

Lančanica i njezine primjene u arhitekturi



Jelena Bekavac Krčadinac,
OŠ Čučerje

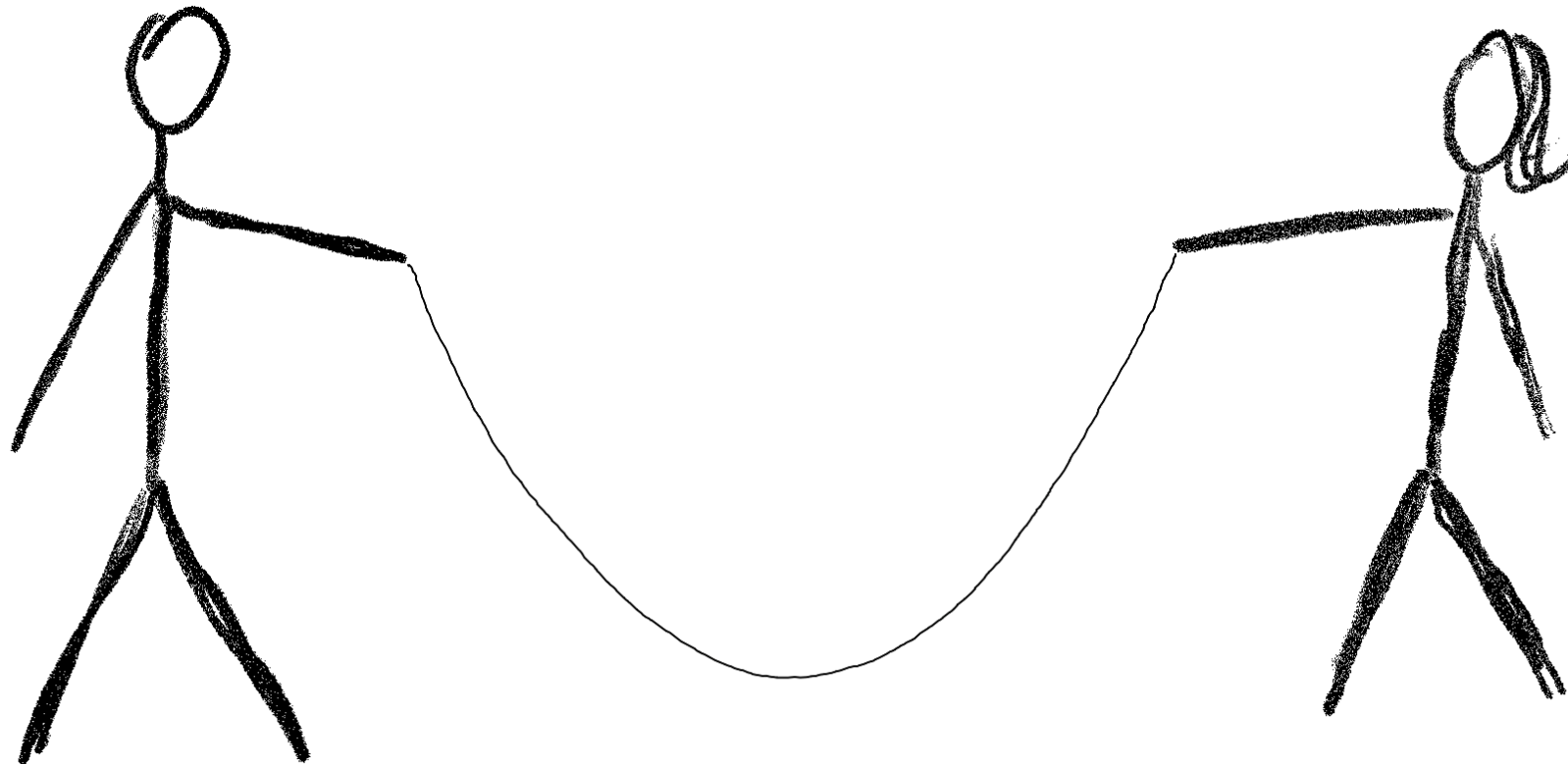
Goran Igaly i Vedran Krčadinac,
PMF-Matematički odsjek

