

CBP2025

Closing Remarks, Results, and Awards

Sixth Championship Branch Prediction

Co-located with ISCA 2025 – Tokyo, Japan

Rami Sheikh
Organizing Committee Chair

June 21, 2025

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Recap

- Witnessed a wide range of creative ideas
 - Improvements to well-known predictors
 - Introduction of new auxiliary predictors
 - Integration of unconventional information into prediction
- No doubt, required monumental effort
- Now, the big question is: **how did they perform?**

Drumroll...

The winners of CBP2025 are...

3rd Place

3

3rd

3rd Place \$ prize: \$250



CBP2025 Winners ...

SiFive



2nd Place \$ prize: \$500



CBP2025 Winners ...

**Nagoya Institute of Technology
The University of Tokyo**

CBP2025 Winner



1st Place \$ prize: \$1,000

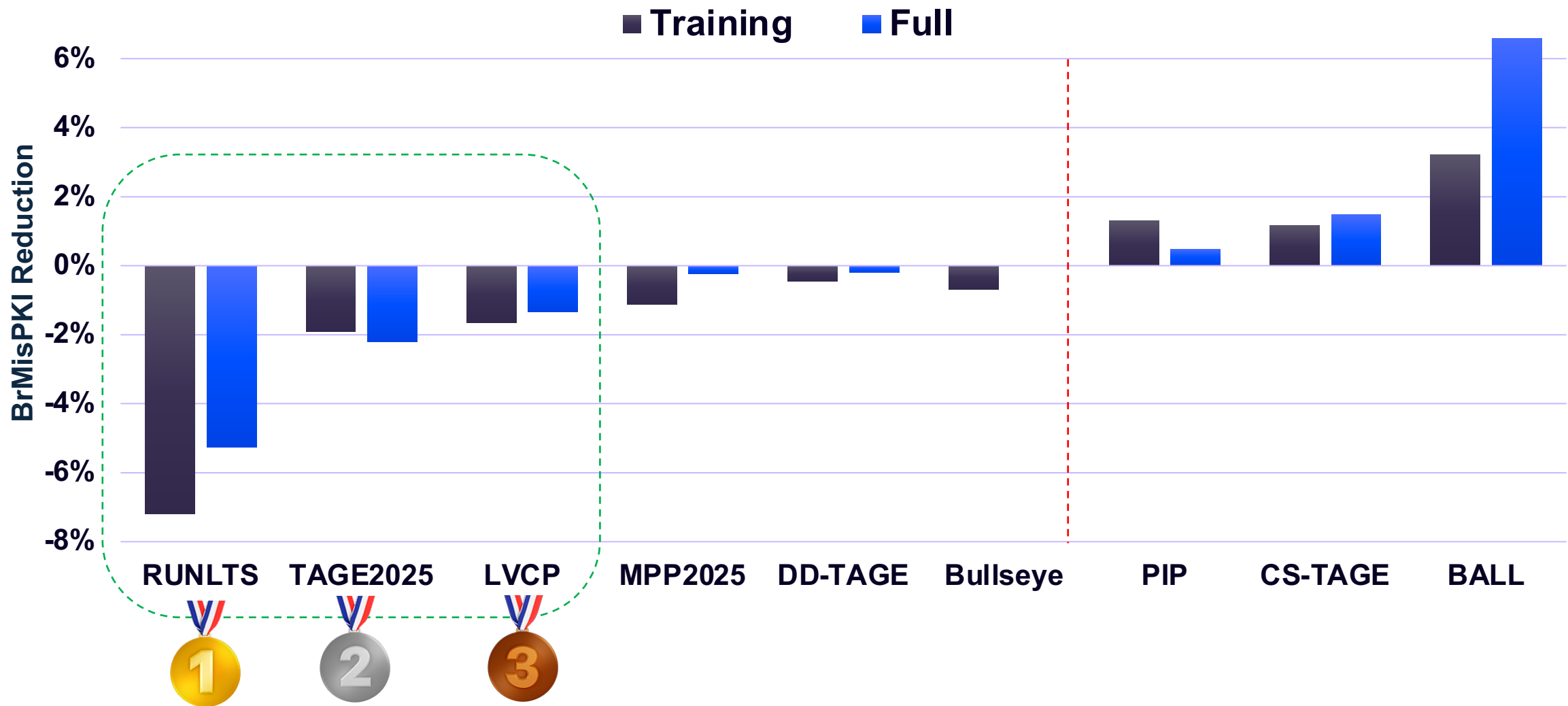


Results – Legend

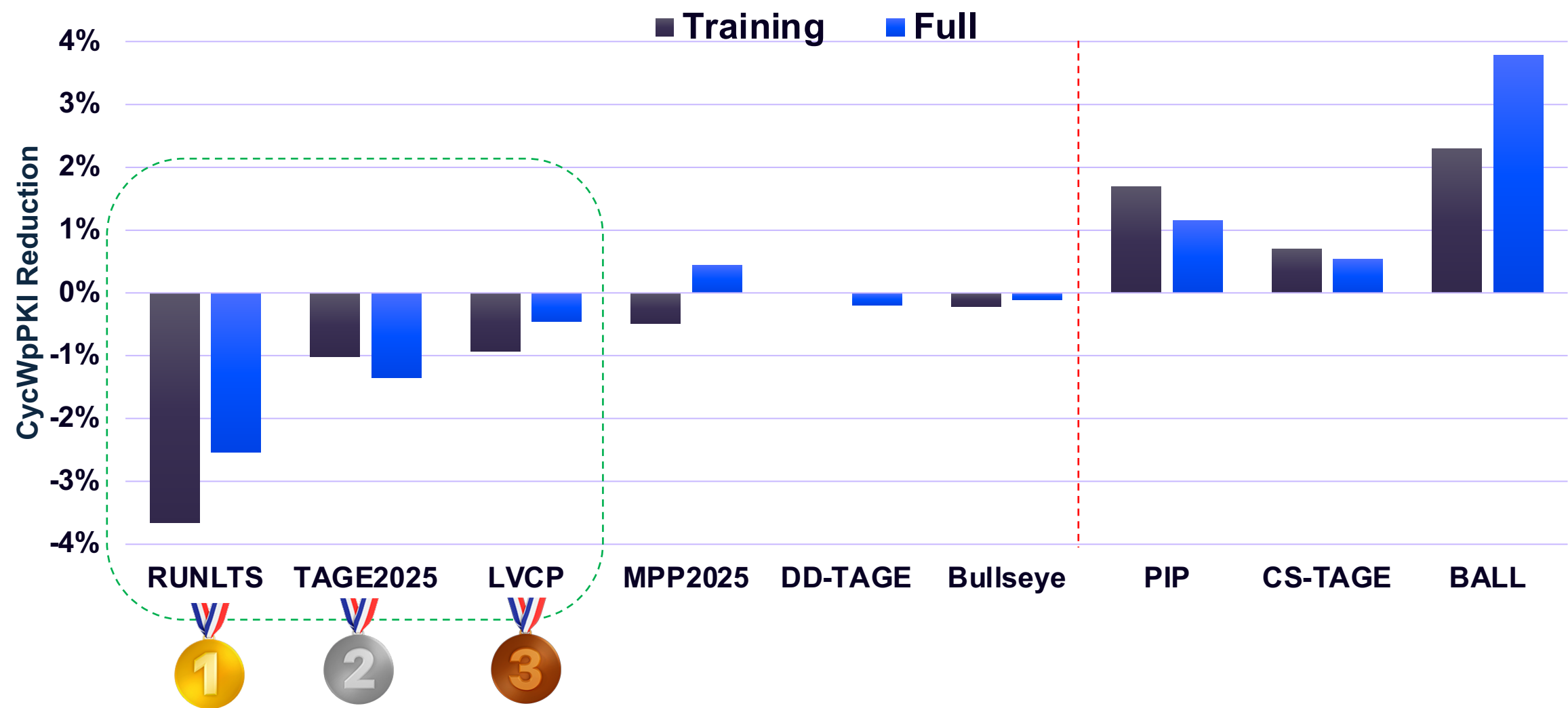
Label	Paper (As Listed in Today's Program)
TAGE2025	TAGE -SC for CBP 2025
DD-TAGE	A Deep Dive Into TAGE -SC-L
RUNLTS	RUNLTS : Register-value-aware predictor Utilizing Nested Large TableS
LVCP	LVCP : A Load Value Correlated Predictor for TAGE-SC-L
PIP	PIP : An Ensemble of Programming-Idiom Predictors
CS-TAGE	TAGE -SC-L with Code Structure Correlator
MPP2025	M ultiperspective P erceptron P redictor
Bullseye	Taming Wild Branches: Overcoming Hard-to-Predict Branches using the Bullseye Predictor
BALL	Branch Prediction via Load Value Prediction: A Case of BALL (Branch-ALU-Load-Load) Pred.

