

NSF Workshop

Future Directions  
In  
Tensor-Based Computation  
and Modeling

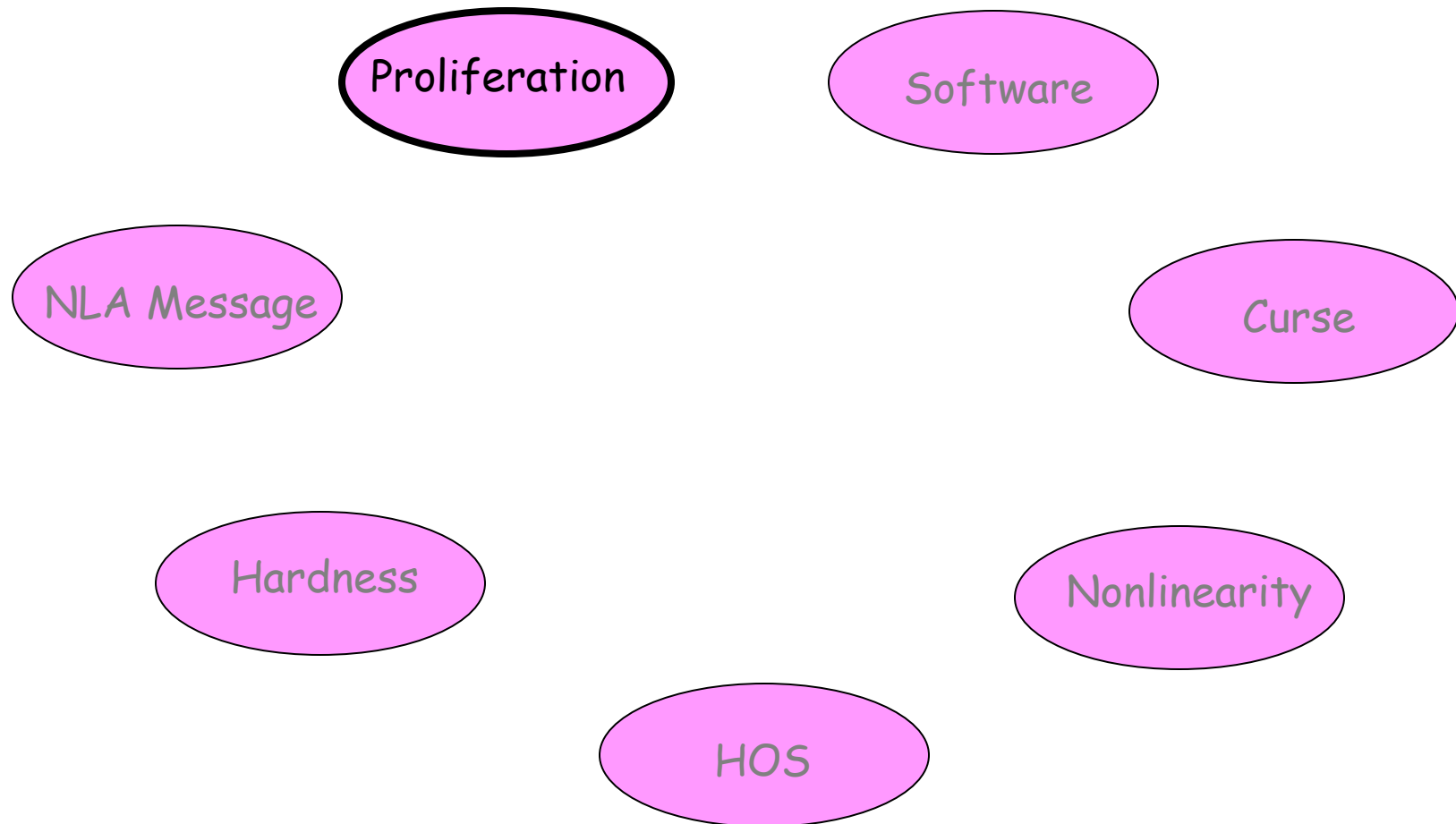
February 20-21, 2009

