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.

Papers & Articles

- Rolling in the Shadows: Analyzing the Extraction of MEV Across Layer-2 Rollups by Christof Ferreira Torres, Albin Mamuti, Ben Weintraub, Cristina Nita-Rotar, and Shweta Shinde investigates the prevalence and impact of MEV on Ethereum, Arbitrum, Optimism and zkSync, and evaluates the feasibility of three novel attacks that exploit cross-layer transactions.
- Decentralization of Ethereum's Builder Market by Sen Yang, Kartik Nayak, and Fan Zhang explores the increasing centralization of the builder market and identifies possible directions to improve decentralization.
- Thread by Data Always
- Thread by Data Always
- Dealing with spam caused by on-chain searching by Quintus Kilbourn presents ideas that address the issues of spam and high transaction reversion rates on blockchains like Base and Solana.
- Proprietary binary provisioning within TEEs by Frieder Erdmann outlines how without adequate constraints or attestation, binary provisioning within TEEs can compromise confidentiality by replacing the legitimate provisioning service with a rogue one.
- Intents Newsletter: Volume 1 by apriori is the inaugural edition of a monthly publication that highlights relevant research in and around intents, intent-centric protocols, and related literature.
- Thread by apriori
- Thread by apriori
- Introducing Smart Transactions by MetaMask announces a new feature built together with SMG that's designed to prevent failed transactions, frontrunning, and provide better gas fee predictions.
- Thread by MetaMask
- Thread by MetaMask
- Builder Reveal Timing Game in ePBS by Terence Tsao describes the impact ePBS might have on timing games and builder behavior.
- CEX/DEX arbitrage, transaction fees, block times, and LP profits by Atis Elsts analyzes the dynamics of CEX/DEX arbitrage and simulates how block times and base fees impact LPs and searchers.
- Reth Execution Extensions by Georgios Konstantopoulos presents a new reth framework for building performant and complex off-chain infrastructure as post-execution hooks.
- Thread by Georgios Konstantopoulos
- Thread by Georgios Konstantopoulos
- Atlas by L2 Iterative Ventures provides an overview of Atlas by FastLane Labs and describes how it's designed to redistribute MEV back to users and protocols.
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- Announcing FairyCoW: Encrypted Orders for CoW Swap by Fairblock Network announces FairyCow built in collaboration with Anagram, that allow users to encrypt CowSwap orders before broadcasting them to solvers and searchers.
- Thread by Fairblock Network
- Thread by Anagram
- Thread by Fairblock Network
- Thread by Anagram

- Implications of EIP-3074 inclusion by Yoav Weiss analyzes the shortcomings of EIP-3074 including centralization vectors and incompatibility with inclusion lists, and describes an alternative path to full AA.
- The pitfalls of EIP-3074, and how to avoid them by Derek Chiang outlines the challenges of EIP-3074 related to censorship resistance and permissioned innovations.
- Thread by Derek Chiang
- Thread by Derek Chiang

Posts & Threads

- Danning Sui published a post to highlight how Banana Gun has become the most valuable retail orderflow with over $118M of MEV captured to proposers and builders since June last year.
- Georgios Konstantopoulos published a post on timing games that spurred further conversation on single slot finality and forking.
- Tom published a post that details how Atlas allows protocols to auction off the right to backrun users transactions and capture MEV.

Talks & Discussions

- ETHDubai:
- Ethereum Staking Economics Endgame by Ansgar Dietrichs
- Anoma: Ethereum's Intent Machine by Adrian Brink
- The rise of programmable intents by Alex Vinyas
- How to decentralize Intents by Mounir Benchemled
- Unlocking Ownership: The Path to an Invisible Web3 through Account Abstraction by Lukas Schor
- Panel on Account Abstraction with Pedro Gomes, Lukas Scho, Kirill Fedoseev, Ansgar Dietrichs, Sachin Tomar, and moderated by Rahul Kothari
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- PEEPanEIP#130 :EIP-7547: Inclusion lists invites Mike Neuder, Terence Tsao, and Francesco to discuss how EIP-7547 is designed to improve censorship resistance by allowing proposers to create inclusion lists with transactions that builders must include.
- Thread by Pooja Ranjan
- Thread by Pooja Ranjan
- Shared Sequencing Espresso invites Benedikt Bünz for an overview of shared- and based sequencing, and the roadmap of Espresso.
- MEV & threshold encryption with Project Shutter hosted by Espresso Systems invites Ellie Davidson, Luis Bezzenberger, and Jannik to discuss Shutter and how encrypted mempools can reduce MEV.

Other

- Notice to Protect Users: Adjustment to builder sharing by Shea Ketsdever announces a change in Flashbots Protect to

increase the likelihood that users receive a refund from MEV-Share.

- First blocks built inside TDX by Chris Hager highlights the first blocks built by Flashbots experimental TDX builder on April 30th.
- Thread by Shea Ketsdever
- Thread by Shea Ketsdever

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