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

- [Liquefaction: Privately Liquefying Blockchain Assets](#) by [James Austgen](#), [Andrés Fábrega](#), [Mahimna Kelkar,](#) [Dani Vilardell](#), [Sarah Allen](#), [Kushal Babel](#), [Jay Yu](#), and [Ari Juels](#) presents a TEE-based wallet platform to encumber private keys, enabling assets of a single end-user address to be freely rented, shared, or pooled.

- [Thread](#) by [IC3](#)

- [Thread](#) by [Jay Yu](#)

- [Thread](#) by [Ari Juels](#)

- [Post](#) by [Puja Ohlhaver](#)

- [Post](#) by [Puja Ohlhaver](#)

- [Thread](#) by [IC3](#)

- [Thread](#) by [Jay Yu](#)

- [Thread](#) by [Ari Juels](#)

- [Post](#) by [Puja Ohlhaver](#)

- [Post](#) by [Puja Ohlhaver](#)

- [Migrating to BuilderNet](#) by [Shea Ketsdever](#) announces that [Flashbots](#) has deprecated our centralized block builders and migrated orderflow and refunds to [BuilderNet](#).

- [Thread](#) by [Shea Ketsdever](#)

- [Thread](#) by [Shea Ketsdever](#)

- [Redistributing LVR to AMM LPs with dynamic fees and first-access auctions: empirical analysis](#) by [Juuso Ahlroos](#) and [Antero Eloranta](#) analyzes ways for LPs on AMMs to capture LVR through dynamic fee structures and first-access auctions.

- [Thread](#) by [Antero Eloranta](#)

- [Thread](#) by [Antero Eloranta](#)

- [Same-Slot L1→L2 Message Passing](#) by [Lin Oshitani, Conor McMenamin, Anshu Jalan](#), and [Ahmad Bitar](#) introduces a protocol for enabling same-slot message passing from L1 to L2, allowing users to atomically execute composable cross-chain transactions.

- [Post](#) by [Lin Oshitani](#)

- [Post](#) by [Lin Oshitani](#)

- [Modularizing Dstack: SDKs and Default Patterns for Creating P2P CVM Clusters](#) by [Tommaso De Ponti](#) details how [rs-modular-dstack](#) is designed to provide developers with standardized building blocks for creating replicable CVMs with [Flashbox](#) and [Dstack](#).

- [On Increasing the Block Gas Limit: Technical Considerations & Path Forward](#) by [Toni Wahrstätter](#), [Marek Moraczyński](#), [parithosh](#), [Jacek Sieka](#), [Paul Hauner](#), [Tim Beiko](#), and [Alex Stokes](#) argues for a cautious, data-driven approach to increasing Ethereum's gas limit, and waiting for Pectra in order to make more informed decisions.

- [Post](#) by [Toni Wahrstätter](#)

- [Post](#) by [Alex Stokes](#)

- [Post](#) by [parithosh](#)

- [Post](#) by [Toni Wahrstätter](#)

- [Post](#) by [Alex Stokes](#)

- [Post](#) by [parithosh](#)

- [The Opinionated Application](#) by [rain & coffee](#) details how application-specific rollups, sequencing mechanisms, and infrastructure customization enables dapps to optimize transaction ordering and MEV internalization.

- [Post](#) by [rain & coffee](#)

- [Post](#) by [rain & coffee](#)

- [AppChains, RaaS, and the Future of DeFi - Insights from DevCon Bangkok](#)by [Krzysztof Gogol](#) discusses appchains and their benefits, limitations, and impact on composability.

Posts & Threads

- [dmarz](#) published a [thread](#) highlighting the recent wave developments by[Flashbots](#) including [BuilderNet](#), [Rollup-Boost](#), [Searching in TDX](#), [Dstack](#), [Teleport](#), and more.

- [Robert Miller](#) published a [thread](#) detailing the latest batch of refunds paid from[BuilderNet](#), with one user being [refunded 22 ETH](#).

- [PBS Foundation](#) published a [thread](#) summarizing proposals, discussions and other resources related to ePBS.

- [Sxymoon](#) published a [thread](#) celebrating the winners from the SF TEE Acceleration Hackerhouse.

- [Alex Nezlobin](#) published a [thread](#) highlighting how a searcher profited ~$60K on the ETH/USDC pair on[Base](#) via concentrated JIT liquidity.

- [Anu](#) published a [thread](#) sharing summaries from talks at[Devcon SEA](#) related to MEV, PBS, and censorship resistance.