# Workshop Goal

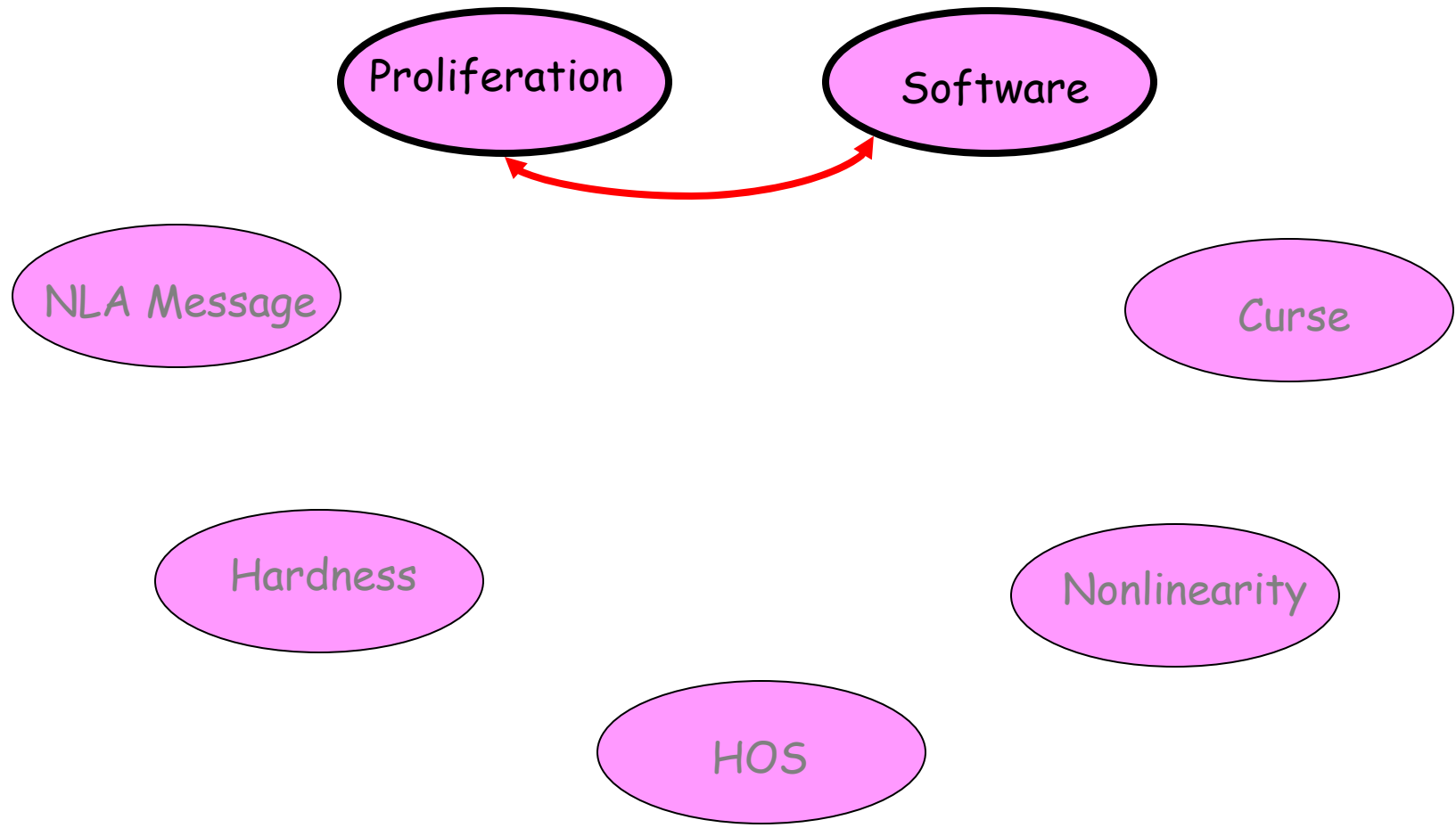
Advise the NSF on how it can best support tensor-based computational thinking across the sciences and engineering.

