

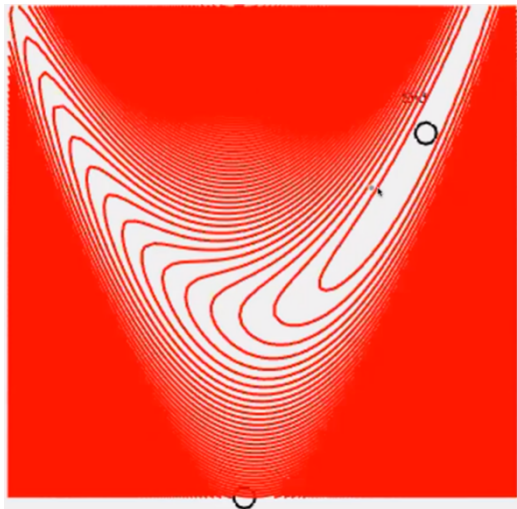
# Newton's method example

Junqi Tang

University of Birmingham

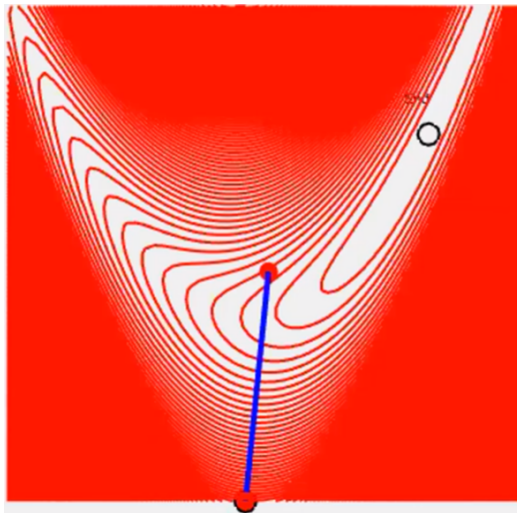
Oct, 2023

# Example



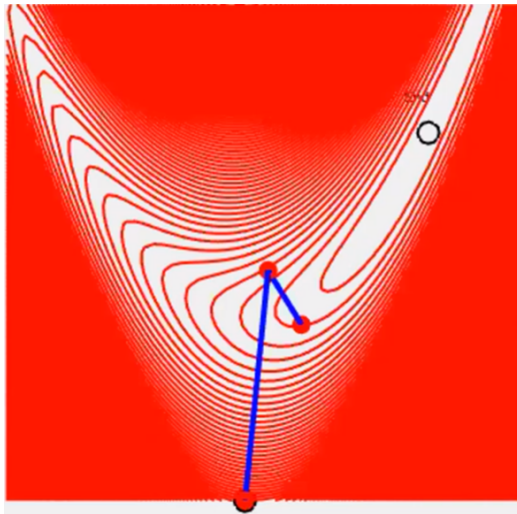
# Example

Run 1 iteration of steepest descent:



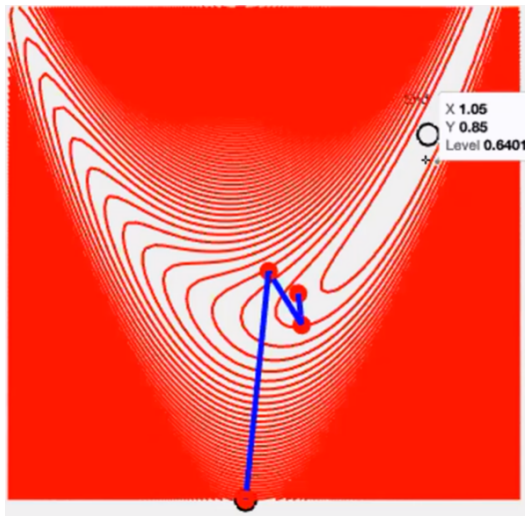
# Example

Run 2nd iteration of steepest descent:



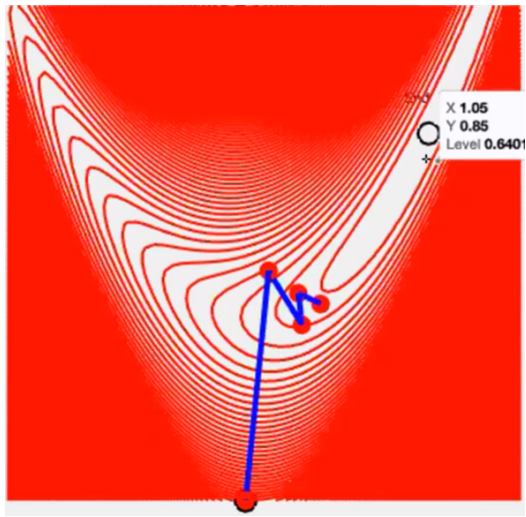
# Example

Run 3rd iteration of steepest descent:



