

Optimizing adaptive optics control

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How to optimize a control strategy for adaptive optics? Starting with a simple description of a generic adaptive optics system, we demonstrate what can be expected of an optimal controller, the design effort required, and the real-time constraints. Simulations and bench and on-sky results of optimal control strategies are presented for astronomy [1,2] and satellite applications [3,4].

References

- [1] B. Siquin et al., "On-sky results for adaptive optics control with data-driven models on low-order modes," MNRAS 2020
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- [4] J.S. Torres et al., "Predictive Adaptive Optics Control in Free Space Optical Communications for LEO Downlinks," COAT 2025.