The MEV Letter

is a weekly collection of papers, articles and resources related to MEV. The intention of this letter is to provide a comprehensive summary of the latest research, discussions, and developments in the space, with links for further reading.

See our Transparency Reports for deeper dives into updates related to Flashbots.

Papers & Articles

- DAO Decentralization: Voting-Bloc Entropy, Bribery, and Dark DAOs by James Austgen, Andrés Fábrega, Sarah Allen, Kushal Babel, Mahimna Kelkar and Ari Juels introduce Voting-Bloc Entropy

(VBE) to formalizes a broad notion of decentralization in DAO voting, and present the first practical realization of a Dark DAO.

- Sequencers and Maximal Extractable Value by David Cao, Sofia Wawrzyniak and Brandon Wang examines multiple designs of rollup sequencers with a focus on MEV and decentralization.
- FRP-29: Research on MEV in L2 Blockchainsby David Cao
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- Dr. changestuff or: how i learned to stop worrying and love mev-burnby Mike Neuder presents protocol benefits of MEV-Burn and clears up some common misconceptions.
- MEV burn: Incentivizing earlier bidding in “a simple design”by Anders Elowsson presents a design for MEV-Burn that incentivize earlier bidding by rewarding builders who submit the winning bid at the observation deadline.
- Minimum Viable Issuance by Anders Elowsson delves into Ethereum’s staking economics and the balance between user utility, network security, and economic sustainability.
- Thread by Anders Elowsson
- Thread by Anders Elowsson
- The Costs of Censorship: A Modeling and Simulation Approach to Inclusion Listsby Thomas Thiery provides a framework to evaluate the impact of network conditions and inclusion list designs on various censorship resistance metrics.
- Thread by Thomas Thiery
- Thread by Thomas Thiery
- Based preconfirmations by Justin Drake show how based rollups (and based validiums) can offer users preconfirmations on transaction execution.
- Validator Smoothing Commitments by Jason Vranek propose Smoothing Commitments

to improve permissionless liquid staking protocols by requiring node operators to pay upfront to run a validator.

- The Impact of Uniswap X on the DEX Ecosystemby Orange Finance explores the impact Uniswap v4 and Uniswap X could have on the DEX landscape.
- Thread by Orange Finance
- Thread by Orange Finance
- A sneak-peek at validator side MEV optimizationby Chorus One shares the results of a recent pilot aimed to minimize the occurrence of missed slots, and increasing validator rewards.
- RIP MEV Bot 2 by rekt details the loss of $2 million by a searcher bot due to an unprotected swap function in its code.

Posts & threads

- Demystifying remote attestation by taking it on-chain by Andrew Miller demonstrates how to verify SGX remote attestations using Solidity smart contracts with RAVE from Puffer Finance.
- Thread by Andrew Miller
- Thread by Andrew Miller

- Blockchain Monitoring is MEV. Always was by Odysseas looks at the monitoring, detection and mitigation of onchain exploits and how incident response is coupled with MEV activity.
- Forum post by Odysseas
- Forum post by Odysseas

Talks & Discussions

- Bell Curve: A Deep Dive into Batch Auctions invites Anna George and Ludwig to discuss how batch auctions and CoW hooks mitigate MEV, and how the Angstrom project by Sorella Labs' tackles LVR.
- Deciphering Private Orderflow in MEV w/ Blocknative and Fastlane Labs hosted by Fenbushi Capital invites Alex Watts and Blair Marshall to explore private order flow markets and the operations of FastLane on Polygon and Blocknative.
- Do You Need to Protect Yourself from MEV? hosted by DODO invites Matt Cutler to give an overview of MEV, and how users can protect themselves through private transactions.

Other

- libMEV by Cryptic Woods is a dashboard and bundle explorer with data on searchers and bundles since the Merge.
- Thread by Cryptic Woods
- Thread by Cryptic Woods
- Toni Wahrstätter announced a maintained list of OFAC sanctioned ETH addresses for research purposes.
- Ulisse by Chainbound is an Ethereum network topology explorer visualizing the geographical distribution of nodes.
- Thread by Chainbound
- Thread by Chainbound
- suave-playground by Miha Lotric is a guide for setting up a local environment to build and submit Goerli blocks to Flashbots relay using SUAVE.
- Thread by Miha Lotric
- Thread by Miha Lotric

Upcoming events

- Nov 15

: ETHconomics by Robust Incentives Group will highlight economic problems on Ethereum with a focus on transaction fee mechanisms, staking economics and AMM mechanism design.

- Nov 16-17

: Programmable Cryptography Conference by 0xPARC and PSE is a two day event focused on next-generation cryptography, applied cryptography, zkSNARKs and MPC.

- Nov 17

: UNISUAVE Researchathon by Flashbots and Uniswap Foundation will explore what SUAVE and Uniswap v4 hooks can uniquely enable.

- Nov 18

: censorship.wtf by T&T will explore censorship resistance across the entire Ethereum stack with speakers presenting from both Istanbul and Prague.

- Public Flashbots collective calendar have extensive information on all talks, panels and workshops by Flashbots during Devconnect, and beyond.

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