This is the second edition of The MEV Letter

- a collection of papers, articles and resources related to MEV. The intention of this letter is to provide a weekly summary of the latest research, discussions, and developments in the space with links for further reading.

See our Transparency Reports for deeper dives into updates related to Flashbots.

Papers & Articles

- Arbitrageurs' profits, LVR, and sandwich attacks: batch trading as an AMM design response by Andrea Canidio and Robin Fritsch introduce an AMM design where all trades are batched and executed at a price equal to the marginal price. The paper argues that such a design would eliminate arbitrage profits (LVR) and sandwich attacks.
- The MEVM, SUAVE Centauri, and Beyond by Robert Miller unveil the SUAVE Centauri release, including an overview of the MEVM – a powerful modification of the EVM for developing MEV applications, as well as details of the SUAVE Centauri Devnet launch.
- Tweet-thread by Robert Miller
- Tweet-thread by Quintus
- Tweet-thread by Robert Miller
- Tweet-thread by Quintus
- FRP Year in Review by Sarah Allen highlights MEV research funded through FRP including studies of private mempools, the impact of frontrunning, AMM design, auction design, PBS, credible commitments, and 7 ongoing projects.
- The Centralizing Effects of Private Order Flow on Proposer-Builder Separation by Tivas Gupta, Mallesh Pai and Max Resnick highlights how the shift towards private transactions via OFAs could centralize power among integrated builder-searchers, suggesting modifications to PBS to achieve a more fair and decentralized Ethereum.
- Tweet-thread by SMG
- Tweet-thread by hazard
- Tweet-thread by SMG
- Tweet-thread by hazard
- Where and when do "execution," "settlement," and "finality" happen on Ethereum: technical understandings by Mikołaj Barczentewicz provides an in-depth analysis of the concepts of transaction execution and finality on Ethereum from a technical, economic and legal perspective.
- Infinite Games by Stephane argues against trying to build a 'final solution' for MEV, instead advocating for adaptive mechanisms to continually address new challenges.
- Tweet-thread by Stephane
- Tweet-thread by Stephane
- [DRAFT] Alternative ePBS design – Payload View-Merge (PVM) by Mike Neuder and Francesco present Payload View-Merge: the new slot anatomy, the new honest attesting/proposing/building behavior, and the properties of the design.
- Decentralized Rollup State Verification via Beacon Layer published by AltLayer presents a system for decentralized verification of rollup states, providing "harder-than-soft" finality and detailing the Beacon Layer's three-tiered approach to achieve finality.
- Twitter-thread by YQ
- Twitter-thread by YQ
- Selfish Mixing and RANDAO Manipulation by Toni Wahrstätter highlights the potential for validators to manipulate Ethereum's RANDAO to increase their rewards and introduce potential countermeasures, like social slashing.
- Tweet by Toni Wahrstätter
- Tweet by Toni Wahrstätter
- Redefining Sequencers: Understanding the Aggregator and the Header Producer by NashQueue challenge previous

definitions of sequencers and makes a case for why sequencers should be split into two logical entities: the aggregator and the header producer.

- FAQ on EIP-7251: Increasing the MAX_EFFECTIVE_BALANCE by Mike Neuder, Francesco, dapplion and Mikhail Kalinin is an FAQ on EIP-7251, the proposal to increase theMAX_EFFECTIVE_BALANCE for validators on Ethereum.
- Tweet-thread by Mike Neuder
- Tweet Thread by Jon Charbonneau
- Tweet-thread by Mike Neuder
- Tweet Thread by Jon Charbonneau
- Blockchain in the age of LLMsby Markus Schmitt explores how LLMs can be leveraged to change various aspects of blockchains, ranging from how we build intents, what role dapps and wallets play to how to attract orderflow.
- Tweet-thread by Markus Schmitt
- Tweet-thread by Markus Schmitt
- CoW Hooks: You are in control!by CowSwap introduces CoW Hooks as part of their “multi purpose intent execution engine” enabling users to execute DeFi actions directly before and after swaps in a single transaction.
- Tweet-thread by CowSwap
- Tweet-thread by CowSwap
- Ethereum’s New Data Economy by TakensTheorem presents a detailed look into the implications of EIP-4844 with a focus on data storage and access, suggesting a growing data economy for Ethereum.
- Summary by TakensTheorem
- Summary by TakensTheorem

