**<Engineering>**

* Code optimization & CUDA—real time
* Network and phone app
* Support for mobile platform
  + Robot | smartphone | arm board |laptop

**<Algorithm>**

* Vision:
  + Feature-based: robustness?
  + Leverage multiple frame data?
* ICP:
  + From formulation:

point-to-point error metric

point-to-plane error metric

plane-to-plane error metric

* + to computation:

closed-form solution or non-linear optimization methods

* Sensors:
  + Fusion two clouds generated from two separate scans
  + SLAM literature: robotics? Odometer data?
* Loop detection:
  + Algorithm and optimization
    - from both sensor and vision perspectives

**<Graphics>**

* mesh & texture mapping
* post-processing
  + “packagelize”—related to [network and phone] in <**engineering**>
  + Holes, faults and noise—related to <mesh & texture mapping>
  + Segmentation
  + Recognition(labels and signboard and scene recognition)
  + Moving object detection
  + Shade/lighting normalization