Parametric Modeling of Vaults for Notre Dame in Revit

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About the speaker

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Chapter 1: Readings

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Part 1: Studying Parts and Proportions of a 4-part Vault

This image below is a reflected ceiling plan of the Notre-Dame de Paris cathedral at ground level. Notice that it contains grid lines and dimensions. Even though this drawing is not fully accurate, it is a good reference for this handout; it is useful for identifying types of vaults and their location in the cathedral.

Highlighted above, between grid lines 7 & 8, and F & G, is an example of the first type of vault that we are going to study. This one is the simplest of all types. This one is known as a "4-part vault", and it is commonly known as "crossed vault", or "groin vault". To start getting familiar with this type of vault, we will follow...
This is the challenge: can we make it?
Chapter 2: Step by Step Instructions
Workflow and Legend of Colors, page 53
4-part Square Vault
Arc-1-Semicircle

Diagram showing a semicircle with the following dimensions:
- Radius $R = 0.5$ m
- Diameter $D = 1$ m
- Angle $	heta = 0.00^\circ$
Arc-2-Pointed
Arc-3-Middle
Data set

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- 1_Templates
- 2_My Families
- 3_Catch-up Families
- 4_Sample Project
- 5_Explore Notre Dame
Reminders

Remind attendees to

- Take the class survey in the app
- Check out socials and meetups in the Expo and Community Quads
- Schedule time to meet after class if you’ll be in the Quads yourself
- Promote additional classes you or your colleagues are teaching