Prior Models on Coronary Arteries

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446

Goals

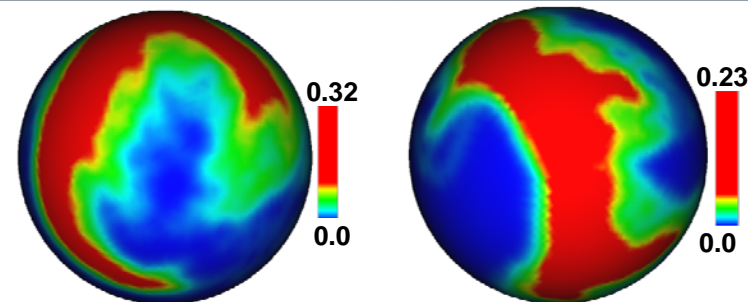Build coronary prior models by

- computing their distribution on territories

- building tree-shape models and geodesic metrics

Significance

- Support coronary detection in CTA

- Statistical analysis of coronary anatomy
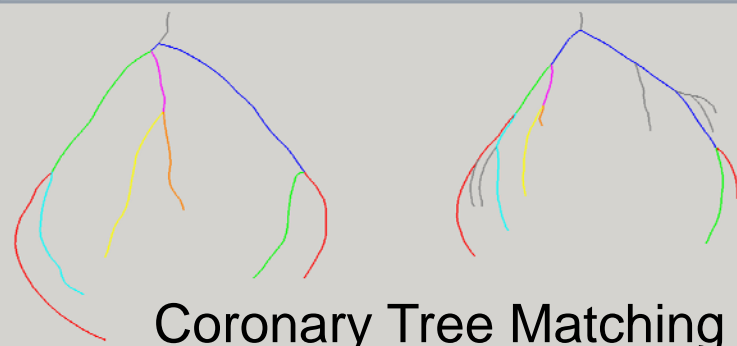
Results

- Coronary average density map

- Average coronary tree

- Coronary tree matching

Average Density Map

Average Coronary Trees

Coronary Tree Matching
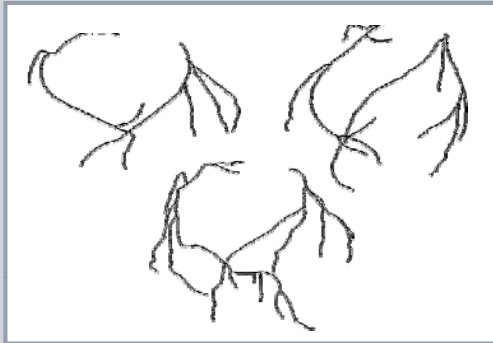
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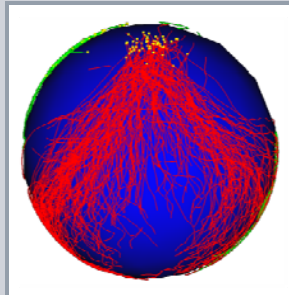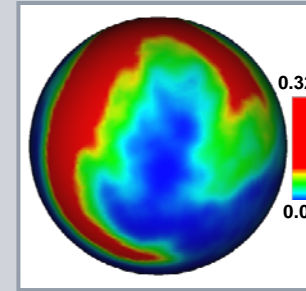Mentor: Gareth Funka-Lea, Princeton

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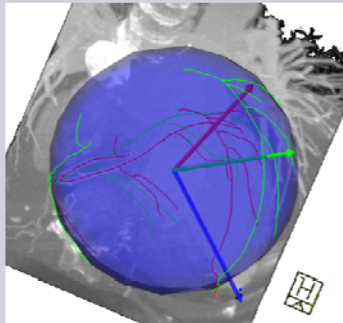
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50 CTA coronaries

Alignment

Statistics on Territories

Coronary Density Map

0.32

0.0

Coronary Tree Matching

TED metric

QED metric

Average Tree

Gulsun, 2012