VSB TECHNICAL UNIVERSITY OF OSTRAVA | FACULTY OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE | DEPARTMENT OF COMPUTER SCIENCE

# Algorithms – Minimum Spanning Tree

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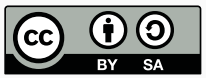
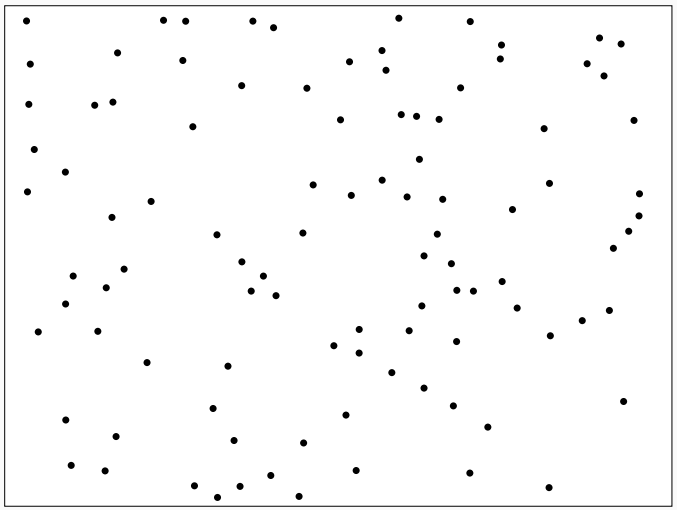


