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

- Analysis of the SUAVE Architecture, Mechanisms and Use-Cases by Jonas Gebele analyzes SUAVE's architecture, development process, and potential applications, focusing on its use of TEEs for confidential computing and verifiable off-chain computation.
- MEV Capture and Decentralization in Execution Tickets by Jonah Burian, Davide Crapis and Fahad Saleh studies ETs and highlights centralization vectors due to heterogeneous MEV extraction abilities and capital costs, and quantifies protocol-level MEV capture.
- Thread by Jonah Burian
- Thread by Jonah Burian
- Combinatorial Auctions without a Numeraire: The Case of Blockchain Trade-Intent Auctions by Andrea Canidio and Felix Henneke explores the complexities of designing trade-intent auctions, and proposes a new fair combinatorial auction.
- Thread by Andrea Canidio
- Thread by Andrea Canidio
- Maximal Arbitrage Value in Starknet. Nostra V2 Arbitrage Quantification by @saguillo2000 and Carlos Fiestas explores methods for quantifying arbitrage opportunities between CEX-DEX on Starknet.
- Building Secure Ethereum Blocks on Minimal Intel TDX Confidential VMs by @Moe present an overview and a step-by-step deployment process of how to run rbuilder in Intel TDX as demo-ed at the TEE.Salon.
- On Multi-proposer Gadgets and Protocols by Thomas Thiery discusses the differences between FOCIL and BRAID in improving censorship resistance and addressing MEV.
- Thread by Thomas Thiery
- Thread by Thomas Thiery
- A Note on Equivocation in Slot Auction ePBS by Julian Ma outlines potential fork choice safety risks in slot auction ePBS, and presents two strawman proposals to secure against builder equivocation.
- Thread by Julian Ma
- Thread by Julian Ma
- The Role of the P2P Market in ePBS by Julian Ma explores the role of the P2P market in ePBS to enable smaller builders to compete, and the implications for multiplexing and MEV-Burn.
- Post by Julian Ma
- Post by Julian Ma
- Does multi-block MEV exist? Analysis of 2 years of MEV Data by Pascal Stichler analyzes multi-block MEV patterns and finds a slightly higher MEV-Boost payments for longer sequences, but fewer multi-slot sequences than a random Monte Carlo simulation would predict.
- Thread by ephema
- Thread by ephema
- 150 Days After Dencun by Zack Pokorny analyzes the impact of EIP-4844 on rollup economics, blob data usage, transaction fees, and network efficiency.
- Thread by Zack Pokorny
- Thread by Christine Kim
- Thread by Zack Pokorny

- Thread by Christine Kim
- To Be Based or Not To Be Based by Jünger discusses the rise of shared sequencers to address the fragmentation of Ethereum's rollup-centric roadmap, and the trade-offs of based sequencing.
- Thread by Taiko
- Thread by Taiko
- Leverage Zero Knowledge in SGX Remote Attestation by @tolak provides a walkthrough of how zk-sgx-attester by Phala Network verifies SGX remote attestation onchain by moving DCAP verification offchain to a zkVM.
- Private Order Flows -The Sleeve Bidding of Crypto - Contribute 89%, $642.5M, of Builders' Income by EigenPhi discusses the importance of private orderflow and the centralization of the builder market.
- Following Up on Telegram Bots: Crypto's New Cash Cows by Jordan Yeakley details the competitive landscape of Telegram bots, with a focus on Banana Gun's performance since the original report.
- Thread by Delphi Digital
- Thread by Delphi Digital
- Commit-Boost: Reducing Risks and Returning Autonomy Over the Block Back to Ethereum's Validators by Commit-Boost outlines the design of Commit-Boost in standardizing the last mile of communication between validators and third parties.
- Thread by Commit-Boost
- Thread by Commit-Boost
- 2024 Half-Year Report by Kofi examines the usage and economic impact of ERC-4337 across various chains.
- After the MEV Research House by vita shares reflections and learnings from hosting the MEV Tokyo Research House.

Posts & Threads

- Mark Ermolov published a thread detailing the successful extraction of Intel SGX Fuse Key0, AKA Root Provisioning Key, for certain processors.
- Follow up by Mark Ermolov
- Reply by Pratyush Ranjan Tiwari
- Reply by dmarz
- Reply by Marvin Tong
- Reply by Sylvain Bellemare
- Follow up by Mark Ermolov
- Reply by Pratyush Ranjan Tiwari
- Reply by dmarz
- Reply by Marvin Tong
- Reply by Sylvain Bellemare
- @bert published a thread outlining how although TEEs have shortcomings, they are currently the only solution to achieve speed, privacy, and decentralization in MEV.
- Mason Nystrom published a thread with data on the orderflow landscape, highlighting that private orderflow has now reached double that of public orderflow.
- Alex Nezlobin published a thread to describe a method for executing large ETH trades on Uniswap by taking advantage of mispriced liquidity and not signaling the intent to searchers.
- PropellerHeads published a thread summarizing their presence at EthCC7 with events and panels on MEV, LVR, solving, and more.
- Prithvir published a post detailing the rise of Telegram bots, private orderflow, and how batch auctions on CowSwap

are designed to protect users against MEV.

