

# Recovery of head scattering from tail scattering

April 18, 2016 9:33 AM

$$\begin{aligned} [A_{\downarrow x}(y), z] &= A_{\downarrow x} [A_{\downarrow x}^{-1} A_{\downarrow x} y, A_{\downarrow x}^{-1} z] \\ &= A_{\downarrow x} [y, A_{\downarrow x}^{-1} z] \end{aligned}$$

This is computable for "test"  $z$   
"head at  $\infty$ ".

---

The recovery challenge: To what extent can I learn  $y$ , if I know  $[y, z]$  for all test  $z$ ?

$$y = f\beta + \sum f_{ij} a_{ij} + g\delta\beta + \sum g_{ij} a_{ij} + \sum g_{ijkl} a_{ijkl}$$

(if  $y = A_{\downarrow x} y_0$ )

(i can be  $\zeta$ )      i or k can be  $\zeta$