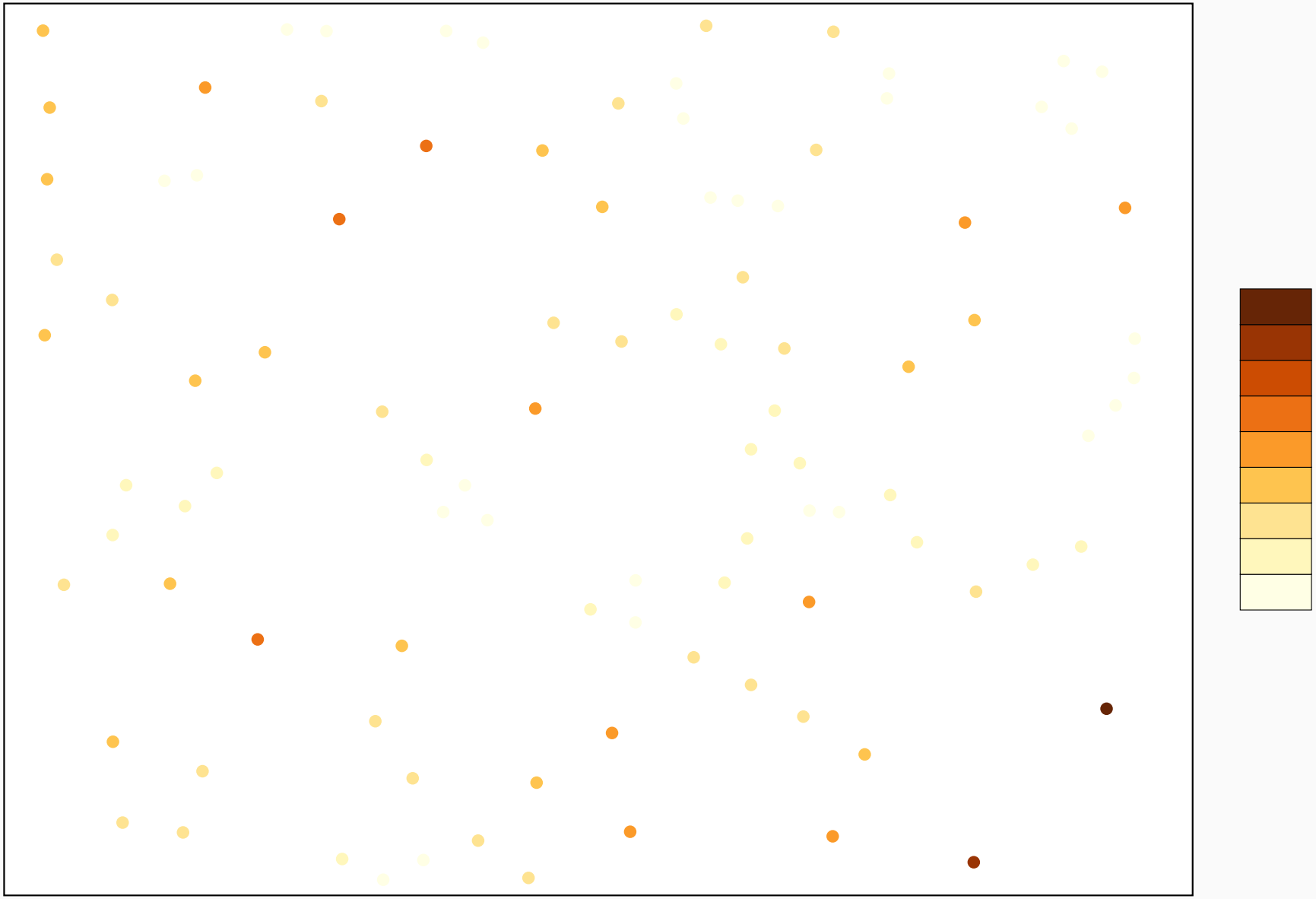
# Minimum Spanning Tree – Initial Graph



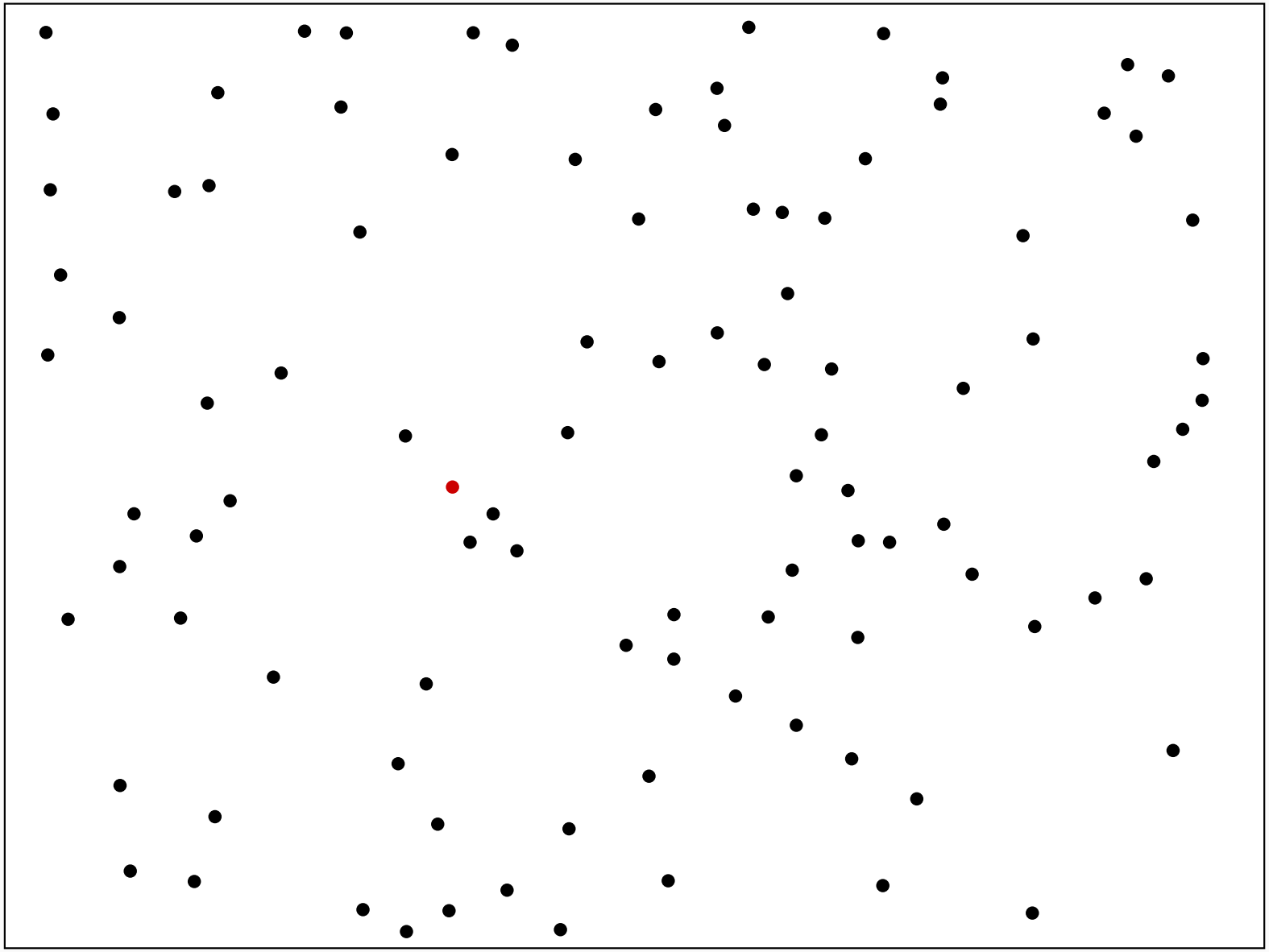
- The graph contains 100 vertices.
- The graph is complete i.e. each vertex is connected by an edge to all other vertices.
- The edges are not drawn for clarity.

- The weight of an edge is given by the Euclidean distance between incident vertices – the greater the distance between vertices in the image, the greater the weight.

