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

- Enhancing Generative Agent Cooperation with Commitment Devices by Feng Yan, Qitian (Jason) Hu, Nan Jiang, and Xyn Sun explores the ability of LLM agents to utilize commitment devices to cooperate under game-theoretical settings.
- Forum post by Feng Yan
- Forum post by Feng Yan
- Hybrid Order Type: A New MEV Aware AMM Design by Arrakis Finance and Valantis Labs presents the Hybrid Order Type

(HOT) AMM design, and details how it's designed to mitigate LVR and protect LPs against toxic flow. *Article by Arrakis Finance

- Thread by Arrakis Finance
- Thread by Hilmar
- Article by Arrakis Finance
- Thread by Arrakis Finance
- Thread by Hilmar
- Impact of EIP-4844 on Ethereum: Consensus Security, Ethereum Usage, Rollup Transaction Dynamics, and Blob Gas Fee Markets by Seongwan Park, Bosul Mun, Seungyun Lee, Woojin Jeong, Jaewook Lee, Hyeonsang Eom, and Huisu Jang examines the impact of EIP-4844 on consensus security, Ethereum usage, rollup transaction dynamics, and the blob gas fee mechanism.
- Forum Post by Seongwan Park and Bosul Mun
- Thread by Seongwan Park
- Forum Post by Seongwan Park and Bosul Mun
- Thread by Seongwan Park
- TEEs - feat. Intel SGX by Moe Mahhouk provides an introduction to Intel SGX, including its use cases, benefits, and limitations.
- Based proposer commitments - Ethereum's marketplace for proposer commitments by Drew Van der Werff introduces Commitment Boost

as an out-of-protocol framework to standardize the last mile of communication between a proposer and a third party. * Thread by Drew Van der Werff

- Thread by Drew Van der Werff
- Multidimensional gas pricing by Vitalik Buterin discusses the benefits of separating pricing for different types of resources, such as computation and storage, to increase the efficiency and scalability of Ethereum.
- Embedded fee markets and ERC-4337 (part 1) by Davide Rezzoli and Barnabé Monnot investigates embedded fee markets within

other fee markets as part of ROP-7.

- Issuance Issues — Subsequent Soliloquy by Mike Neuder examines adjustments to the issuance curve and the impact on nominal and real yields.
- Examining the Based Sequencing Spectrum by Jonas Bostoen discusses the trade-offs related to based sequencing and highlights the technical, and economic requirements for L1 proposers to effectively preconfirm transactions.
- Thread by Jonas Bostoen

- Thread by Jonas Bostoen
- Eating Sandwiches: Modular and Lightweight Elimination of Transaction Reordering Attacks by Orestis Alpos, Ignacio Amores-Sesar, Christian Cachin, and Michelle Yeo presents findings from their paper that details a mechanism to mitigate sandwich attacks.
- Sandwitch attacks on ePBS by Potuz analyzes sandwich and ex-ante attacks under ePBS compared to MEV-Boost.
- Derivatives Market: Fast Finality for Rollups by Tariz proposes a new derivatives market for based sequencing to achieve fast finality.
- TEE Coprocessor: Automata Multi-Prover AVS on EigenLayer by Automata Network outlines the implementation of their TEE Coprocessors as a multi-prover AVS on EigenLayer.
- Thread by Automata Network
- Thread by Automata Network
- How to Raise the Gas Limit, Part 2: History Growth investigates the scaling bottlenecks of Ethereum by exploring history growth and its impact on node storage.
- Thread by storm
- Thread by storm
- The Espresso Market Design by Espresso Systems details the design of the Espresso marketplace which enables rollups to sell their sequencing rights.
- Thread by Benedikt Bünz
- Thread by Espresso Systems
- Thread by Benedikt Bünz
- Thread by Espresso Systems
- 1inch Fusion 2.0 revolutionizes swap efficiency for users by 1inch Network presents an upgrade to 1inch Fusion with an improved Dutch auction using a dynamic gas price curve.
- Thread by 1inch Network
- Thread by Alex Obchakevich
- Thread by 1inch Network
- Thread by Alex Obchakevich

Posts & Threads

- Chorus One published a thread to unveil an upgrade to their MEV-Boost fork Adagio

, designed to increase validator rewards by delaying the getHeader

request sent to the relay.

- Gregory Markou published a post to explore the implications on censorship resistance by validators outsourcing responsibilities like block building to specialized third parties.

Talks & Discussions

- Ethereum Sequencing and Preconfirmations Call #7 included presentations on Bootstrapping Based Preconfirmation

by Justin Drake, and Preconfirmation Thoughts From Lido

by sacha. * Agenda by Josh Rudolf

- Notes by Drew Van der Werff and Sam Jernigan
- Agenda by Josh Rudolf

- Notes by Drew Van der Werff and Sam Jernigan
- Future of EOA/AA Breakout Room #2 hosted by Matt Garnett discusses the in-protocol AA roadmap, EIP-3074, EIP-7702, and more.
- Agenda by Matt Garnett
- Agenda by Matt Garnett
- ETHDubai: Based vs Non Based Sequencing: Converging Paths by Toghrul Maharramov explore the evolution of based sequencing and what the end-game for rollups sequencing might look like.
- EthStaker: Community Call #39: ePBS - enshrined Proposer Builder Separation invites Terence Tsao and Barnabé Monnot to talk about ePBS, ETs, PTC and MEV-Burn.
- The Gwart Show: Behind The MEV Mask invites Dean Eigenmann for a deep dive into the past, present and future of MEV, PBS, regulations, and more.

Other

- EIP-7702 by Vitalik Buterin, Sam Wilson and Ansgar Dietrichs and Matt Garnett proposes an alternative to EIP-3074 which is more compatible with ERC-4337.
- Post by Vitalik Buterin
- Post by Vitalik Buterin
- Multi-kettle communication by Quintus Kilbourn argues for implementing two types of kettle communication on SUAVE; No-guarantees/Best-effort

and Consensus

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- Getting started in SGX by Andrew Miller is a collection of introductory resources related to SGX.
- Awesome TDX by Andrew Miller is a collection of introductory resources related to TDX.
- Chain Abstraction Resources by Vaibhav Chellani is a collection of resources related to Chain Abstraction.
- Post by Vaibhav Chellani
- Post by Vaibhav Chellani

Upcoming Events

- May 15

: Intro to TEEs and SGX by Moe Mahhouk will be a hands-on session exploring Intel SGX.

- May 16-17

: TLDR Conference 2024 by tldresear.ch is a two-day event in NYC with sessions on MEV, block building, DEX design, and more.

- May 17

: HOT: Coffee and MEV Aware AMMs with Arrakis by Arrakis Finance in NYC will be a meetup focused on the Hybrid Order Type (HOT) AMM design by Arrakis Finance and Valantis Labs.

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