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

- Isolating Attesters From MEV by @Quintus and @Christoph outlines the tradeoff space of proposed designs that change how blocks are built and proposed on Ethereum.
- Thread by @Quintus
- Thread by @Quintus
- Credible, Optimal Auctions via Public Broadcast by Tarun Chitra, Matheus V. X. Ferreira, and Kshitij Kulkarni studies how public blockchains enable the design of credible auctions, where the auctioneer has no incentive to be strategic.
- Thread by Kevin Wang
- Thread by Kevin Wang
- AUCIL: An Auction-Based Inclusion List Design for Enhanced Censorship Resistance on Ethereum by Sarisht Wadhwa, Kartik Nayak, Fan Zhang, Thomas Thiery, and Julian Ma introduces a multi-proposer IL design where the aggregator role is auctioned off to the actor with the largest IL.
- My (e)thesis: settlement, data availability, execution — in that order by Mike Neuder details how Ethereum's decentralization and censorship resistance create strong property rights for digital assets and how rollups expand economic activity without sacrificing security.
- Post by Mike Neuder
- Post by Mike Neuder
- Deanonymizing Ethereum Validators: The P2P Network Has a Privacy Issue by Lioba Heimbach, Yann Vonlanthen, Juan Villacis, Lucianna Kiffer, Roger Wattenhofer demonstrates a method to deanonymize Ethereum validators in the P2P network, and suggests ways to improve anonymity.
- Thread by Seres István András
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- Pricing Ethereum Blocks with Vol Markets with Implications for Preconfirmations by Kevin Lepsoe presents a method for pricing Ethereum blocks by linking Vol markets with preconfirmations and CEX-DEX arbitrage.
- Thread by ETHGAS
- Presentation by Kevin Lepsoe
- Thread by ETHGAS
- Presentation by Kevin Lepsoe
- Why Slot Auction ePBS is not held back by LocalBlockValueBoost by Julian Ma explores how min-bid

and LocalBlockValueBoost

help proposers maintain credible neutrality, and the potential challenges posed by the shift to slot auctions in ePBS.

- Doppler: A liquidity bootstrapping ecosystem [Draft] by Austin Adams presents a liquidity-bootstrapping hook for Uniswap v4 with a Dutch auction dynamic bonding curve.
- Thread by Austin Adams
- Thread by Austin Adams
- Trusted Enclaves by Oliver Jaros and Shlok Khemani details how TEEs safeguard sensitive data and their growing relevance in cloud computing and web3.
- Post by Decentralised.Co
- Post by Decentralised.Co

- Observations on Factors Driving Low Gas Prices by Teck Yuan Lee examines how EIP-4844 and the rise of private transactions have resulted in sustained low transaction fees on Ethereum despite transaction volume remaining stable.
- To Reverse A Big Brain by jtriley.eth details various attempts at reverse-engineering bigbrainchad.eth's contract, showcasing sophisticated code obfuscation.
- Intrablock Lending: A Solution to Break the Sandwich Monopoly? by Miha Lotric explores the idea of intrablock lending on Ethereum, using jaredfromsubway.eth's sandwich strategy as a case study.
- From Fragmentation to Cohesion: Coordinating Last Miles to Unify Transaction Supply Chains by Kevin Wang describes the evolving role of relayers and solvers in enabling cross-chain interoperability.
- Thread by Kevin Wang
- Thread by Kevin Wang
- Statistical arbitrage on AMMs and block building on Ethereum – Part 1 by Christoph Rosenmayr and Mateusz Dominiak examines the leading actors performing statistical arbitrage on Uniswap and how it impacts block building.
- Thread by Greenfield Capital
- Thread by Greenfield Capital
- The Shape of Issuance Curves to Come by pa7x1 analyzes how the shape of the issuance curve impacts the decentralization of the validator set.
- Decentralized Anti-MEV sequencer based on Order-Fairness Byzantine Fault-Tolerant (BFT) consensus by KD.Conway describes an Anti-MEV sequencer, based on Order-Fairness BFT Consensus, to counteract MEV and ensure transaction fairness.
- 274 Transactions, One Strategy: How This Searcher-Builder Seized 4 of 6 Consecutive Blocks with a 6-Token Arbitrage by EigenPhi examines how the searcher-builder "I can haz block?" seized 4 consecutive blocks using a 6-token arbitrage strategy and 90% of block space.
- App-Specific Sequencing (ASS) is not all what you need by Pavel Paramonov explores the complexities of implementing app-specific sequencing, including block size constraints, and fair MEV distribution.
- The Based Stack by Spire Labs presents the Based Stack

as a rollup framework for building based appchains. *Thread by Spire Labs

- Thread by Spire Labs
- A primer on proposer preconfirms by Chorus One outlines how preconfirmations improve transaction speed, security, and reliability by providing inclusion- and execution guarantees.
- Thread by Chorus One
- Thread by Chorus One
- The Block Builder Landscape by Facundo Indabera highlights findings from Who Wins Ethereum Block Building Auctions and Why? by Burak Öz, Danning Sui, Thomas Thiery, and Florian Matthes.
- Post by Delphi Digital
- Post by Delphi Digital
- Breaking Down the Permission Layer by pedro details how wallet abstraction and chain abstraction improve UX by simplifying interactions with multiple blockchains.
- Thread by Modular Media
- Thread by Modular Media
- Security notes on ERC4337 and smart wallets by adriro outlines ERC-4337 in terms of structure, benefits, and associated security concerns.