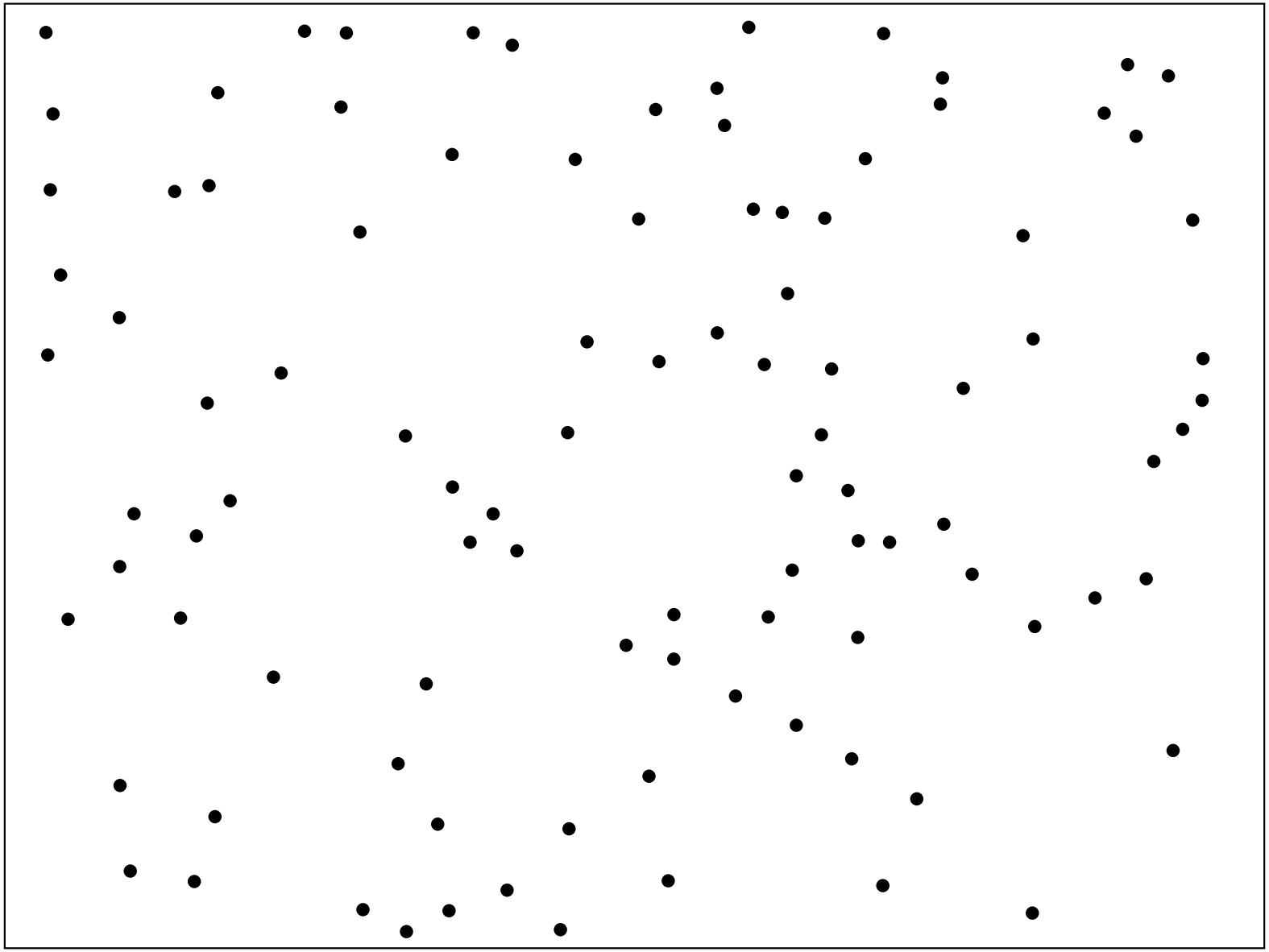
# Distance of Points – Distance of a Point to Its Nearest Neighbour



# Minimum Spanning Tree – Prim's Algorithm

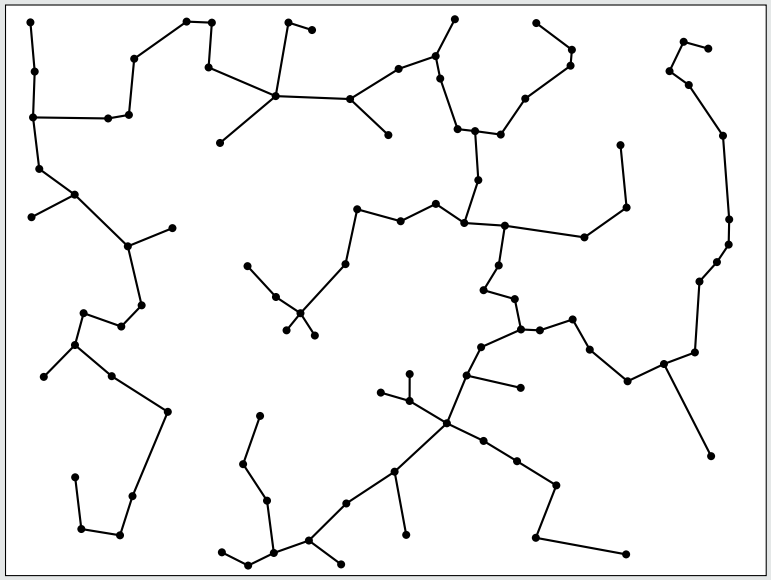


# Minimum Spanning Tree – Kruskal's Algorithm



# Minimum Spanning Tree – Results Comparison

## Prim's algorithm



## Kruskal's algorithm