Talks & Discussions

- [TEE.salon @Bangkok](#):

- [Trustless Hosting with TEEs](#) by [Patrick Kearney](#)

- [TEE Build System](#) by Davie

- [Searching in TDX: to BoB and Beyond](#)by [Frieder Erdmann](#) and [0xprincess](#)

- [Reproducible builds for Nitro Enclaves](#) by [Roshan Raghupathy](#)

- [Ledger: A Case Study](#) by [Charles Guillemet](#)

- [Satellite Compute Fleet as Distributed Trusted Hardware](#) by [Daniel Bar](#) and [yangwao](#)

- [Javacard/ Smartcard based TEE](#) by Marcus Hearn

- [Building the trustless trade supply chain with TEEs](#)by [Markus Schmitt](#)

- [Dedicated TPM-based System with WASM signing verification vs. TEEs](#)by [Will Villanueva](#)

- [TEE Abstraction Middleware](#) by Alex GG

- [Shared Private State on Aztec](#) by [Rahul Kothari](#)

- [Last-mile TEE use cases for Penumbra](#) by [Henry de Valence](#)

- [Physical Unclonable Functions for Socially Unpredictable Humans](#) by [Sxysun](#)

- [5 Levels of TEEs](#) by [Georgios Konstantopoulos](#)

- [Old TEE Tales: A not-so-in-depth exploration of TEE platforms and its designs](#)by [Zheng Leong Chua](#)

- [TEE perspectives: Where you run your TEEs matters](#)by [Frieder Erdmann](#)

- [Bringing TEE magic to web2 and web3](#) by [Andrew Miller](#)

- [Panel: TEE for Block Building & Preconfs](#) with [dmarz](#), [Nathan Worsley](#), [Ellie Davidson](#), [Kevin Lepsoe](#), and [kassandraETH](#)

- [Secure Hardware: From Sand To Stone](#) by [Quintus Kilbourn](#)

- [Ethereum & Silicon](#) with [Quintus Kilbourn](#), [Vitalik Buterin](#), [Charles Guillemet](#), [Robert Drost](#), and [Michael Gao](#)

- [Towards Verifiable Fab](#) with [Robert Drost](#) and [Michael Gao](#)

- [Forum post](#) by [T.I.N.A](#)

- [Trustless Hosting with TEEs](#) by [Patrick Kearney](#)

- [TEE Build System](#) by Davie

- [Searching in TDX: to BoB and Beyond](#) by [Frieder Erdmann](#) and [0xprincess](#)

- [Reproducible builds for Nitro Enclaves](#) by [Roshan Raghupathy](#)

- [Ledger: A Case Study](#) by [Charles Guillemet](#)

- [Satellite Compute Fleet as Distributed Trusted Hardware](#) by [Daniel Bar](#) and [yangwao](#)

- [Javacard/ Smartcard based TEE](#) by Marcus Hearn

- [Building the trustless trade supply chain with TEEs](#) by [Markus Schmitt](#)

- [Dedicated TPM-based System with WASM signing verification vs. TEEs](#) by [Will Villanueva](#)

- [TEE Abstraction Middleware](#) by Alex GG

- [Shared Private State on Aztec](#) by [Rahul Kothari](#)

- [Last-mile TEE use cases for Penumbra](#) by [Henry de Valence](#)

- [Physical Unclonable Functions for Socially Unpredictable Humans](#) by [Sxysun](#)

- [5 Levels of TEEs](#) by [Georgios Konstantopoulos](#)

- [Old TEE Tales: A not-so-in-depth exploration of TEE platforms and its designs](#) by [Zheng Leong Chua](#)

- [TEE perspectives: Where you run your TEEs matters](#) by [Frieder Erdmann](#)

- [Bringing TEE magic to web2 and web3](#) by [Andrew Miller](#)

- [Panel: TEE for Block Building & Preconfs](#) with [dmarz](#), [Nathan Worsley](#), [Ellie Davidson](#), [Kevin Lepsoe](#), and [kassandraETH](#)

- [Sequencing Day](#) hosted by [Puffer Finance](#), [Espresso Systems](#), and [Radius](#):

- [Sequencing escape velocity](#) by [Justin Drake](#)

- [Leading to profitable block building for rollups](#) by [AJ Park](#)

- [L1 Composability in Gwyneth](#) by [Cecilia Zhang](#)

- [Sidecar standardization with Commit-Boost](#) by [Drew Van Der Werff](#)

- [Synchronous Composability with CIRC](#) by [Ellie Davidson](#)

- [Learnings From Building The Universal Preconf Registry](#) by [Jason Vranek](#)

- [How to Make Application Specific Sequencing Composable](#) by [Lily Johnson](#)

- [Superchain Interop - How do we scale blockchain apps to billions of users?](#) by [Mark Tyneway](#)

- [Network Effects: Why Based Sequencing is Important](#) by [mteam](#)

- [Open based sequencing protocol](#) by [Sam Battenally](#)

- [Sequencing with TEEs](#) by [Shea Ketsdever](#)

- [Panel: Sequencing Day Surprise Panel](#) with [Justin Drake](#), [Ben Fisch](#), [Amir Forouzani](#), and [AJ Park](#)