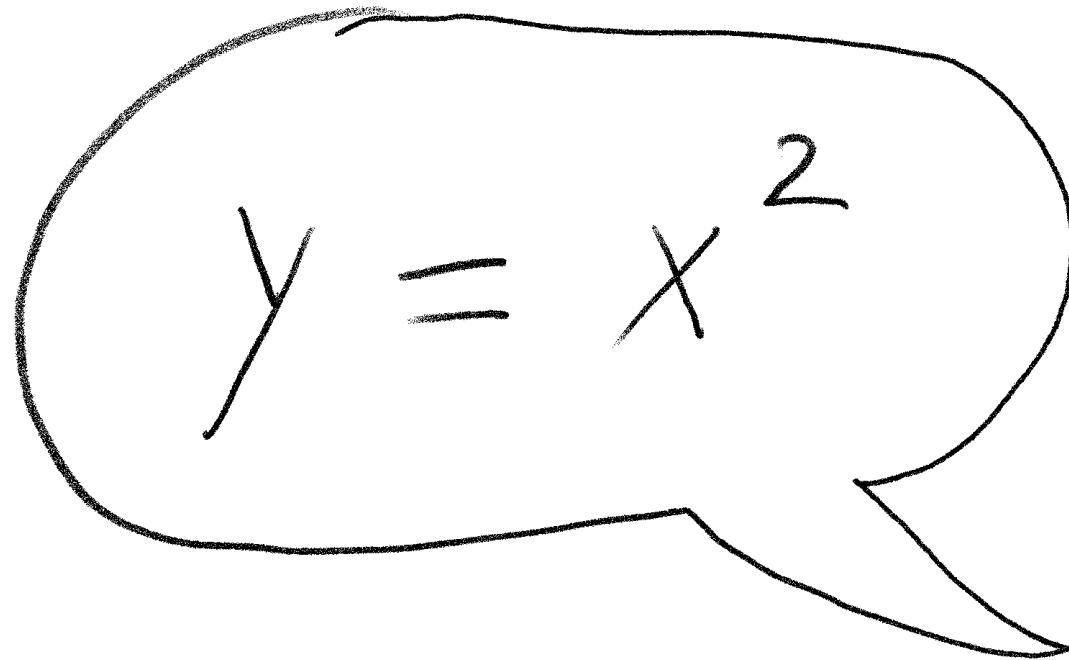
Koja je ovo krivulja?