# Tensor Methods and Modeling

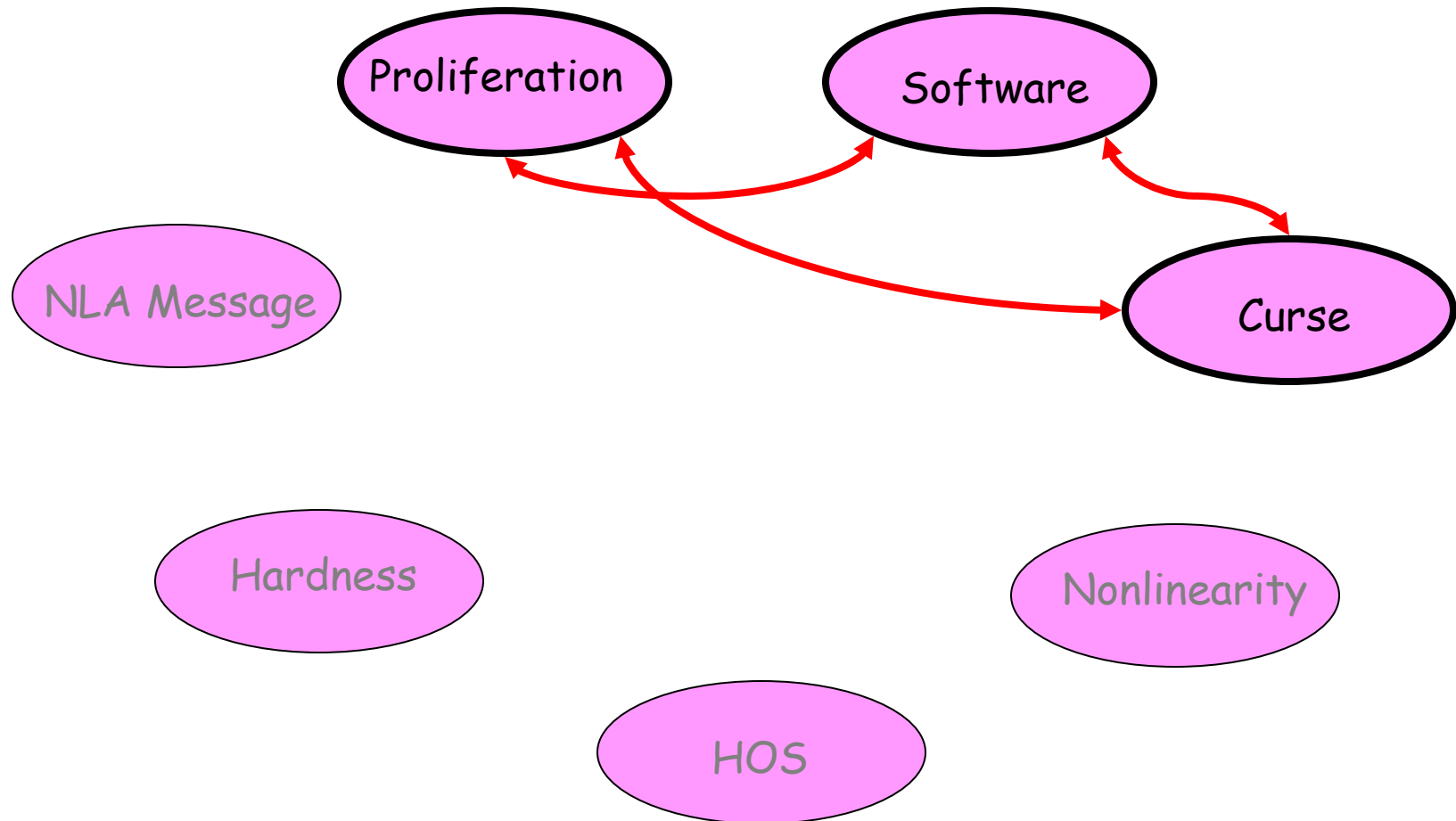
## Why the Proliferation?