- [Panel: The Great Priority Auction Debate with](#)[Ben Fisch](#), [Ed Felten](#), [Dan Robinson](#), and [Alex Nezlobin](#)

- [Based vs Restaked Rollups](#) by [Yaoqi Jia](#)

- [Shared Solvers: Rise of Dapp owned solvers](#) by [Anshul Yadav](#)

- [Economic Optimality of Offering Preconfs](#) by [Conor McMenamin](#)

- [No one cares about finality](#) by [Elias Tazartes](#)

- [How Preconfs & Blockspace Products Make Ethereum Relevant](#) by [Kevin Lepsoe](#)

- [Supercharging Ethereum w/ Fast Preconfs & Decentralized Yield Distribution](#) by [Kubi Mensah](#) and Lorenzo

- [Tradeoffs with app-specific sequencing](#) by [Marshall Vyletel](#)

- [Braid](#) by [Max Resnick](#)

- [Are L2s extractive to Ethereum?](#) by [Ren](#)

- [To Delay or Not Delay Preconfs](#) by [Rohan Shrouthrium](#)

- [Leveraging Pod to Decentralize Block Sequencing](#) by [Shresth Agrawal](#)

- [Sequencing escape velocity](#) by [Justin Drake](#)

- [Leading to profitable block building for rollups](#) by [AJ Park](#)

- [L1 Composability in Gwyneth](#) by [Cecilia Zhang](#)

- [Sidecar standardization with Commit-Boost](#) by [Drew Van Der Werff](#)

- [Synchronous Composability with CIRC](#) by [Ellie Davidson](#)

- [Learnings From Building The Universal Preconf Registry](#) by [Jason Vranek](#)

- [How to Make Application Specific Sequencing Composable](#) by [Lily Johnson](#)

- [Superchain Interop - How do we scale blockchain apps to billions of users?](#) by [Mark Tyneway](#)

- [Network Effects: Why Based Sequencing is Important](#) by [mteam](#)

- [Open based sequencing protocol](#) by [Sam Battenally](#)

- [Leveraging Pod to Decentralize Block Sequencing](#) by [Shresth Agrawal](#)

- [CBER Crafting the Cryptoeconomy Conference](#):

- [Who wins Ethereum Block Building Auctions and Why?](#) by [Danning Sui](#)

- [An Analysis of Intent-Based Markets](#) by [Mallesh Pai](#)

- [(De)centralization of Ethereum's builder market](#) by [Fan Zhang](#)

- [Who wins Ethereum Block Building Auctions and Why?](#) by [Danning Sui](#)

- [An Analysis of Intent-Based Markets](#) by [Mallesh Pai](#)

- [(De)centralization of Ethereum's builder market](#) by [Fan Zhang](#)

- [Additional recordings](#) from [preconf.erence](#) hosted by [Primev](#), [Nethermind](#), [Taiko Gwyneth](#), and [Puffer Finance](#):

- [Preconfs on Mainnet](#) with [Murat Akdeniz](#), [Christian Matt](#), and [Kubi Mensah](#)

- [Preconfirmations in Taiko Gwyneth](#) by [Brecht Devos](#)

- [Exploring Based Preconfirmations Without Gateways](#) by [Lin Oshitani](#)

- [Panel: Preconfirmations from a Validator's Perspective](#) with [Drew Harding](#), [Joshua Cheong](#), [Michael Moser](#), [Drew Van der Werff](#), [Irina Timchenko](#), and [Darren Langley](#)

- [Thread](#) by [Primev](#)

- [Preconfs on Mainnet](#) with [Murat Akdeniz](#), [Christian Matt](#), and [Kubi Mensah](#)

- [Preconfirmations in Taiko Gwyneth](#) by [Brecht Devos](#)

- [Exploring Based Preconfirmations Without Gateways](#) by [Lin Oshitani](#)

- [Panel: Preconfirmations from a Validator's Perspective](#) with [Drew Harding](#), [Joshua Cheong](#), [Michael Moser](#), [Drew Van der Werff](#), [Irina Timchenko](#), and [Darren Langley](#)

- [Thread](#) by [Primev](#)

- [Into the Bytecode](#): [Quintus Kilbourn on TEEs and Secure Hardware](#) invites [Quintus Kilbourn](#) for a conversation on the history, architecture, and roadmap for building TEEs with open-source hardware and supply chains.

- [Post](#) by [Sina Habibian](#)

- [Post](#) by [Sina Habibian](#)

- [How to solve builder centralization crisis w/o using napkin research?](#) hosted by [EigenPhi](#) invites [Stephen Levin](#), [Ludwig Thouvenin](#), [Murat Akdeniz](#), [Fan Zhang](#), [Eyal Markovich](#), [Burak Öz](#), [Auston Sterling](#), and [Bryan Zheng](#) to discuss the centralization in the builder market, and possible ways to improve decentralization.