PARABOLA

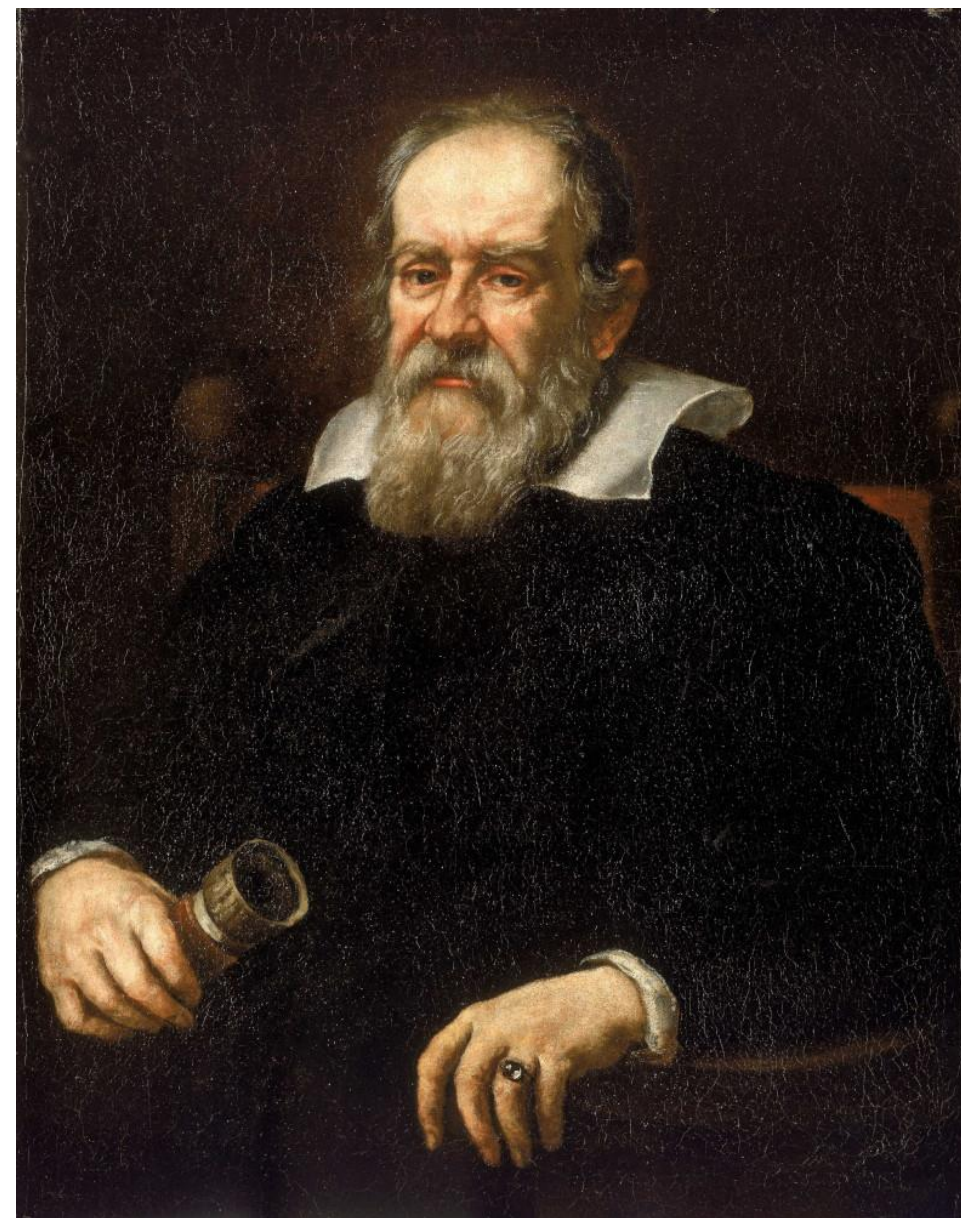
ili

NIJE PARABOLA ?





A hand-drawn speech bubble with a black outline, containing the mathematical equation $y = x^2$ written in black ink.



Galileo Galilei (1564.-1642.)



$$y = |x|^3$$

Robert Hooke (1635.-1703.)



Slika: Niklaus Bernoulli, 1687.

Jacob Bernoulli (1655.-1705.)

$$y = \frac{e^x + e^{-x}}{2} = \operatorname{ch} x$$

1691.



Slika: Johann Rudolf Huber, oko 1740.

Johann Bernoulli (1667.-1748.)



Slika: Caspar Netscher, 1671.

Christiaan Huygens (1629.-1695.)



Slika: Christoph Bernhard Francke, oko 1695.

Gottfried Leibniz (1646.-1716.)

A
DESCRIPTION
OF
HELIOSCOPES,
And some other
INSTRUMENTS

MADE BY
ROBERT HOOKE,
Fellow of the *Royal Society*.

Hos ego, &c.

Sic vos non vobis—



L O N D O N,

Printed by T. R. for *John Martyn* Printer to the *Royal Society*,
at the *Bell* in *St. Pauls Church-yard*, 1676.



