# Lucian Ilie

- Lucian Ilie, Professor
- `www.csd.uwo.ca/~ilie/`

# Research – Bioinformatics

- Genomics
  - Sequence Analysis
    - Efficiently detecting similarities between DNA sequences (SpEED)
    - Whole genome alignment (E-MEM)
    - Read mapping (SHRiMP2)
  - DNA Sequencing – Finding DNA sequences of real genomes
    - Error correction (RACER)
    - De novo genome assembly (SAGE)
    - Assembly evaluation (LASER)
    - Illumina, Pacific Biosciences (HISEA)
  - Probe design – Unique probes to identify, e.g., missing genes
    - DNA oligonucleotide design (BOND)
- Proteomics
  - Protein Protein Interactions (PPI)
    - Predicting interactions between proteins (SPRINT)
    - Aligning networks of PPIs between different organisms

# Lab

- Our own computer cluster
  - 1 node: 32 cores, 1TB RAM
  - 4 nodes: 12 cores, 256GB RAM each

# Teaching

- CS9877 – Research Topics in Genomics and Proteomics
  - fall 2016
  - no background required
  - introduction to basic algorithms in sequence analysis
  - currently hot research topics
  - no assignments or exams (only presentations)
  - `www.csd.uwo.ca/~ilie/courses/CS9877.html`