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

- FRP-30: Even Faster Private Set Intersection by Gokay Saldamli and Lisandro Acuña presents a PSI protocol that can be used for applications such as private auctions and access list comparison.
- A concrete proposal for correlated attester penalties by Vitalik Buterin outlines a proposal for correlated validator penalties based on the previously published design.
- Appointed Execution Proposers: Because the Proposer you know… by Conor McMenamin introduces the concept of appointed execution proposers (AEPs) to appoint specialized proposers to propose blocks on behalf of validators.
- ePBS: Bypassing Relayer by Terence Tsao details the continued existence of relays in ePBS and argues that the benefits, including lower latency and costs, outweigh the drawbacks.
- Thread by Terence Tsao
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- ePBS specification notes by Potuz provides a comprehensive overview of the ePBS specification including its architecture, features, and interactions between builders and proposers.
- ePBS Forkchoice annotated spec by Potuz annotates the ePBS forkchoice specification and the required changes needed for implementation.
- Private Transactions: Where MEV and The Public Mempool Go to Die by Jason Chaskin examines the evolution of the MEV supply chain and how new applications are designed to minimize MEV.
- Thread by Jason Chaskin
- Thread by Jason Chaskin
- Foundations of minimum viable issuance by Anders Elowsson explores the economic implications of reducing Ethereum's issuance by modifying the reward curve.
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- Reward curve with capped issuance by Anders Elowsson presents a baseline design for a capped reward curve.
- Beyond Spot Transactions: Modeling Dynamic Preconfirmation Auctions by Primev introduces a model for auctioning preconfirmations, and explores the implications for bidders and providers.
- Thread by Primev
- Thread by Primev
- On ERC-4337, Intents, and MEV by Ben Basche and Alex Watts details the tradeoffs and relationship between ERC-4337, intents, and MEV.
- Across and Uniswap Labs propose standard for cross-chain intents to accelerate cross-chain interoperability by dreamsofdefi presents the collaborative effort by Across and Uniswap Labs to develop ERC-7683 as a new standard for cross-chain intents.
- Thread by Across
- Thread by Across
- ERC7683: The Cross-Chain Intents Standard by Nick Pai discusses infrastructure for chain abstraction, solver network liveness, and the design goals of ERC-7683.
- Thread by Nick Pai
- Thread by Nick Pai
- Kurtosis: A Deep Dive to Local Devnets by barnabasbusa and parithosh goes over the features of Kurtosis as a

platform to run devnets and test Ethereum clients, tooling, and applications.

- Thread by parithosh
- Thread by parithosh

Posts & Threads

- Anvil for MEVM external provider by brock provides a guide for locally simulating bundles from SUAVE using new endpoints in suavex-foundry.
- Danning Sui published a thread to highlights the percentage of blocks fromultra sound relay that take profit through their bid-adjustment feature.
- Danning Sui published a thread that examines the inclusion rate of blobs by builders in the first month after Dencun.
- ephema published a thread highlighting the initial performance and economic effects of blobs, and the strategies used by different rollups.
- EIP-4844 – The Impact of Blobs by ephema
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- tldresear.ch published a thread to announce the program schedule for the upcomingTLDR Conference 2024 with sessions on MEV, block building, DEX design, and more.
- Profesor Utonio published a thread on the competitive dynamics of builders subsidizing their bids to gain market share, resulting in three dominant builders currently winning 86% of blocks.
- samczsun published a thread to announce SEAL-ISAC by Security Alliance as a threat intelligence sharing platform for web3 entities.
- Astria published a thread detailing the architecture of their shared sequencing layer and the implications for rollups and applications.
- Campbell published a thread with data on the amount of OEV lost to liquidations on lending protocols in the past 30 days.

