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.

In order to ensure The MEV Letter meets its objectives and provides an optimal reading experience, we've set up aoval [survey

](https://3eoyy3ayc8w.typeform.com/to/KrtWUvSV) to better understand reader preferences and expectations.

We do not include any trackers in the emails, which means that we can not perform direct analytics on reader behavior. Instead, we rely on your feedback to optimize content and improve the publication further. The [survey

](https://3eoyy3ayc8w.typeform.com/to/KrtWUvSV) is quick and your engagement is very much appreciated. Thank you!

Papers & Articles

- Collusion-Resilience in Transaction Fee Mechanism Design by Hao Chung, Tim Roughgarden and Elaine Shi study the limitations of transaction fee mechanisms (TFM) and show that no TFM can simultaneously satisfy user and proposer incentive compatibility along with collusion-resilience during times of contention between transactions.
- Thread by Tim Roughgarden
- Thread by Tim Roughgarden
- Barriers to Collusion-resistant Transaction Fee Mechanisms by Yotam Gafni and Aviv Yaish demonstrate the impossibility of designing a TFM that ensures incentive compatibility for both users and proposer while preventing collusion.
- Thread by Yotam Gafni
- Thread by Yotam Gafni
- No Transaction Fees? No Problem! Achieving Fairness in Transaction Fee Mechanism Designby Sankarshan Damle, Varul Srivastava and Sujit Gujar highlights limitations in incentive compatibility for existing TFMs and presents a novel mechanism that uses on-chain randomness, rTFM

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- Multidimensional Blockchain Fees are (Essentially) Optimal by Guillermo Angeris, Theo Diamandis and Ciamac Moallemi show that, using only mild assumptions,previously proposed multidimensional blockchain fee markets are essentially optimal, even against worst-case adversaries.
- Thread by Guillermo Angeris
- Thread by Guillermo Angeris
- SPEC-04 Dynamic Transaction Fee Mechanism Design by Mallesh Pai and Max Resnick studies TFMs in PoW and PoS under dynamic conditions and proposes slowing down the base fee update in EIP-1559 to reduce delays and lower gas fees.
- Thread by SMG
- Thread by Max Resnick
- Thread by SMG
- Thread by Max Resnick
- Paths to hardening PBS by Francesco D'Amato explores ways to improve the guarantees of PBS as an alternative to full enshrinement.
- Rollup-Centric Roadmap (2024 version) (mike+stokes version) (From The Vault) by Mike Neuder and Alex Stokes study Ethereum's journey since Vitalik Buterin published A rollup-centric ethereum roadmap and explores future directions in the immediate, and medium-term.
- Thread by Mike Neuder
- Thread by Mike Neuder
- Introducing the CAKE framework by Ankit Chiplunkar and Stephane Gosselin explores chain abstraction, and presents

CAKE

(Chain Abstraction Key Elements) to facilitate seamless cross-chain operations. *Thread by Ankit Chiplunkar

- Thread by Ankit Chiplunkar
- The price is right: Realigning proposer-builder incentives with predictive MEV-burn by Thomas Thiery provides an overview of MEV-burn iterations and introduces predictive

MEV-burn (pMEV-burn), aimed to address some of disadvantages inkMEV-burn.

- Leaderless Auctions by Dave White, Dan Robinson, Ludwig Thouvenin, Karthik Srinivasan presents a protocol for a decentralized auction with no auctioneer, addressing the “last look” problem when one participant is allowed to act after all others.
- Thread by Dave White
- Thread by Dave White
- Unbundling staking: Towards rainbow staking by Barnabé Monnot introduces a conceptual framework for protocol service providers to participate in services, adapted to their own strengths and value propositions.
- Multi-chain SUAVE Request for Ideas by dmarz summarizes the conversation in suave-specs related to enabling multi-chain support for SUAVE.
- CoW DAO launches the first MEV-capturing AMM by CoW Swap introduces CoW AMM; a Function-Maximizing AMM (FM-AMM) that uses batch auctions to rebalance pools and capture LVR for LPs.
- Thread by CoW Swap
- Thread by CoW Swap
- Introducing the Security Alliance by Security Alliance announces their formation and intentions to support security researchers and whitehats aiding protocols during active exploits.
- Whitehat Safe Harbor by Security Alliance
- Thread by samczsun
- Whitehat Safe Harbor by Security Alliance
- Thread by samczsun
- Shutter for Espresso by Shutter announces a collaboration between Shutter and Espresso to build an encrypted mempool for the Espresso sequencer network.
- Thread by Shutter
- Thread by Shutter
- Telegram Bots: Evaluating Crypto’s New Cash Cows by Jordan Yeakley explores the rise and competitive landscape of Telegram trading bots.
- Thread by Delphi Digital
- Thread by Banana Gun
- Thread by Delphi Digital
- Thread by Banana Gun

