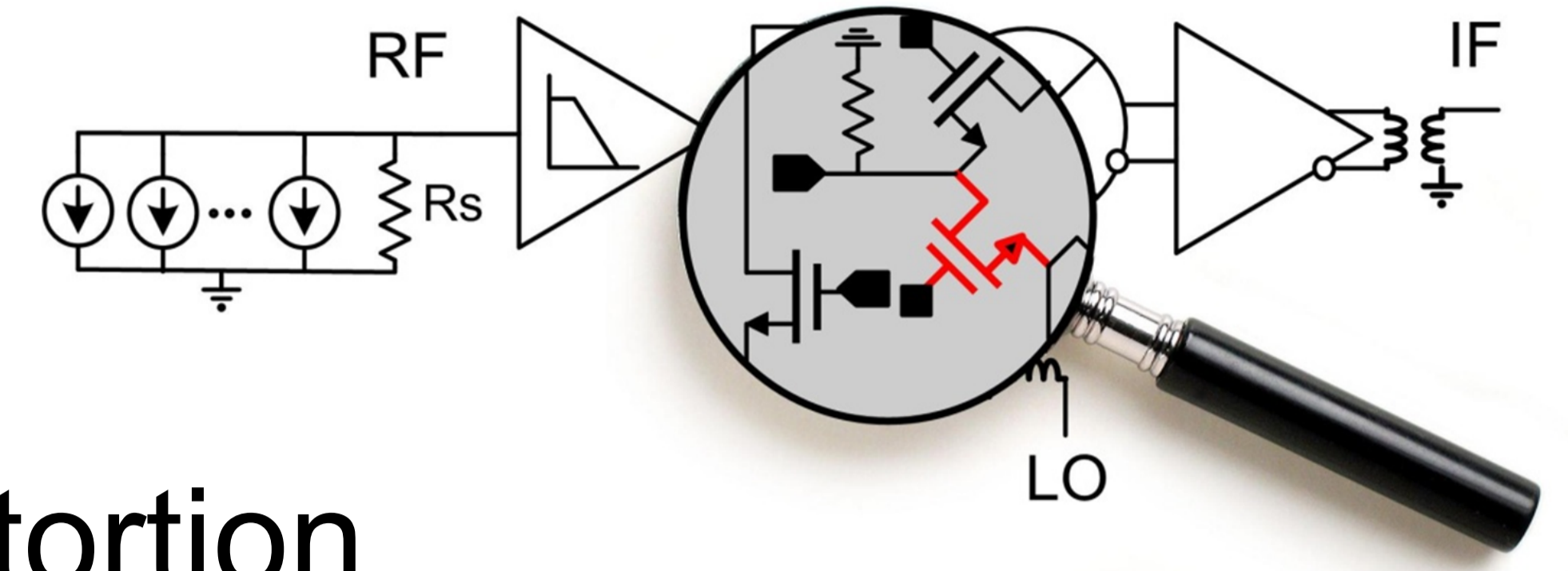


# Distortion Contribution Analysis

by combining the BLA and MIMO noise Analysis

Adam Cooman and Gerd Vandersteen

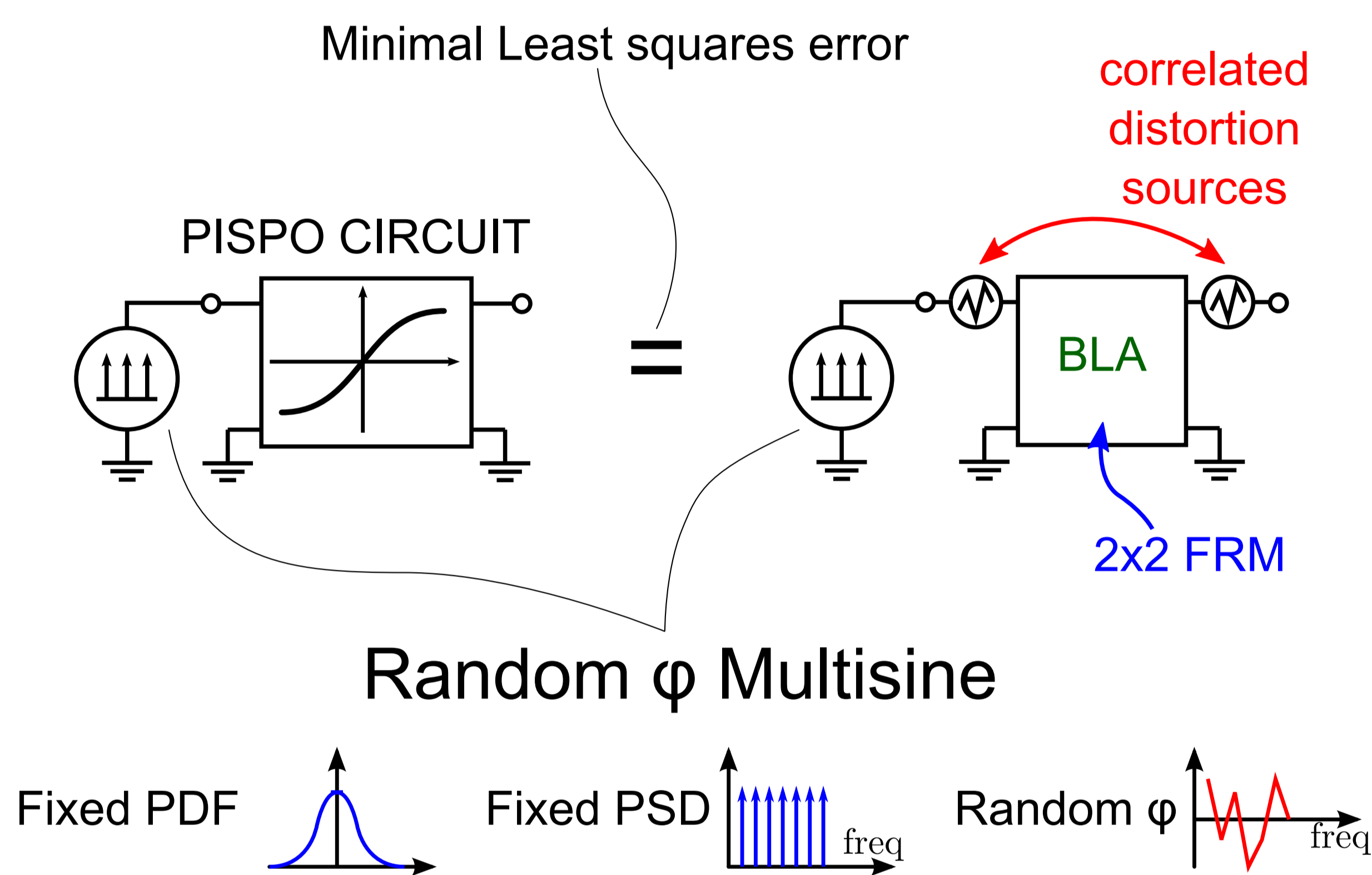
Now:  $\left\{ \begin{array}{l} \text{Analog/RF