Talks & Discussions

- ETH Seoul: Game Manipulation for Fun and Profit by Xinyuan Sun gives examples of incentive warping contracts and how to make game manipulation real.
- Slides by Xinyuan Sun
- Slides by Xinyuan Sun
- Ethereum Orderflow and MEV Supply Chain by CBER Forum invites Ankit Chiplunkar and Danning Sui for a deep dive into orderflow, the MEV supply chain, emerging trends in the builder market, and more.
- PBS and Arbitrage by Lioba Heimbach presents research on PBS and non-atomic arbitrage from two papers; Ethereum's Proposer-Builder Separation: Promises and Realities, and Non-Atomic Arbitrage in Decentralized Finance.
- ETHTaipei:
- How MEV infrastructure makes Ethereum more brittle by Marius van der Wijden examines recent incidents in the MEV supply chain, and potential solutions to increase its resilience.
- Recipes for a Stateless Ethereum by Guillaume Ballet provides an overview of how Verkle trees, PBS, and DVT contribute to Ethereum's decentralization.
- What is OFA and why should you care by Nic Lin discuss OFAs and how they enable users to capture part of the MEV they create.
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- Ethereum Sequencing and Preconfirmations Call #6 by Justin Drake details the motivation and benefits of real-time proving through zkASIC.
- Agenda by Josh Rudolf
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- What is Rainbow staking? by Barnabé Monnot presents the Rainbow staking framework and ways to incentivize protocol decentralization.
- Zero Knowledge Podcast: A Deep Dive into Shared Sequencers invites Ben Fisch to explore the current sequencing landscape, shared sequencing, and Espresso.
- Reputation-Weighted QoS in MEV Auctions by Jacob Greene introduces reputation-weighted QoS as a mechanism for mitigating spam in MEV auctions.
- The Race Against Time: Why Validators are at War with Milliseconds with Haseeb Qureshi, Freddy Zwanzger, Terence Tsao, Max Resnick, Eyal Markovich, and moderated by Kilian Boshoff discusses MEV, latency, and strategies used by builders and relays.
- Execution Layer Meeting 185 hosted by Tim Beiko discusses which EIPs to include in Pectra.
- Agenda by Tim Beiko
- Thread by Tim Beiko
- Notes by Christine Kim
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- Thread by Tim Beiko
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- Infinite Jungle: ACDE #185: The Engine of Ethereum Needs A Makeover by Christine Kim provides an overview of the EIPs that will be included in Pectra.

Other

- CHANGELOG #4 - SUAVE Development Updates (April 10, 2024) by Andy provides details of the latest developments related to SUAVE, including updates to suave-geth, suave-std, and suapp-examples.
- dmarz published a series of specs that outlines use cases and applications that can be built on SUAVE:
- Request for SUAPP: Storage Slot Bundle Type
- Request for SUAPP: Solver <> Builder Bottom of Block Interface
- TEE + Rainbow MEV Boost Idea
- Request for SUAPP: One Shot Signature
- Request for SUAPP: Storage Slot Bundle Type
- Request for SUAPP: Solver <> Builder Bottom of Block Interface
- TEE + Rainbow MEV Boost Idea
- Request for SUAPP: One Shot Signature
- Request for SUAPP: Bottom of the block arbitrage bot by Robert Miller describes how builders could allow searchers to run bottom of the block arbitrage strategies inside kettles on SUAVE.
- Tracoor: Ethereum beacon data and execution trace explorer by ethPandaOps introduces Tracoor as a tool that captures and stores Ethereum network data such as beacon states, blocks, and execution traces.
- Thread by ethPandaOps
- Thread by ethPandaOps

- Assertoor: Ethereum Testnet Testing Tool by ethPandaOps presents an end-to-end, cross-client integration testing tool for client interop testing.
- Thread by parithosh
- Thread by parithosh
- Announcing MVI Grants by Artem Kotelskiy provides an update on the MVI Grants program with details on five grantees that will analyze the implications of adjusting the reward curve.
- Post by cyber•Fund
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- ROP-12: Credible LLM Markets and AI-MEV by Robust Incentives Group outlines an open problem for advancing research on new forms of AI-MEV related to LLMs.

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