Posts & Threads

- @bert published a thread detailing how the searcher bigbrainchad.eth mines vanity transaction hashes and call data as they exploit vulnerable contracts.

- Emmanuel Awosika published a thread outlining the design principles of MCP and its impact on censorship resistance.
- Emmanuel Awosika published a thread on timing games and the impact it has on network stability.
- Sreeram Kannan published a post exploring different approaches to transaction ordering, such as auctions, FIFO, and combined models.
- mteam published a thread describing how MR-MEV-Boost enables based preconfirmations by running multiple rounds of MEV-Boost auctions within a single slot.
- Wei Dai published a thread on adding accountability in MPC protocols to enable cryptoeconomic security on top of cryptographic security.
- Ben Fisch published a post outlining how rollups can decentralize their sequencer without giving up revenue by selling sequencing rights in a cross-rollup marketplace like Espresso.

Talks & Discussions

- TEEs for Non-Equivocation in Modern Consensus by @socrates1024 details how TEEs disintermediate app developers and clouds, and the use cases of trusted hardware in consensus.
- Zero Knowledge Podcast: Episode 339 - TEEs invites @socrates1024 to discuss Andrew's previous work on consensus, ZK, MPC, and the current focus on TEEs.
- Thread by Ittai Abraham
- Thread by Ittai Abraham
- Web3 Summit: Panel: Decentralization and the Next Wave of Regulations with Dr. Joachim Schwerin, Mariana de la Roche Wills, @ryager, and Nathalie Boyke discuss proposed regulations and their impact on web3.
- Indexed Podcast: PBS Series EP1: Block Builder Market invites Burak Öz to discuss the paper Who Wins Ethereum Block Building Auctions and Why? by Burak Öz, Danning Sui , Thomas Thiery, and Florian Matthes.
- Post by Indexed Podcast
- Post by Indexed Podcast
- Scalability Summit - ETHOnline 2024: Multiple Concurrent Proposers invites Liam Horne, Mark Tyneway, Max Resnick, and Justin Drake to dive into MCP and its implications on Ethereum's rollup-centric roadmap.
- The Rollup:
- The Ethereum Roadmap invites Justin Drake to discuss MEV, based sequencing, censorship resistance, and more.
- Post by The Rollup
- Post by robbie
- Post by The Rollup
- Post by robbie
- Why Solving Is The Biggest Onchain Opportunity In Crypto with Catalyst invites Jim Chang for a conversation on intents and the emerging importance of solvers.
- Post by Fav_Truffe
- Post by Fav_Truffe
- Why No One Wants To Be A Shared Sequencer Anymore invites Noah Pravecek to talk about synchronous composability, superbuilders, and Nodekit.
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- Ethereum Sequencing and Preconfirmations Call #14 invites Kevin Lepsoe for a presentation on Pricing Ethereum Blocks with Vol Markets with Implications for Preconfirmations.
- Agenda by Josh Rudolf
- Notes by Drew Van der Werff, Sam Jernigan, and Sam Bobitz
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- ePBS (EIP-7732) breakout room #9 hosted by Potuz includes a presentation on Trusted Advantage in Slot Auctions by Julian Ma, and Engine API changes introduced in EIP-7732 by Mark Mackey.
- Agenda by Potuz
- Notes by Terence Tsao
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- Web3 with a16z: How Tech Advances in Blockchains Benefit Other Industries invites Tim Roughgarden, Dan Boneh, and Sonal Chokshi to discuss AMMs, credible auctions, TEEs, and more.
- Post by a16z crypto
- Post by a16z crypto
- MACROCOSM: Sequencing invites Josh Bowen to provide an overview of shared sequencing, decentralized sequencing, and Astria.
- MEV Explained: Mev-Boost, Trust, Censorship & Future Upgrades by Jordan McKinney visualizes the MEV-Boost architecture and details how things might evolve with ePBS, MCP, and SUAVE.
- Thread by Jordan McKinney
- Thread by Jordan McKinney
- Breaking Down the Role of Solver Layers invites Kevin Wang, braindamâge, Connor, Noah Pravecek, and Rohan Garg to discuss the role of solvers and how they facilitate intent resolution for optimal transaction outcomes.

Other

- Show: a simple coin mix tool on toliman by @laospace describes how a coin mix tool could be built using SUAVE to prevent the linking of transactions through confidential deposits and withdrawals.
- Constitutional AIP: Proposal to adopt Timeboost, a new transaction ordering policy by Arbitrum proposes the adoption of Timeboost as a new transaction ordering policy for Arbitrum One and Arbitrum Nova.
- Forum post by Arbitrum
- Thread by Entropy Advisors

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- 4844 Data Challenge: Insights and Winners by Rodrigo Vasquez announces the winners of the Data Collection grant round with research related to EIP-4844's impact on scalability, consensus security, and rollup economics.
- Bolt-Boost by Chainbound is a commit-boost module that extends the default PBS module with the constraints-API.
- Post by [mempirate

](https://x.com/mempirate)

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