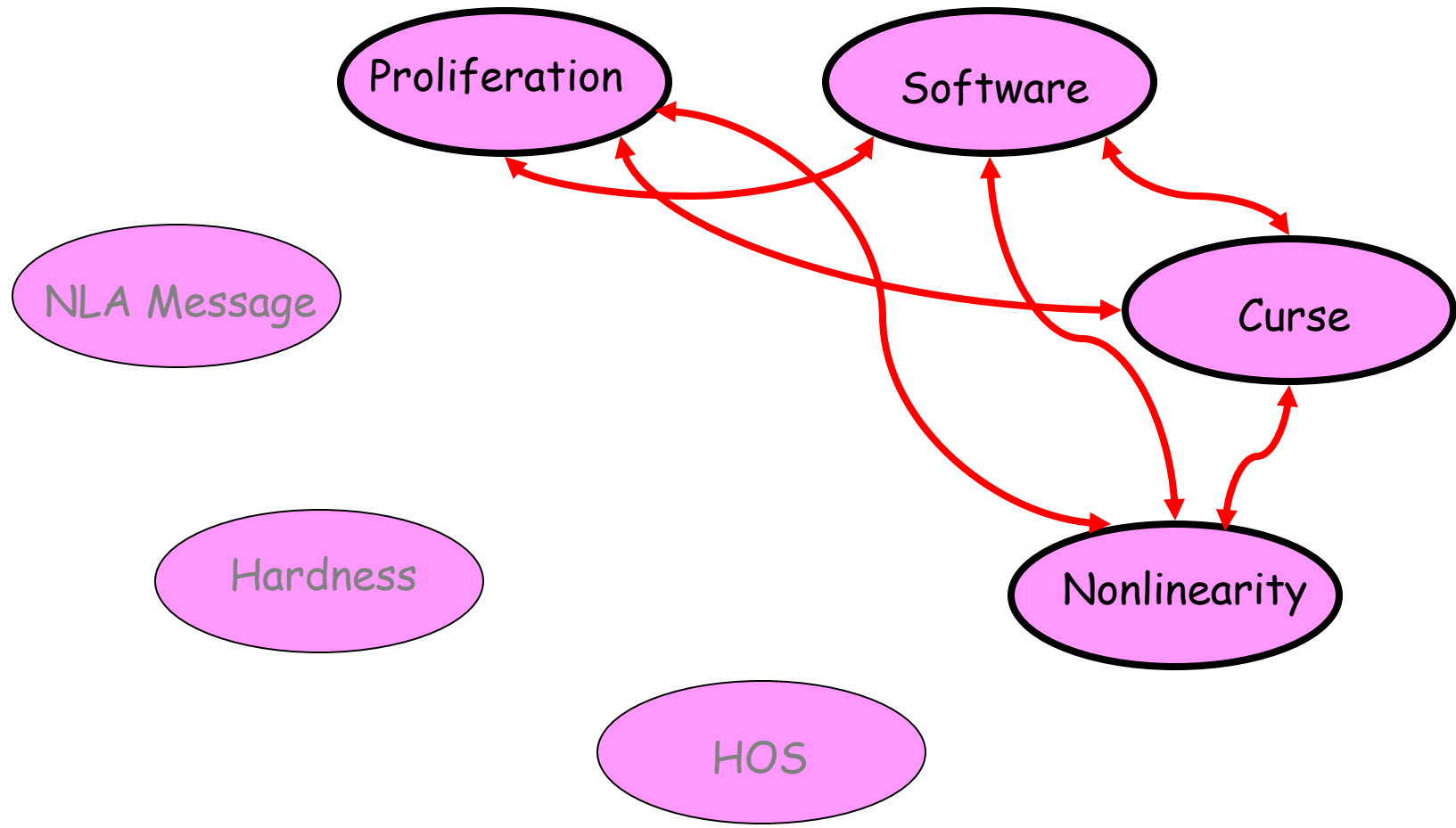
# How Do We Build Infrastructure to Support Hi Perf Tensor Computation?