- [The Rollup](#):

- [Max Resnick on Ethereum's Roadmap, Economics, and Alignment Taxes](#) invites [Max Resnick](#) to discuss the Ethereum roadmap, sequencing, interopability, and more.

- [Post](#) by [The Rollup](#)

- [Post](#) by [The Rollup](#)

- [How Fast Confirmations Will Improve Rollup UX](#) invites [Ben Fisch](#) and [Matt Pearing](#) for a conversation on interoperability, decentralized sequencing, and [Espresso](#)'s fast confirmation layer.

- [Post](#) by [The Rollup](#)

- [Post](#) by [The Rollup](#)

- [Ed Felten on Arbitrum DAO, Timeboost, and His Newest Research](#) invites [Ed Felten](#) to dive into the latest related to [Arbitrum](#), [BoLD](#), [Timeboost](#), and more.

- [Post](#) by [The Rollup](#)

- [Post](#) by [The Rollup](#)

- [Max Resnick on Ethereum's Roadmap, Economics, and Alignment Taxes](#) invites [Max Resnick](#) to discuss the Ethereum roadmap, sequencing, interopability, and more.

- [Post](#) by [The Rollup](#)

- [Post](#) by [The Rollup](#)

- [How Fast Confirmations Will Improve Rollup UX](#) invites [Ben Fisch](#) and [Matt Pearing](#) for a conversation on interoperability, decentralized sequencing, and [Espresso](#)'s fast confirmation layer.

- [Post](#) by [The Rollup](#)

- [Post](#) by [The Rollup](#)

- [Ed Felten on Arbitrum DAO, Timeboost, and His Newest Research](#) invites [Ed Felten](#) to dive into the latest related to [Arbitrum](#), [BoLD](#), [Timeboost](#), and more.

- [Post](#) by [The Rollup](#)

- [Post](#) by [The Rollup](#)

- [The Gwart Show](#):

- [TOOL, Or How To Get 1 Second Confs On Ethereum](#) invites [0xprincess](#) to talk about searching, block building, orderflow, TEEs, and [TOOL](#).

- [Post](#) by [Blockspace Media](#)

- [Post](#) by [Blockspace Media](#)

- [Beam Me Up!](#) invites [Justin Drake](#) to discuss the [Beam Chain](#) proposal, censorship resistance, APS, based rollups, and more.

- [Post](#) by [Blockspace Media](#)

- [Post](#) by [Blockspace Media](#)

- [TOOL, Or How To Get 1 Second Confs On Ethereum](#) invites [0xprincess](#) to talk about searching, block building, orderflow, TEEs, and [TOOL](#).

- [Post](#) by [Blockspace Media](#)

- [Post](#) by [Blockspace Media](#)

- [Beam Me Up!](#) invites [Justin Drake](#) to discuss the [Beam Chain](#) proposal, censorship resistance, APS, based rollups, and more.

- [Post](#) by [Blockspace Media](#)

- [Post](#) by [Blockspace Media](#)

- [Bankless](#): [Ethereum's Three Front War](#) Invites [Justin Drake](#) for a conversation on Ethereum's roadmap, the rollup design space, preconfirmations, and the [Beam Chain](#) proposal.

- [Post](#) by [Bankless](#)

- [Post](#) by [Bankless](#)

- [Bell Curve](#): [Scaling Ethereum With Based Rollups](#) invites [mteam](#) to talk about the current state of the rollup-centric roadmap and how things might evolve with based rollups.

- [Post](#) by [Bell Curve](#)

- [Post](#) by [Bell Curve](#)

- [Distributed Block Building Call #1](#) hosted by [Francesco](#) discuss [Sharded blob mempool and distributed block production](#) by [Dankrad Feist](#), and [PeerDAS L1 R&D breakout notes](#) by [Francesco](#).

Other

- [turn the dial to freedom](#) by [Phil Daian](#) advocates for reclaiming control of technology by adopting open-source and user-controlled software.

- [Thread](#) by [Phil Daian](#)

- [Thread](#) by [Phil Daian](#)

- [How should I adress a TEE?](#) by [Mateusz Morusiewicz](#) discusses challenges and approaches for securely interacting with TEE web services.

- [Mev-boost community call #11 - 10 Dec 2024](#) by [Alex Stokes](#) invites the MEV-Boost community to discuss recent events and developments such as the [Titan Relay incident](#), [BuilderNet](#), preconfirmations, and more.

[Sign up here

](https://flashbots.net/the-mev-letter) if you'd like to get The MEV Letter straight to your inbox!

[Previous editions of The MEV Letter

](https://collective.flashbots.net/tag/the-mev-letter)[Join Flashbots

](https://www.flashbots.net/jobs)