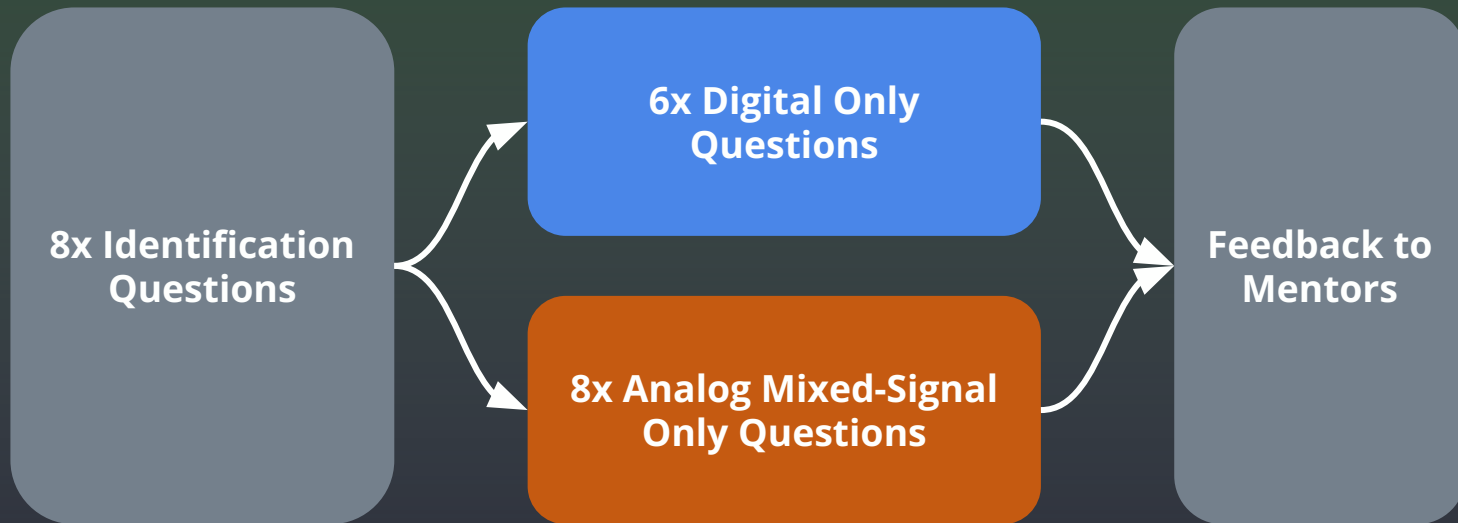
- Monitor each team's milestones
- Identify bottlenecks early to ensure teams stay on track for tape-out

Refine and Improve the Program

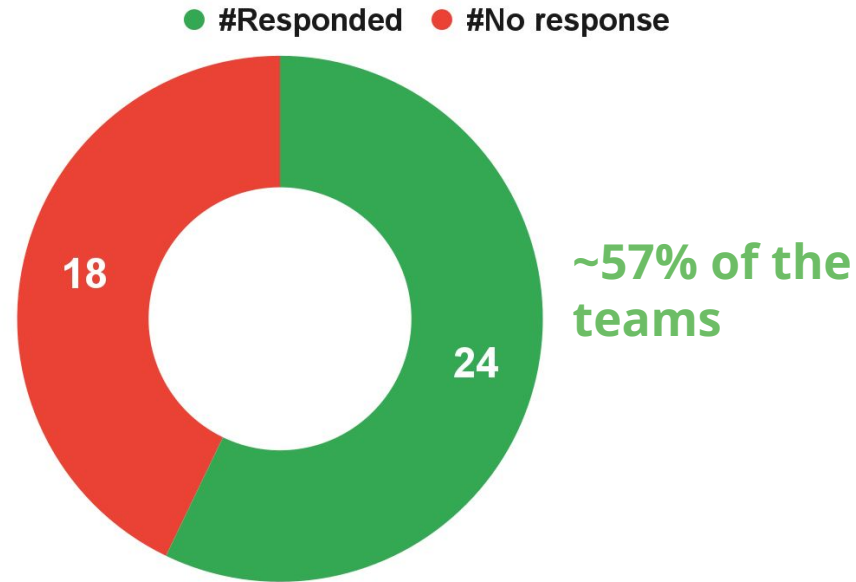
- Ensure that training, tools, and resources meet the evolving needs of participants
- Gather feedbacks to improve this and future programs

The screenshot shows a Google Forms interface for the 2024 IEEE UNIC-CASS Progress Questionnaire. The header is green with the text '2024 | IEEE UNIC-CASS Progress Questionnaire'. The main title is 'UNIC-CASS Progress Questionnaire'. Below the title, there is a paragraph explaining that the team asks each Design Team (DT) to fill out a short questionnaire, which takes about 5 minutes. Another paragraph asks respondents to answer all questions and write suggestions at the end, for feedback by Mentors and Design to Tapeout Mentoring team. A link is provided for the IEEE Circuits and Systems Society (CASS) UNIC-CASS page: <https://unic-cass.github.io/>. The form includes a 'Switch account' button, a 'Not shared' indicator, and a redacted area. The first question is 'Design Team Identifier (Use an ACRONYM as a short name for the IP block top level) *', with a 'Your answer' field. The second question is 'Contact email (1 or more) *', with a 'Your answer' field. The third question is 'Active Design Team members (First Name & Last Name of all students. Student names only) *', with a 'Your answer' field.