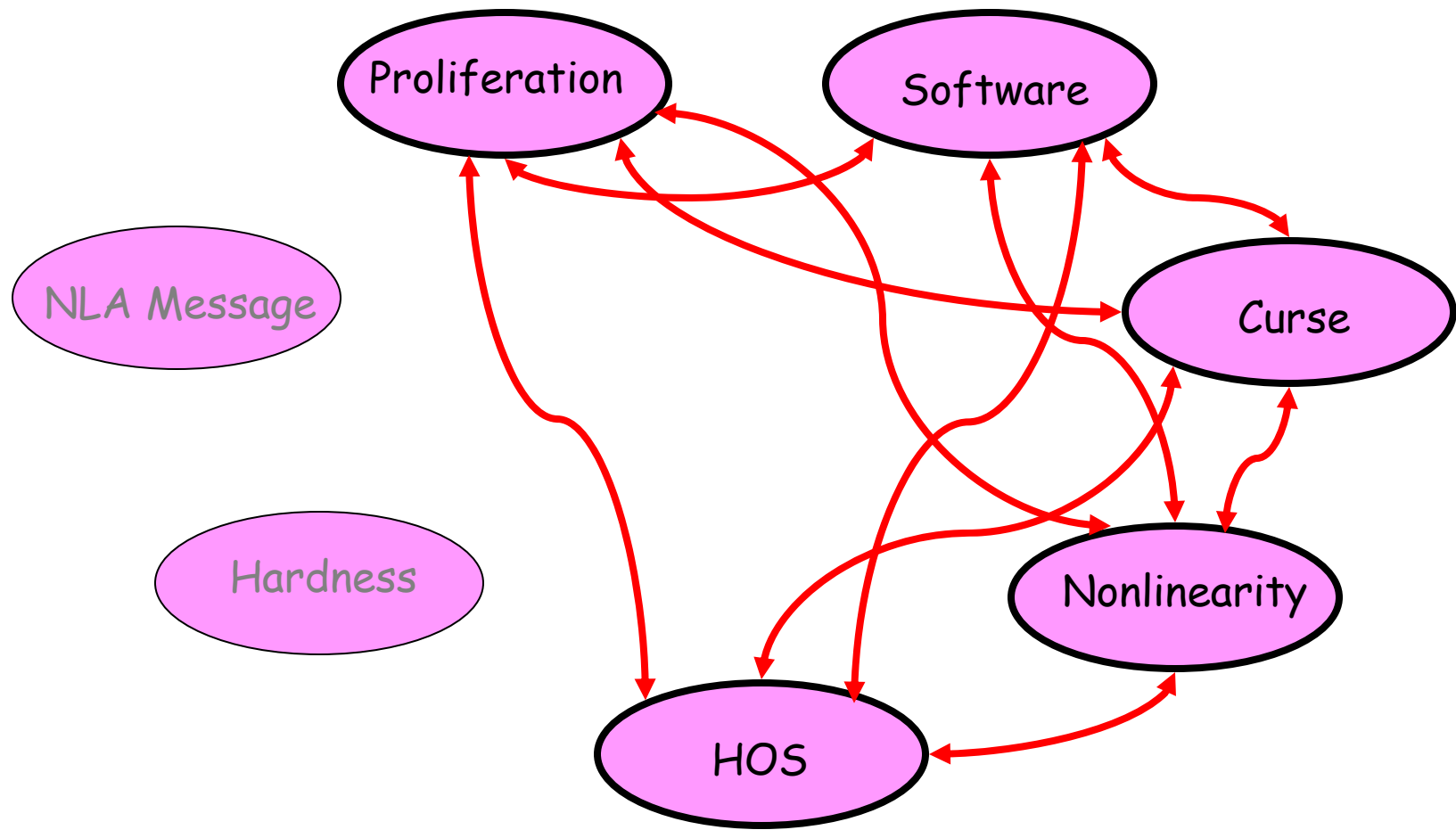
# The Curse of Dimensionality: A Grand Challenge?