THE TRUE MATHEMATICAL AND MECHANICAL FORM OF
ALL MANNER OF ARCHES FOR BUILDING, WITH THE TRUE
BUTMENT NECESSARY TO EACH OF THEM. A PROBLEM
WHICH NO ARCHITECTONICK WRITER HATH EVER YET
ATTEMPTED, MUCH LESS PERFORMED:



ABCCCDDEEEEEFFGGIIIIIIILLMMMM
NNNNNOOPRRSSSTTTTTTTUUUUUUUVX

THE TRUE MATHEMATICAL AND MECHANICAL FORM OF
ALL MANNER OF ARCHES FOR BUILDING, WITH THE TRUE
BUTMENT NECESSARY TO EACH OF THEM. A PROBLEM
WHICH NO ARCHITECTONICK WRITER HATH EVER YET
ATTEMPTED, MUCH LESS PERFORMED:



UT PENDET CONTINUUM FLEXILE, SIC
STABIT CONTIGUUM RIGIDUM INVERSUM

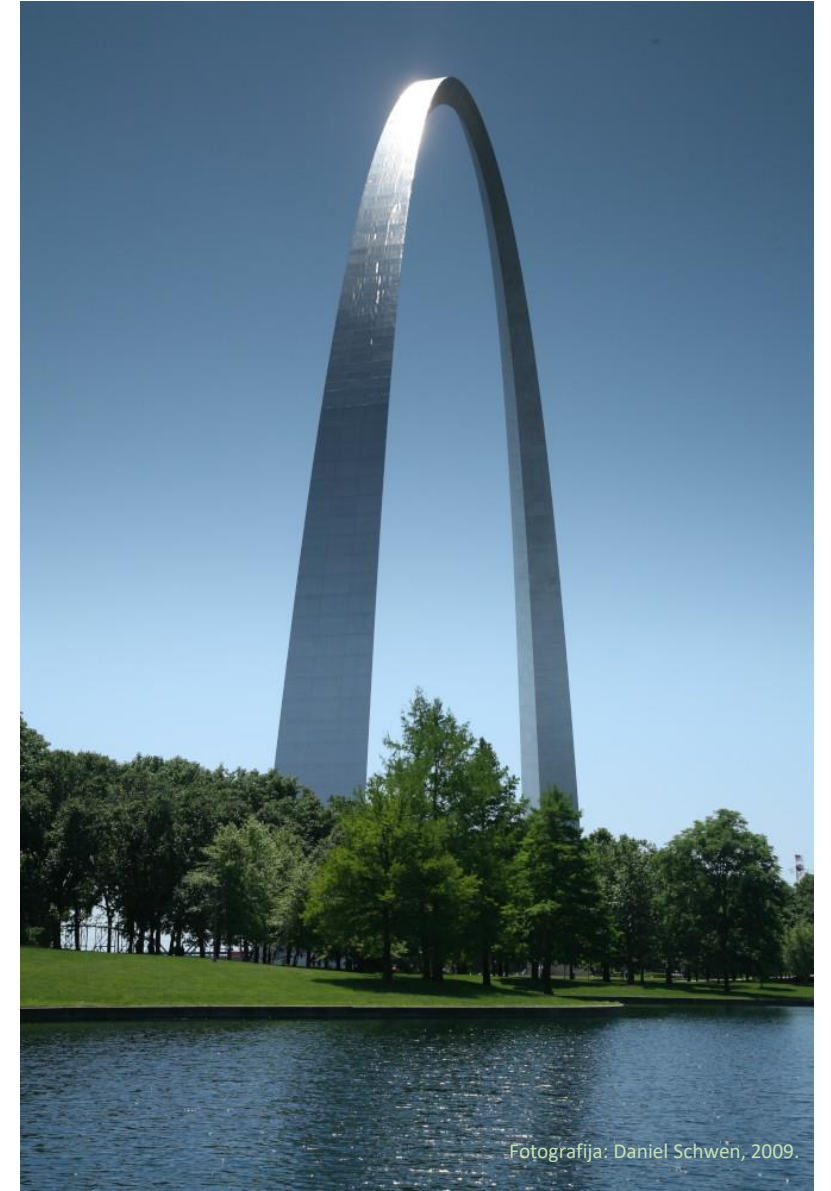
Kako visi savitljiva nit, tako će naopako
stajati nadovezani kruti dijelovi luka



Fotografija: Maxcorradi, 2012.