Progress Questionnaire

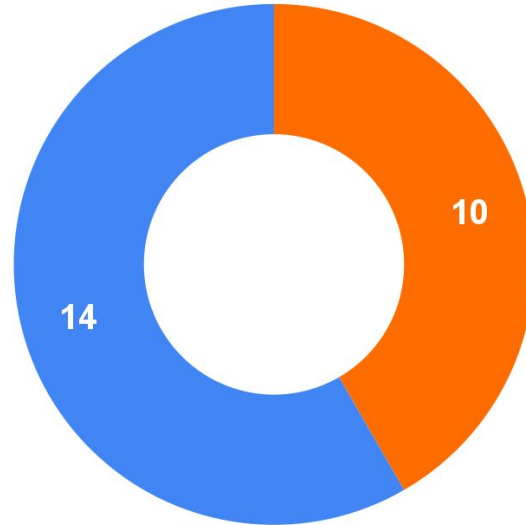


Number of Teams that Filled the Progress Questionnaire



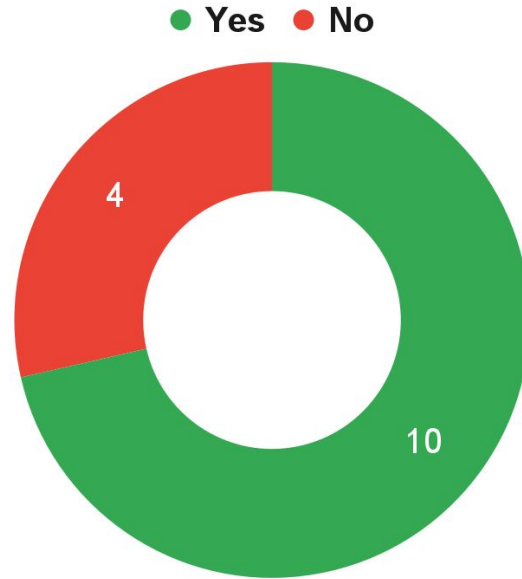
Distribution of Designs

● Analog / Mixed Signal ● Digital Only

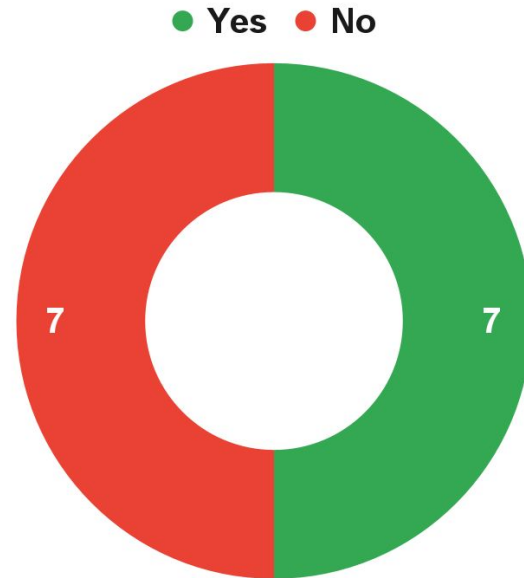


Digital-Specific Questionnaire Results

Number of Teams that Finished the RTL

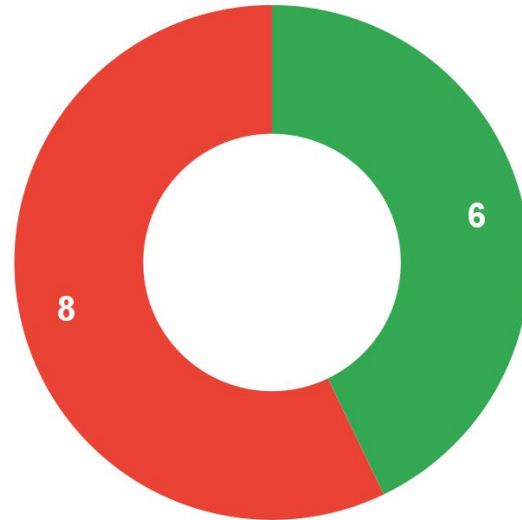


Number of Teams that Completed the RTL2GDSII Flow



Number of Teams that Completed Both RTL and RTL2GDSII Flow

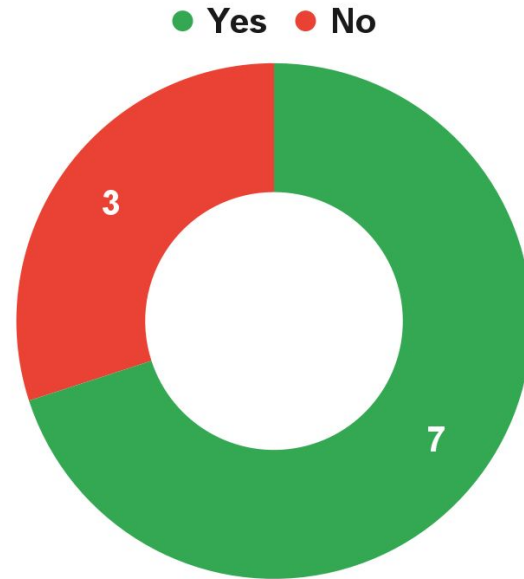
● RTL and Synthesis Ready ● Not Ready



+40%
of the digital teams

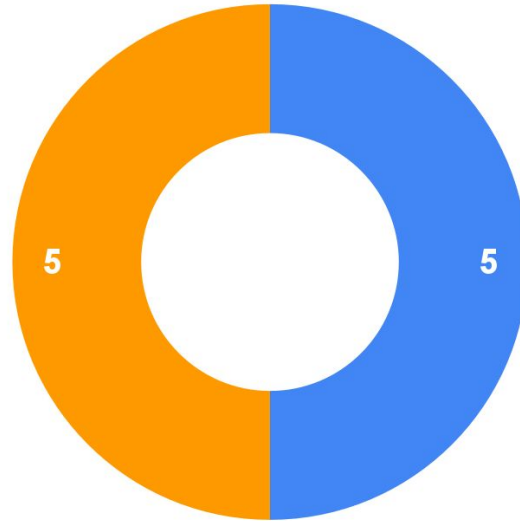
AMS-Specific Questionnaire Results

Number of Teams that Completed the Circuit Schematic



Number of Teams that Completed the RTL (Mixed-Signal Design)

● Verilog ● Don't apply (fully analog)



Feedback from UNIC-CASS Designers

19 Feedback Answers

(out of the 24 answers)

Feedback from Digital Designers

1. Further and detailed explanation on how to integrate user projects into Caravel
2. Emphasize the availability of certain documentations (e.g., Caravel)
3. Private session with the teams
4. Further explanation about the precheck and tape-out
5. Talk about the different standard cell libraries available for the PDK
6. About pdk versions and which to enable using volare

Feedback from AMS Designers

1. Mixed-Signal Tutorials
2. About the best practices in the overall process and about the integration of local repository to caravel template
3. Further explanation about the precheck and tape-out
4. The usage of the Slack channel could be more active, as there were times, particularly at the beginning, when we had difficulty finding the meeting link

Next Milestones

Next Milestones

Activities	Date / Deadline	Purpose/ comments	Your Deliverables (provide info/links on your GitHub)	We will provide/handle