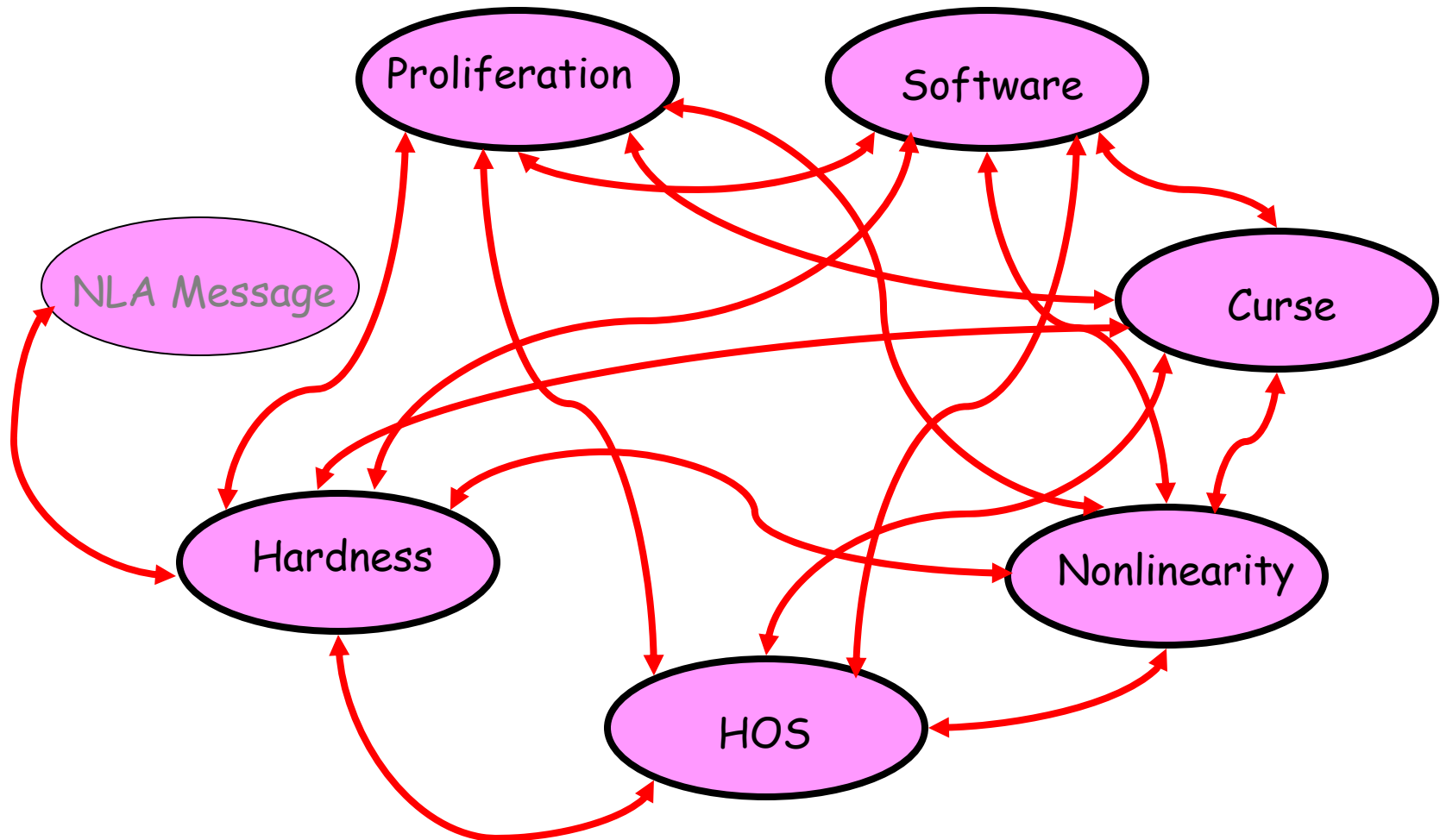
# Multilinear Optimization: More Nonlinear than Linear?