Gateway Arch, St. Louis, USA (Eero Saarinen, 1962.– 1965.)



Akvadukt Pont du Gard na jugu Francuske (1. st. n.e.)

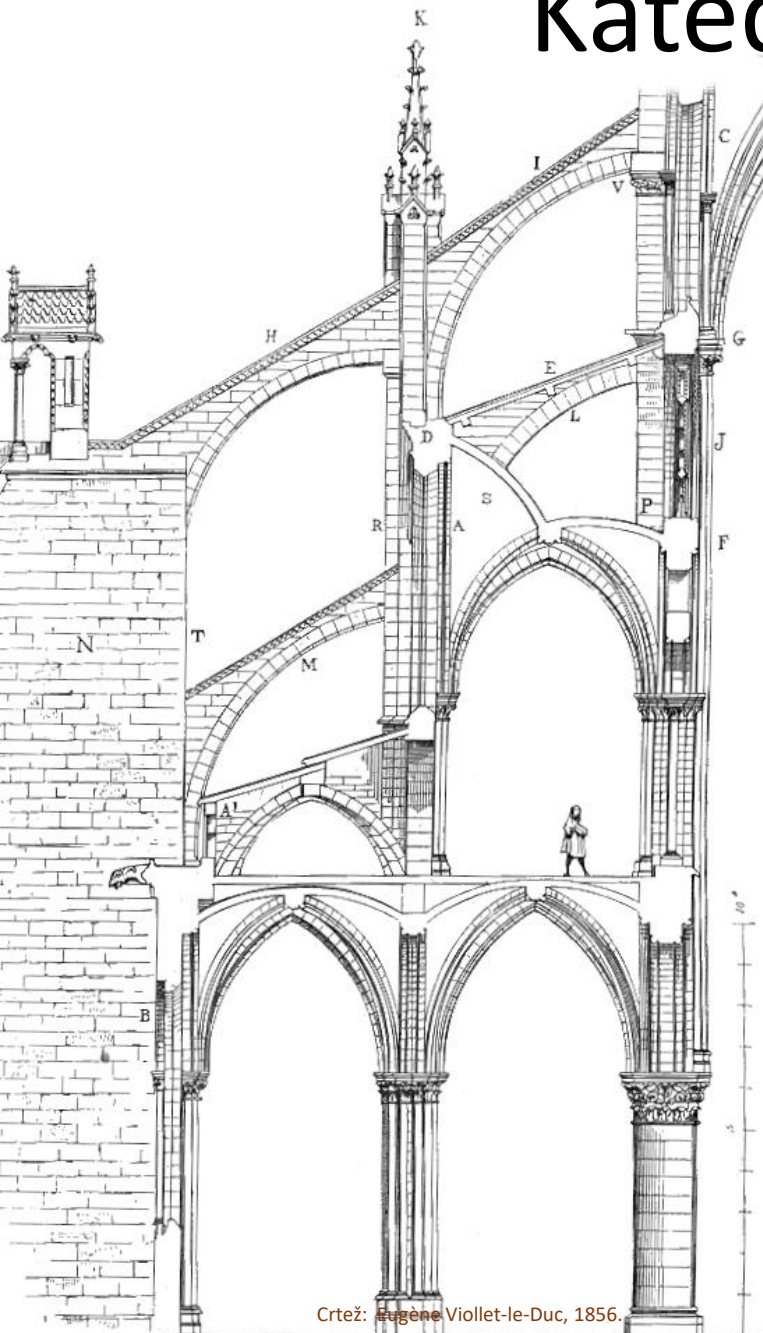