Talks & Discussions

- Recordings from Chain Abstraction Meetup hosted by Archetype and Socket are available with talks on MEV, PBS, intents and more.
- Superbuilders F@%k by Noah Pravecek
- Intents Can Cure Cancer, But Not MEV by Vishwa Naik
- Hidden Lies in Tents by Vaibhav Chellani
- Solver Risk is Too Damn High by Andrew Rollins
- [AA + CA =

](https://www.youtube.com/watch?v=A-qXcvIdLuY) by Derek Chiang
- Intents Are Bridges. And That's OK, Kitten by Nam Chu Hoai
- Superbuilders F@%k by Noah Pravecek
- Intents Can Cure Cancer, But Not MEV by Vishwa Naik
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](https://www.youtube.com/watch?v=A-qXcvIdLuY) by Derek Chiang
- Intents Are Bridges. And That's OK, Kitten by Nam Chu Hoai
- Recordings from Astria Research Day hosted by Astria are available with talks on TEEs, PBS, intents and more.
- Upgradeable TEEs by Nerla Jean-Louis
- Builders, Superbuilders, or no Builders? with rain&coffee, Max Resnick, Lily and Pranav Garidmidi
- Do Intents Actually Help DeFi? with Tarun Chitra, Vishwa Naik, 0xTaker and Hart Lambur
- Upgradeable TEEs by Nerla Jean-Louis
- Builders, Superbuilders, or no Builders? with rain&coffee, Max Resnick, Lily and Pranav Garidmidi
- Do Intents Actually Help DeFi? with Tarun Chitra, Vishwa Naik, 0xTaker and Hart Lambur
- Ethereum Sequencing and Preconfirmations Call #13 hosted by Justin Drake explored preconfirmation tip pricing.
- Agenda by Josh Rudolf
- Notes by Drew Van der Werff, Sam Jernigan and Sam Bobitz
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- Commit-Boost Community call #00 hosted by Alex Stokes covered updates on Commit-Boost, feedback from validators, and a showcase of modules.
- Thread by Commit-Boost
- Notes by Sam Jernigan and Sam Bobitz
- Thread by Commit-Boost
- Notes by Sam Jernigan and Sam Bobitz
- Infinite Jungle: ILs, ePBS, Preconfs, and More! Oh, the Possibilities of Commit Boost!invites Drew Van der Werff and Alex Stokes to discuss PBS, ILs, and Commit-Boost.

- Thread by Christine Kim
- Post by Commit-Boost
- Post by Galaxy
- Thread by Christine Kim
- Post by Commit-Boost
- Post by Galaxy
- The Magic of TEEs' - Online Workshop on TEE Basics invites Alex Zaidelson, Lisa Loud, @socrates1024, and Shelven Zhou to discuss the fundamentals of TEEs and showcase how Web3 projects are integrating TEEs into their architecture.
- Thread by Phala Network
- Thread by Phala Network

Other

- MEV-Boost v1.8 by Flashbots has been released with two minor changes, cleanup, and dependency updates.
- Post by @metachris
- Post by @metachris
- Sorella Dashboard by Sorella Labs provides a live overview of the MEV supply chain including bundles, bids, and mempool highlights

. * Post by Sorella Labs

- Thread by 100y.eth
- Post by Sorella Labs
- Thread by 100y.eth
- ETHGas Explorer by ETHGas provides metrics of Ethereum's gas market in real-time.
- Thread by ETHGas
- Thread by ETHGas
- Eden Network Announces Strategic Transition of their MEV-Boost Relay Operations to Gattaca by Luke Lichtenstein details Eden Network's handover of its MEV-Boost relay operations to Gattaca, and focus on SUAVE R&D and the intersection of crypto and AI.
- Post by Eden Network
- Thread by Titan Relay
- Post by Eden Network
- Thread by Titan Relay
- Out-of-Protocol Inclusion Lists via Commit-Boost by Eitan Seri-Levi describes a Commit-Boost module designed to allow proposers to create an IL while still outsourcing block construction via MEV-Boost.
- Sandwich Resistant Hook by cairo implements the Sandwich Resistant AMM by Jarry Xiao, frankie, 0xShitTrader and Dan Robinson which prevents swaps from being filled at a price better than the initial slot window price, as a hook for Uniswap V4.
- Thread by cairo
- Thread by cairo
- Xatu Consensus Layer P2P tables now available by samcm and savid announces the publication of Consensus Layer P2P tables in Parquet format.
- Post by ethPandaOps

- Post by ethPandaOps
- PyXatu by Toni Wahrstätter provides an interface to query data from theXatu database by ethPandaOps.
- Thread by[Toni Wahrstätter

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

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