Results compared to 192KB scaled TAGE-SC-L

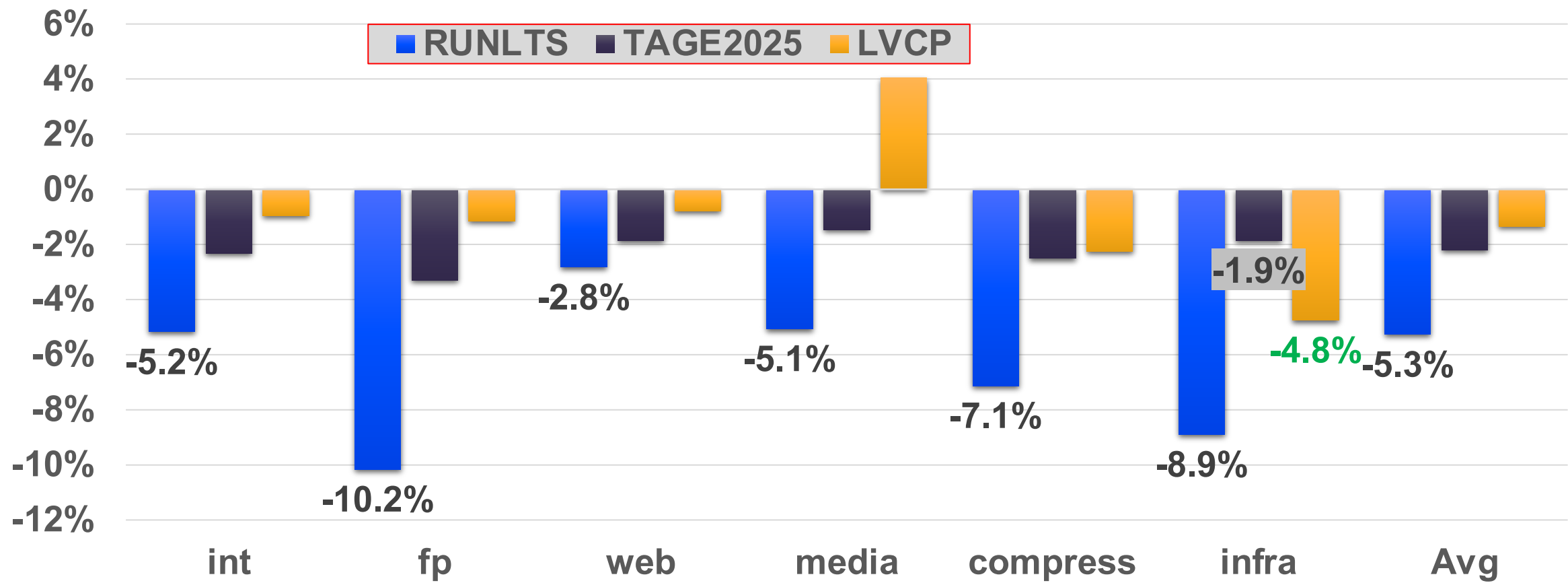
Results – Overall BrMisPKI



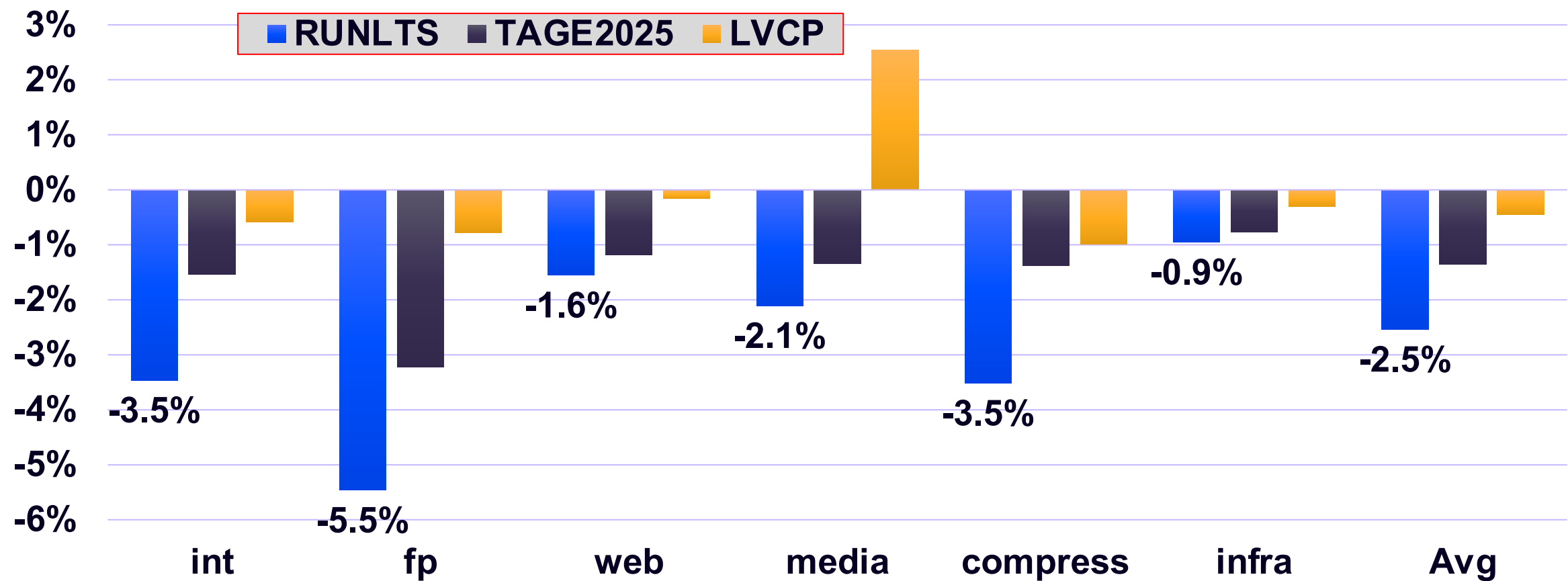
Results – Overall CycWpPKI



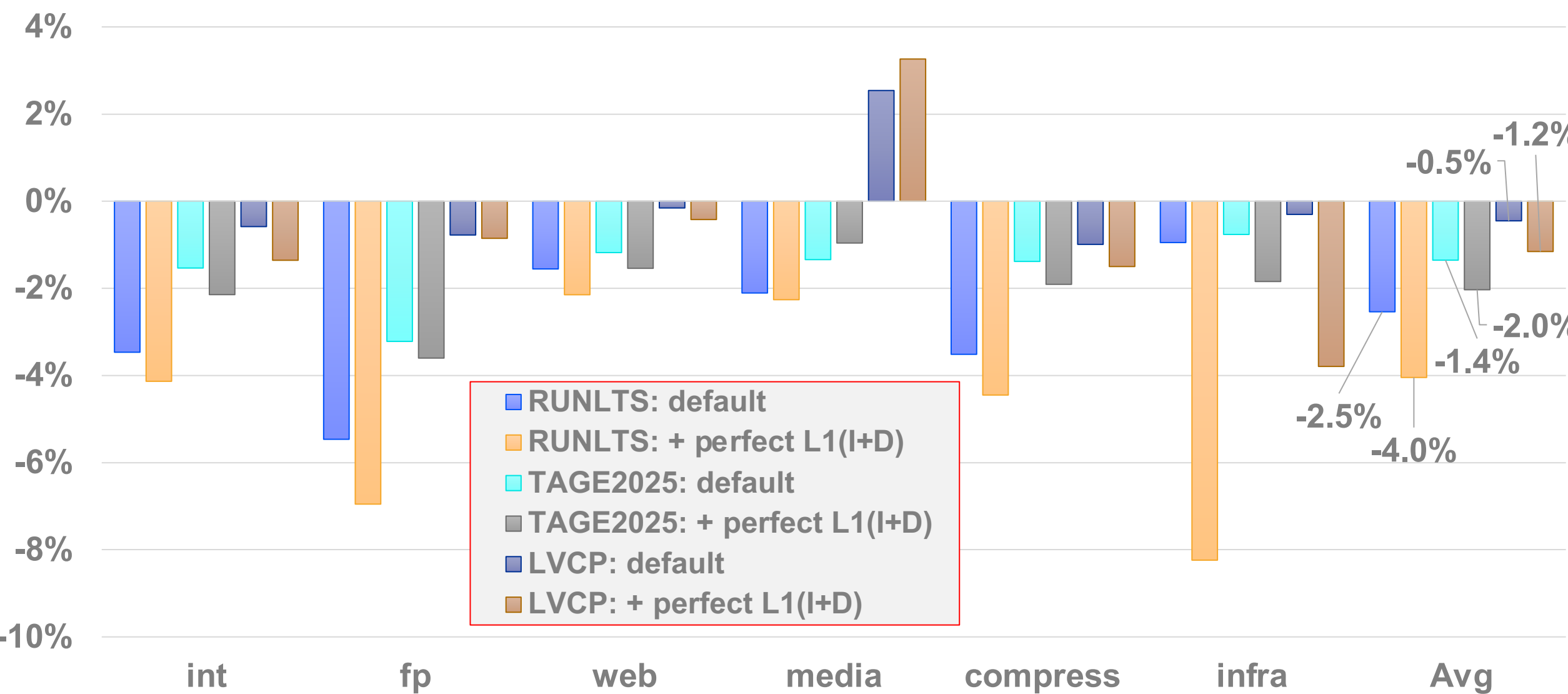
Results – Top-3 Per Workload Category (BrMisPKI, Full)



Results – Top-3 Per Workload Category (CycWpPKI, Full)



Results – Top-3 Per Workload Category (CycWpPKI, Full, Perfect L1(I+D))



Open Questions for The Community

- Should we make CBP a year-round competition?
- What improvements would the community like to see in the infrastructure?
- Are there improvements to traces that would be valuable?

Reflections & Closing Thoughts

- Despite the short runway, our community delivered so much innovation!
 - Record number of submissions
 - Rich, diverse set of new branch prediction algorithms
- Branch prediction is very important
 - Need for continued innovation and community sharing
- Thanks to all participants, authors, reviewers, and organizers
- Workshop materials (papers, source code, slides ...etc.) will be available online

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Merci

Danke

Gracias

Grazie

谢谢

ありがとう

Asante

Thank You

감사합니다

धन्यवाद

Kiitos

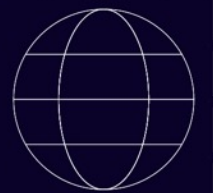
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Köszönöm



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