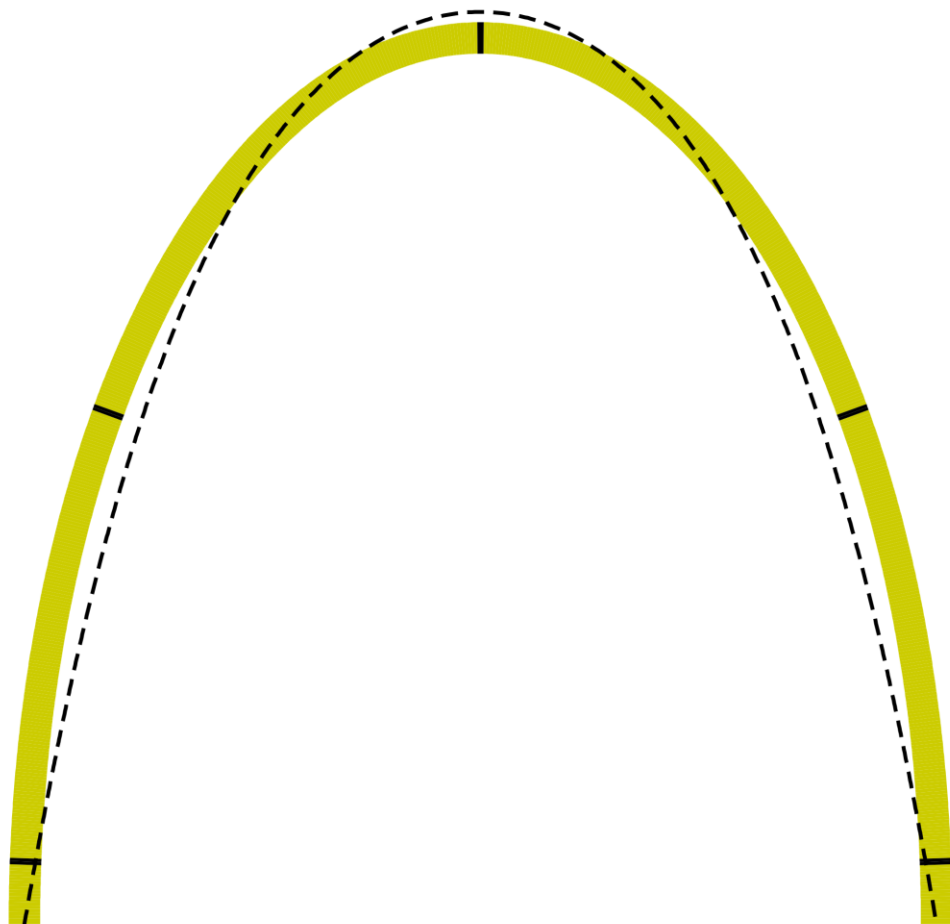
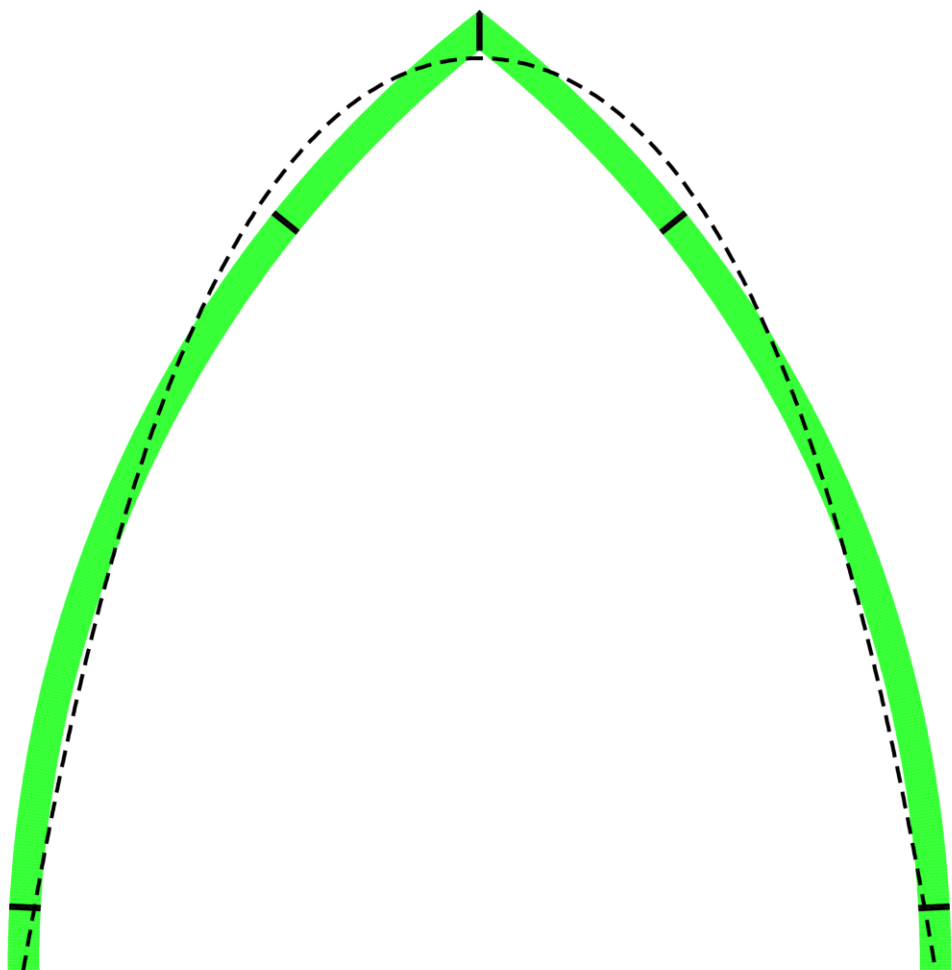
Dioklecijanov akvadukt u Splitu (3.–4. st. n.e.)