design} = \text{linear reasoning} \\ \text{Non-linear performance} = \text{nuisance} \end{array} \right.$



Goal: Locate + identify the dominant source of distortion

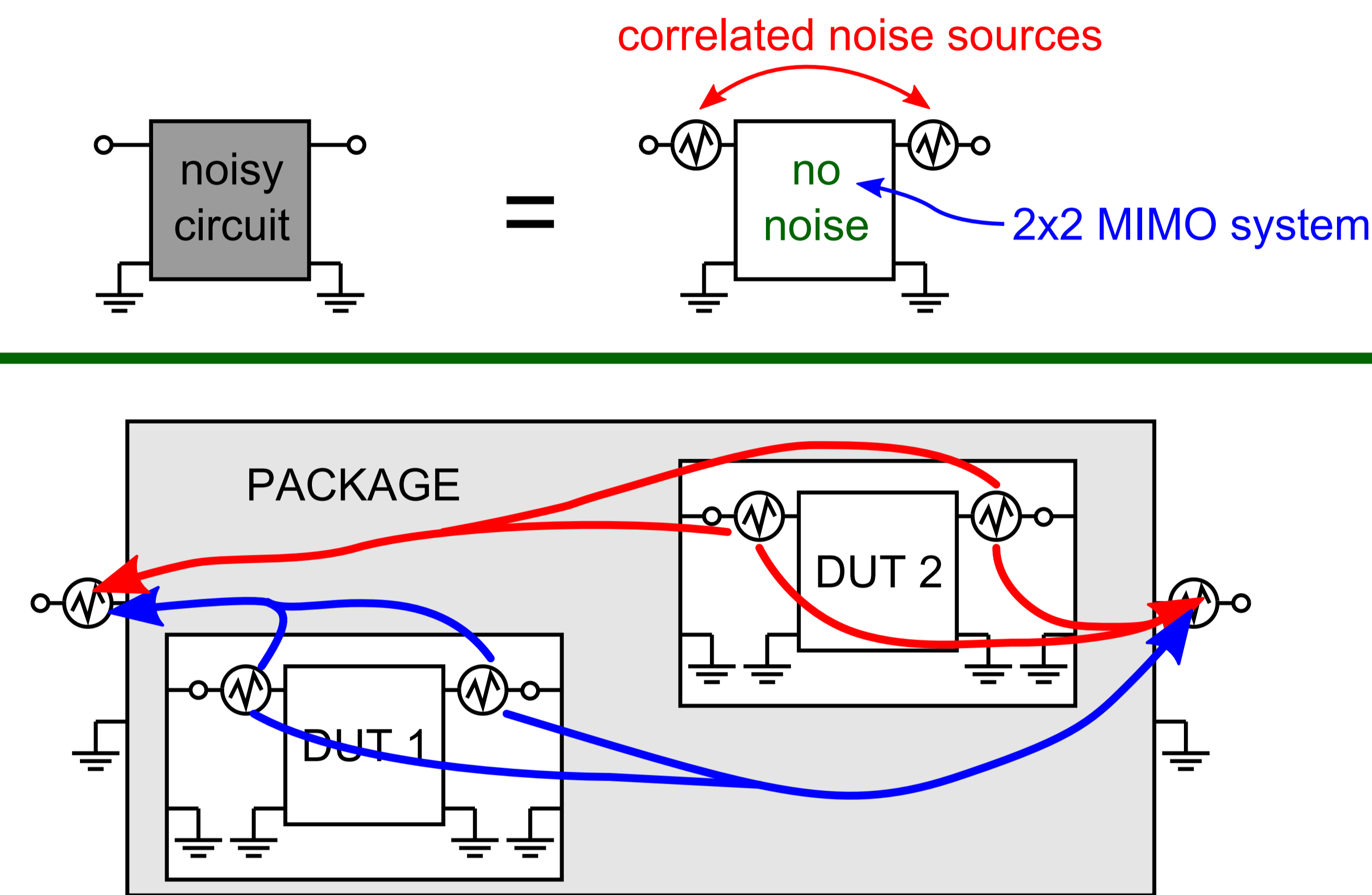
Combine best of both worlds:

## Identification community: Best Linear Approximation



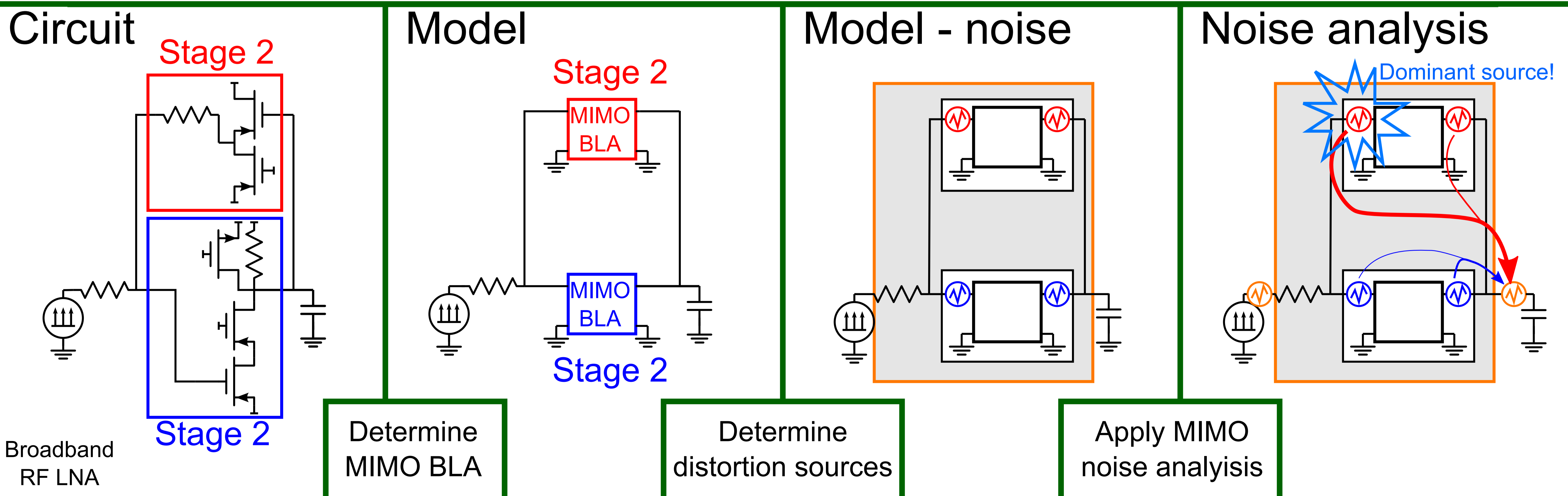
Non-linear system = linear system + noise

## Microwave Community: MIMO Noise Analysis



Noise analysis: pinpoint dominant sources

## BLA-based Distortion Contribution Analysis



Fast simulation-based MIMO BLA estimation?

Correlation between distortion generated in different stages?

How to deal with out-of-band distortion?