Posts & threads

- Shea Ketsdever published an overview of an upgrade to Flashbots Protect that enables faster inclusion times by allowing users to selectively share their private transactions with additional builders.
- Al N looks at existing formulas for calculating arbitrage profits (LVR) and presents a general model for how much value LPs should expect to lose to arbitrageurs in a given pool.
- Harry Kalodner published a thread on how decentralizing the rollup sequencer will impact MEV, liveness, confirmation times, and more.

Talks & Discussions

- SUAVE smart contract programming model: TEE-based smart contracts for block buildingby Andrew Miller provides a broader outline of SUAVE and delves into Builder Solidity, TEE deployment, and the potential for apps built on top of SUAVE.
- Slides
- Abridged transcript.
- Tweet-thread by Eray
- Slides
- Abridged transcript.
- Tweet-thread by Eray
- Recordings from CredibleCommitments.WTF, exploring practical implementations of cooperative AI on top of cryptoeconomic/cryptographic credible commitment devices, has been uploaded to Youtube.
- Tweet-thread by sxysun
- Tweet-thread by sxysun
- Uncommon Core 2.0 with Hasu returns with new co-hostJon Charbonneau. Together they will dive into the

technologies and incentives behind public blockchains, with a focus on MEV, blockchain security, and the rollup ecosystem.

- Episode #0: The Reboot
- Episode #0: The Reboot
- MEV - Qué es y cómo afecta a los usuarios de Ethereum by ETH•KIPU with Alejo Salles is a discussion, in Spanish, on the concept of MEV and how it affects Ethereum users.
- All You Wanna Know About Cross Chain MEV Market with Matt Deible (ODOS), Julian (RIG), Yixin Cao (EigenPhi) and Bridge Baron (searcher) explored the opportunities and threats associated with cross-chain MEV, how to design fair markets and how upcoming EIPs may impact cross-chain MEV.
- Modular Summit Roundtable by Modular Summit with Jon Kol, Brian Retford, Jill Gunter and Arjun Kalsy talks about the future MEV trends related to L2s and cross-chain communication.

Other

- A new series of searching guides has been published as part of the MEV-Share documentation. The tutorials cover topics such as; how to listen to events, setting up a new bot, sending limit order bundles, simulations, and debugging.
- Tweet-thread by Shea Ketsdever
- Tweet-thread by Shea Ketsdever
- SUAVE Wiki initiated by Quintus provides a repository of public information related to SUAVE. The wiki will be continuously updated as more content is published.
- Robust Incentives Group Notion page aggregates RIG posts, papers and talks.
- bid_ask_service by 0xKitsune is a Rust program designed to aggregate real-time orderbook data from multiple CeFi exchanges in order to publish the bid-ask spread via a gRPC server.
- Ethereum enshrined PBS - Towards a minimal spec by Terence Tsao presents a roadmap for enshrining PBS in Ethereum, detailing the necessary changes, unresolved questions, and future steps towards achieving a minimal ePBS specification.
- Aztec Labs announced the two finalists of their Sequencer Selection Request for Proposals:B52 by Joe Andrews, a protocol integrating MEV into the design via a first-price auction, and Fernet by Santiago Palladino, a protocol employing a Verifiable Random Function (VRF) for random sequencer selection.

Upcoming events

The week of EthCC[6] has begun! Talks, panels and other events related to MEV will take place all throughout the week. See our forum post for more information on the various salons hosted by Flashbots. For a broader overview of all MEV-related events, see our guide to MEV Week Paris.

[Sign up here

](https://forms.gle/Qr6MEUkVa13TDipW6) if you'd like to get The MEV Letter straight to your inbox!

Previous editions of The MEV Letter