1st Meet-up	Aug 12, 1pm-2pm UTC	Kick-off meeting	N/A	N/A
Weekly meet-ups	21/8,28/8,4/9, 18/9 1pm-2pm UTC	Mentoring and Design groups to present progress. Short presentations on topics such as Caravel/Caravan, best practices, pitfalls to avoid.	N/A	Slides and videos will be posted on the UNI-CASS website
1st Design submission [Mock tape-out]	Sep 25	Prepare the teams in advance for the final tape-out phase	Passing pre-check report	1. Detailed instructions for pre-check 2. Example files
1st Design Review & Feedback	Oct 2	Provide feedback and advice for the next stages	N/A	Feedback on the pre-check work
Weekly meet-ups	16/10, 30/10, 5/11 1pm-2pm UTC	Focused mentoring + preparation for final tape-out + evaluate status of potential drop-outs	N/A	Slides and videos will be posted on the UNI-CASS website

Next Milestones

Activities	Date / Deadline	Purpose/ comments	Your Deliverables (provide info/links on your GitHub)	We will provide/handle
2nd Design submission	Oct 16	Verify feasibility of designs and top integration	Detailed circuit description (pinout, area and functionality) + DRC/LVS reports on Efabless platform	Check reports to confirm all blocks are LVS and DRC clean.
2nd Design Review & Feedback from mentors	Oct 23	Provide feedback and advice for the final stages	N/A	Feedback on the individual designs + advice for top merge
Efabless pre-check + tapeout	Nov 8	Complete tape-out work on Efabless platform	Deliver COMPLETE Caravel/Caravan drop-ins to Efabless final check	Provide assistance to tape-out leaders within the teams
Tape-out	Nov 11	See: https://efabless.com/chipignite	N/A	List of winner teams included in this tapeout List of unfinished designs to candidate for 2025 UNIC-CASS program
Chip delivery date	Apr 11	See: https://efabless.com/chipignite	N/A	Chip shipping and testing logistics

Thanks, any questions? :)

feel free to reach out