Posts & Threads

- Justin Drake published a thread to address concerns related to shared sequencing and the implications for rollup sovereignty, synchronous composability, and builder centralization.
- Profesor Utonio published a thread exploring what the transaction flow for preconfirmations in based rollups could look like and the implications on MEV.
- UMA published a post that details how MEV-Share is used in Oval to enable searchers to bid on the right to backrun Chainlink Data Feeds.

- Tarun Chitra published a thread to highlight findings from a new paper which indicates that having more solvers on intent-based systems like UniswapX does not always lead to better outcomes for users.
- OreoMev published a thread to point out inflated profitability metrics for some builders onRelayscan.io and announce that builder profitability data is now also accessible via Eden Data Explorer.

Talks & Discussions

- Bankless:
- Hasu & Hart on Oval & The Recapturing of Billions in DeFi Liquidationsinvites Hasu and Hart Lambur to explore how Oval uses MEV-Share to enable protocols to monetize the value they produce when consuming Chainlink oracle data.
- Endgame 2.0: A Guide to Vitalik's Ethereum Roadmapinvites Mike Neuder and Dom for a deep dive into the intricacies of the latest Ethereum roadmap diagram by Vitalik Buterin.
- Hasu & Hart on Oval & The Recapturing of Billions in DeFi Liquidationsinvites Hasu and Hart Lambur to explore how Oval uses MEV-Share to enable protocols to monetize the value they produce when consuming Chainlink oracle data.
- Endgame 2.0: A Guide to Vitalik's Ethereum Roadmapinvites Mike Neuder and Dom for a deep dive into the intricacies of the latest Ethereum roadmap diagram by Vitalik Buterin.
- Infinite Jungle: The Blobs Are Coming! Dencun Mainnet Activation Set For Marchprovides an overview of Dencun and invites Danning Sui for a conversation on MEV and the quirks of working with on-chain data.
- The Gwart Show: We're Pretty Sure Mike and Max Can Fix MEVinvites Mike Neuder and Max Resnick to talk about MEV, PBS, EIP-1559 and more.
- The Chain Abstraction Thesis invites Sam Hart and Illia Polosukhin to delve into chain abstraction, intent-based interoperability, cross-chain architectures, and the tradeoffs between shared security and chain sovereignty.
- Indexed Podcast: Farcaster, Daimo & Polymarket with Danning Sui, Boxer and hildobby discuss Farcaster, Daimo, Polymarket and more.
- Ethereum Sequencing and Preconfirmations Call #1 hosted by Justin Drake discuss based sequencing and based preconfirmations.
  - Notes by Drew Van der Werff and Sam Jernigan
  - Notes by Profesor Utonio
- Inclusion List Breakout Room hosted by Mike Neuder presents recent spec changes and key considerations related to inclusion list and the interactions between the EL and CL.
  - Agenda by Mike Neuder
  - Notes by Terence Tsao
- (e)PBS Breakout Room hosted by Alex Stokes discussed limitations of the current PBS implementation and potential directions for ePBS.
  - Agenda by Alex Stokes
  - Notes by Terence Tsao
  - Notes by Christine Kim

- Wolfgang Vitale published a video that explore censorship resistance and various designs for inclusion lists.
- UniswapX by Eric Zhong provides an overview of the UniswapX design with a focus on interoperability, intents and UX.

Other

- Changelog #2 - SUAVE Development Updates by Chris Hager provides details on new developments related to SUAVE from the last few weeks.
- Troll SuApps by Andrew Miller presents a list of potential SUAVE Andromeda hackathon projects, including data exfiltration, threshold secret sharing, one shot computations, and more.
- MEV-Boost Auction Simulation Framework by Fei Wu and Thomas Thiery simulates bids submitted by agents employing different strategies at each time step in the MEV-Boost auction and visualizes the results.
- Thread by Thomas Thiery
- Thread by Thomas Thiery
- Oval Searcher Capture The Flag by UMA challenge searchers to liquidate “honeypots” usingOval, starting February 19 and concludes once all the honeypots are claimed.
- Thread by UMA
- Thread by UMA

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