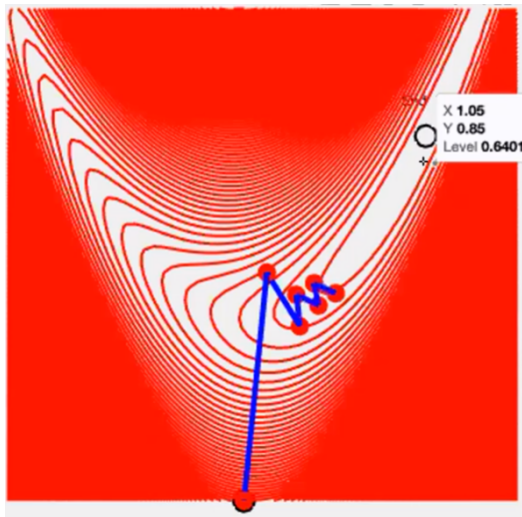
# Example

Run 4th iteration of steepest descent:



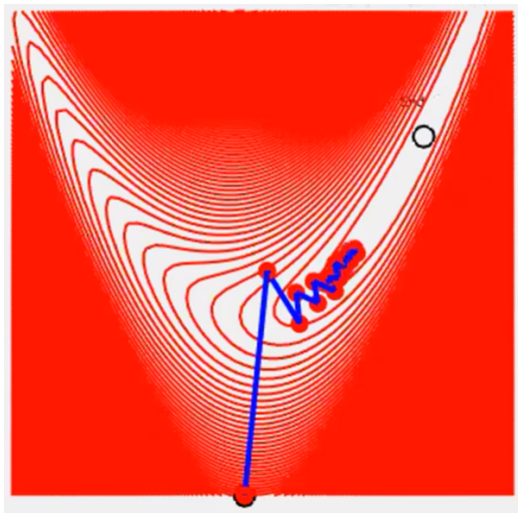
# Example

Run 6th iteration of steepest descent:



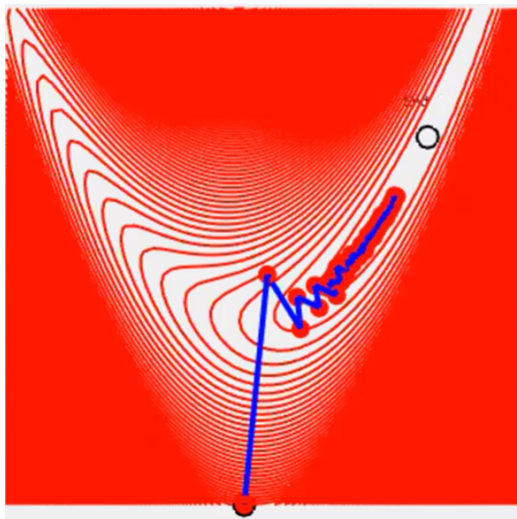
# Example

Run 30th iteration of steepest descent:



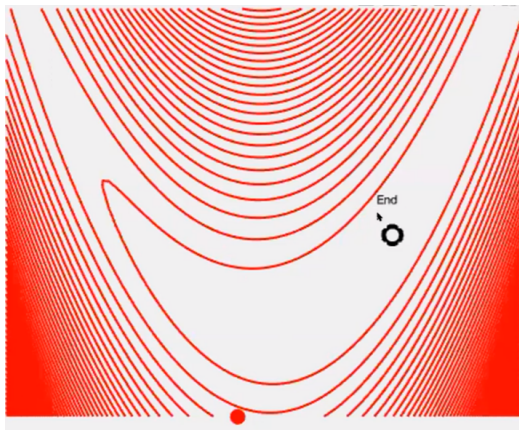
# Example

Run 100 iterations of steepest descent:



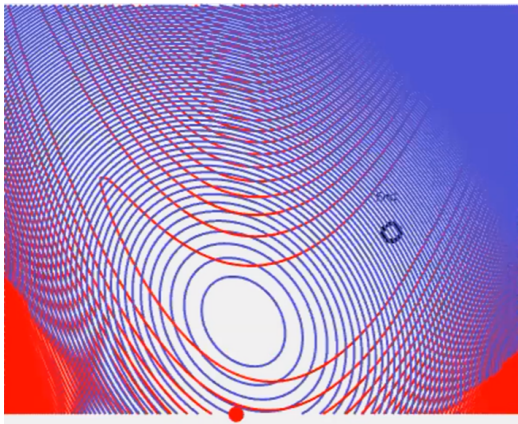
# Example

Let's try Newton:



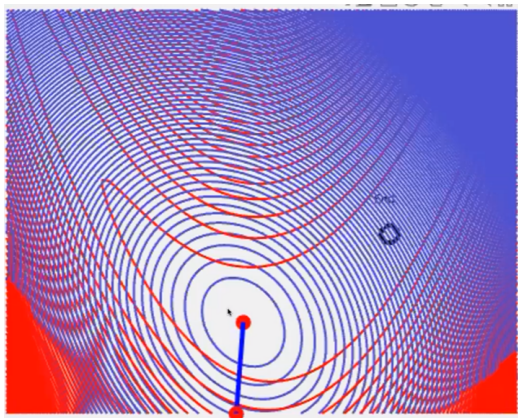
# Example

Let's try Newton:



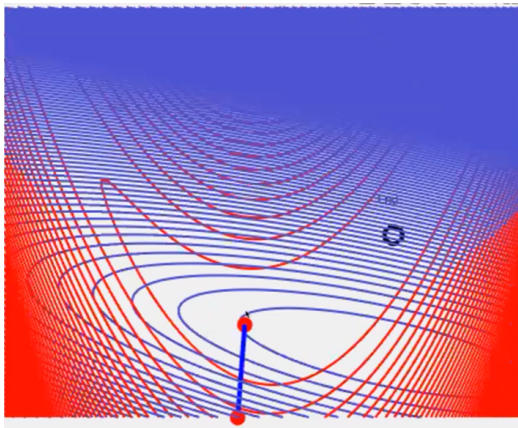
# Example

Let's try Newton:



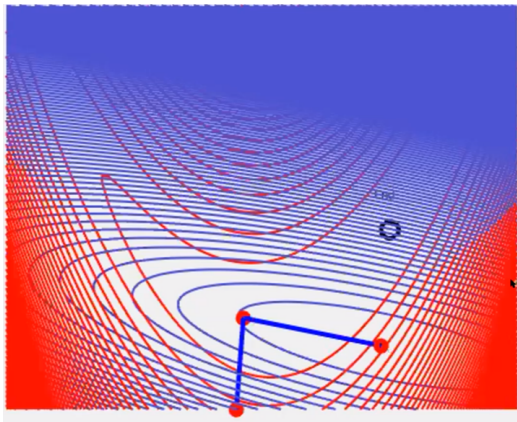
# Example

Let's try Newton:



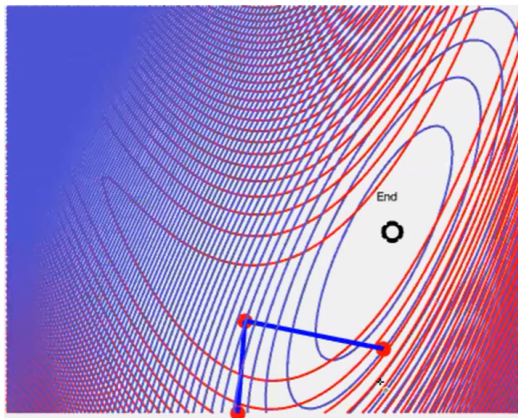
# Example

Let's try Newton:



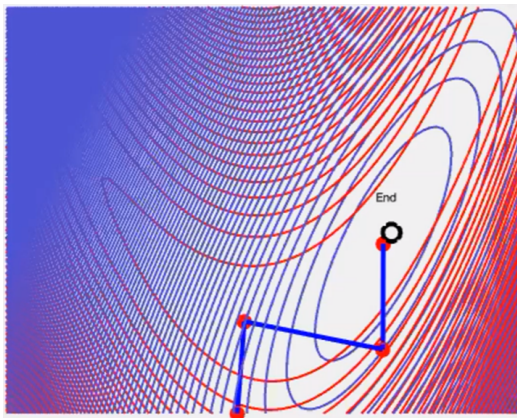
# Example

Let's try Newton:



# Example

Let's try Newton:



# Example

Let's try Newton:

