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Podium discussion contribution

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Some selected questions:Critical slowing down with $a \to 0$.
- Rounding issues on large volumes.
- Multiscale approaches to increase signal over noise
- Benefits of (approximate eigenvectors) and how to obtain these
- Approaches to excited state contributions: multi-state fits, GEVP, smearing.
- efficient stochastic estimation of traces, all-to-all propagators, perambulators

These are based on an analysis of challenges:
* Large lattice volumes (due to small a and M_π)
- Computational cost does not nexessarily translate into better signal/noise.
- critical slowing down (in general with small a)
- precision issues
- how to maintain good acceptance in HMC?
- algorithms that scale like V^2, e.g., number of eigenvectors in estimators/deflation, algorithms that scale like V/a^2 (smearing).
- How to beat noise of disconnected contributions on large volumes?
* n-point functions with $n > 3$:
- QED corrections to QCD, $K \to \pi\pi$ etc.
- Quasi-, Pseudo-, etc. PDFs
- transitions to scattering states/resonances
* Bigger excited state problems at small quark masses
- go to larger times? How?
- improve smearing? Examples: momentum smearing, perambulators.
- several interpolators, including multi-quark states?
* More mixing with lower dimensional operators than in the continuum if chiral symmetry is broken
- grandient flow?

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