# Tensor-Based Signal Proc and Stat: Where to and Why?

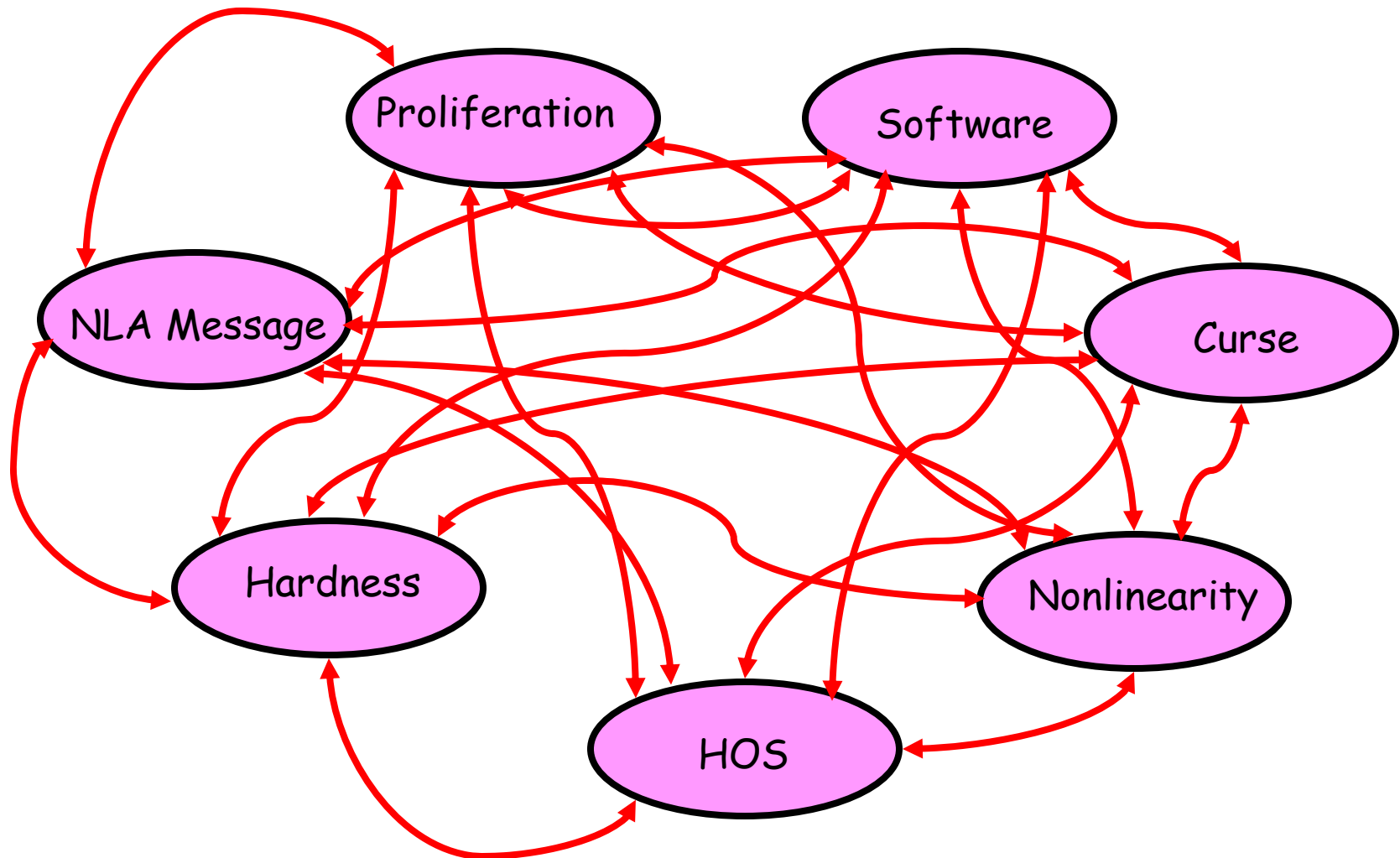


# Tensor Problems: What Makes them Hard?

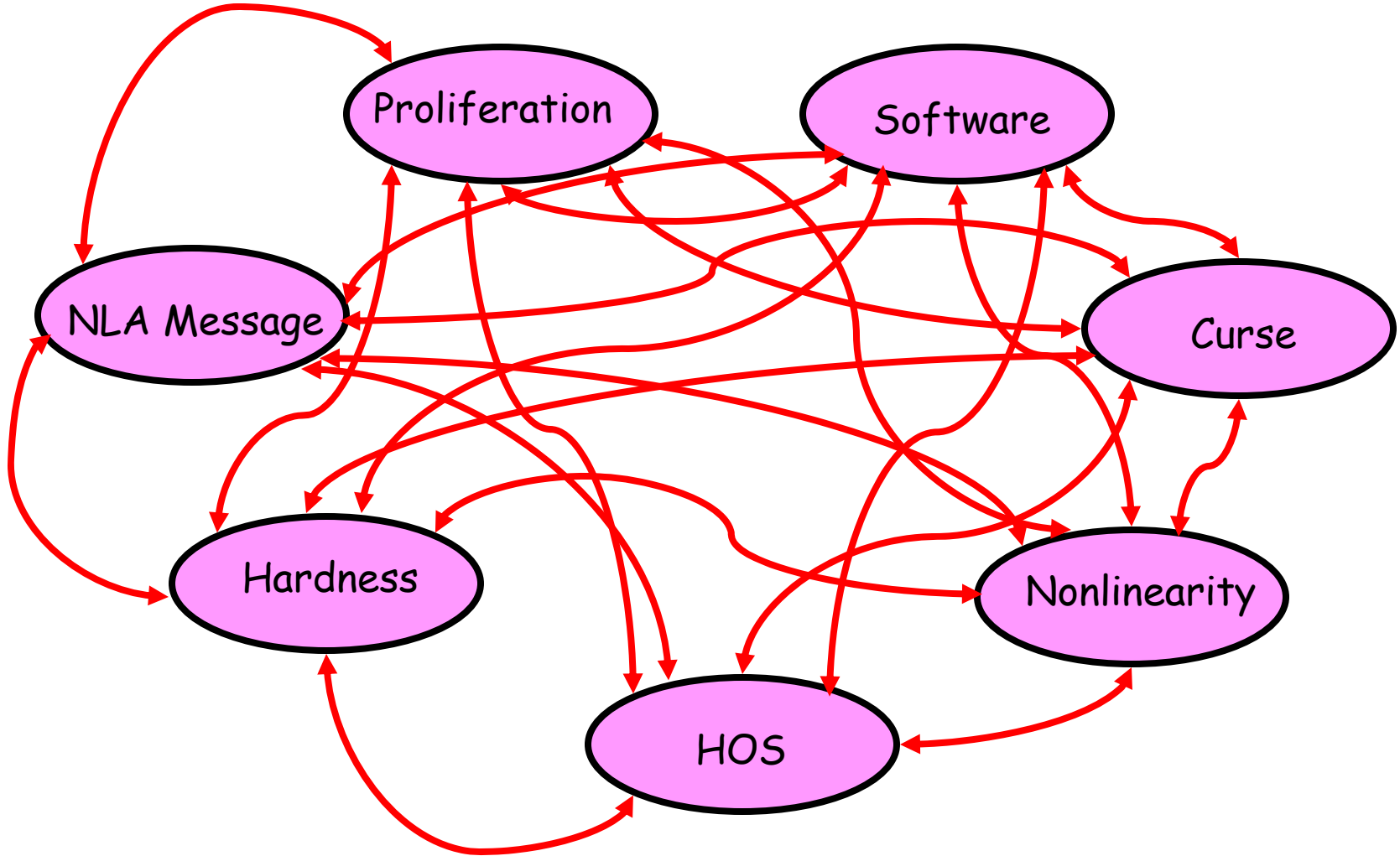




# Numerical Linear Algebra: What Is Its Message?



# Let's Spot Connections



# Workshop Methodology

## Speakers:

1. Think Out Loud !!!
2. Taunt the Audience with Conjectures !!!
3. Watch the Clock !!!

## Audience:

1. Listen Out Loud !!!
2. Challenge the Speaker with Questions !!!
3. Watch Your Watch !!!

# Contribute to the Final Report

Keep the scribes busy!

Send us slides, references, and thoughts.

Sunday Morning Session (Optional)

Post-Workshop ChitChat/Editing