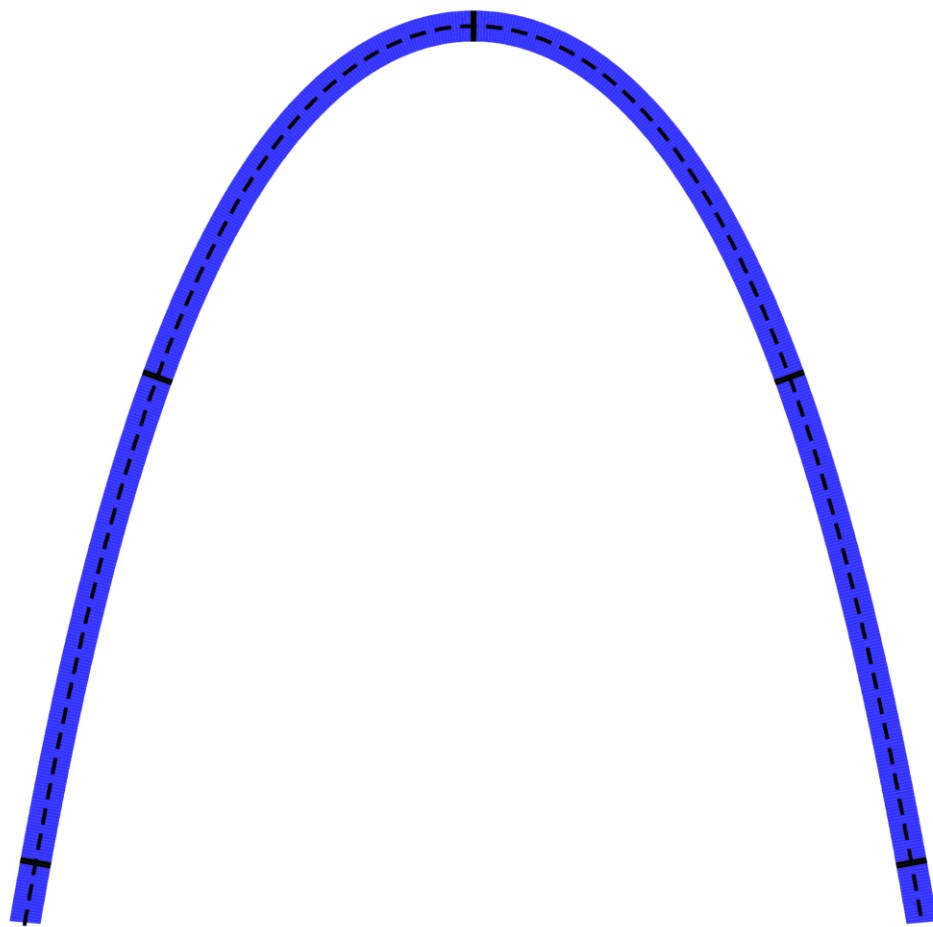
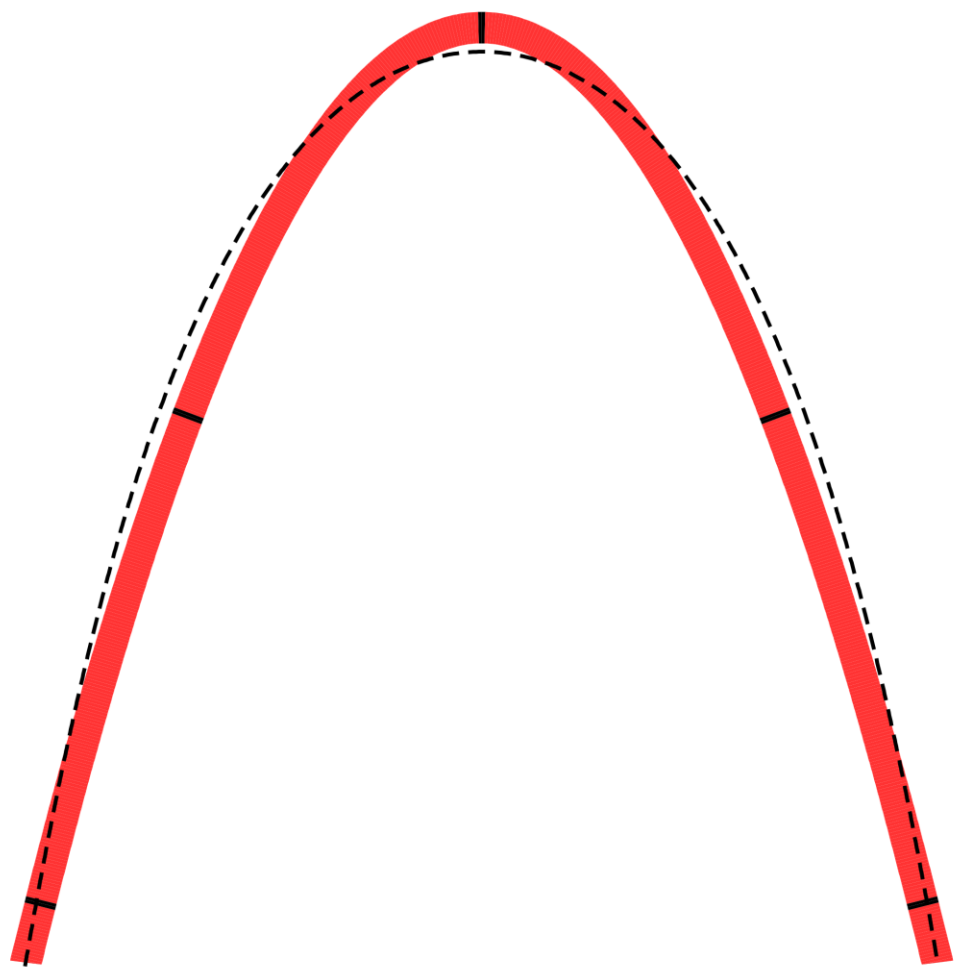


Fotografija: SchiDD, 2017.

Katedrala Notre-Dame u Parizu (12.–13. st.)







Golden Gate Bridge, San Francisco, USA

(Joseph Strauss,
1933. – 1937.)

Koja je ovo krivulja?



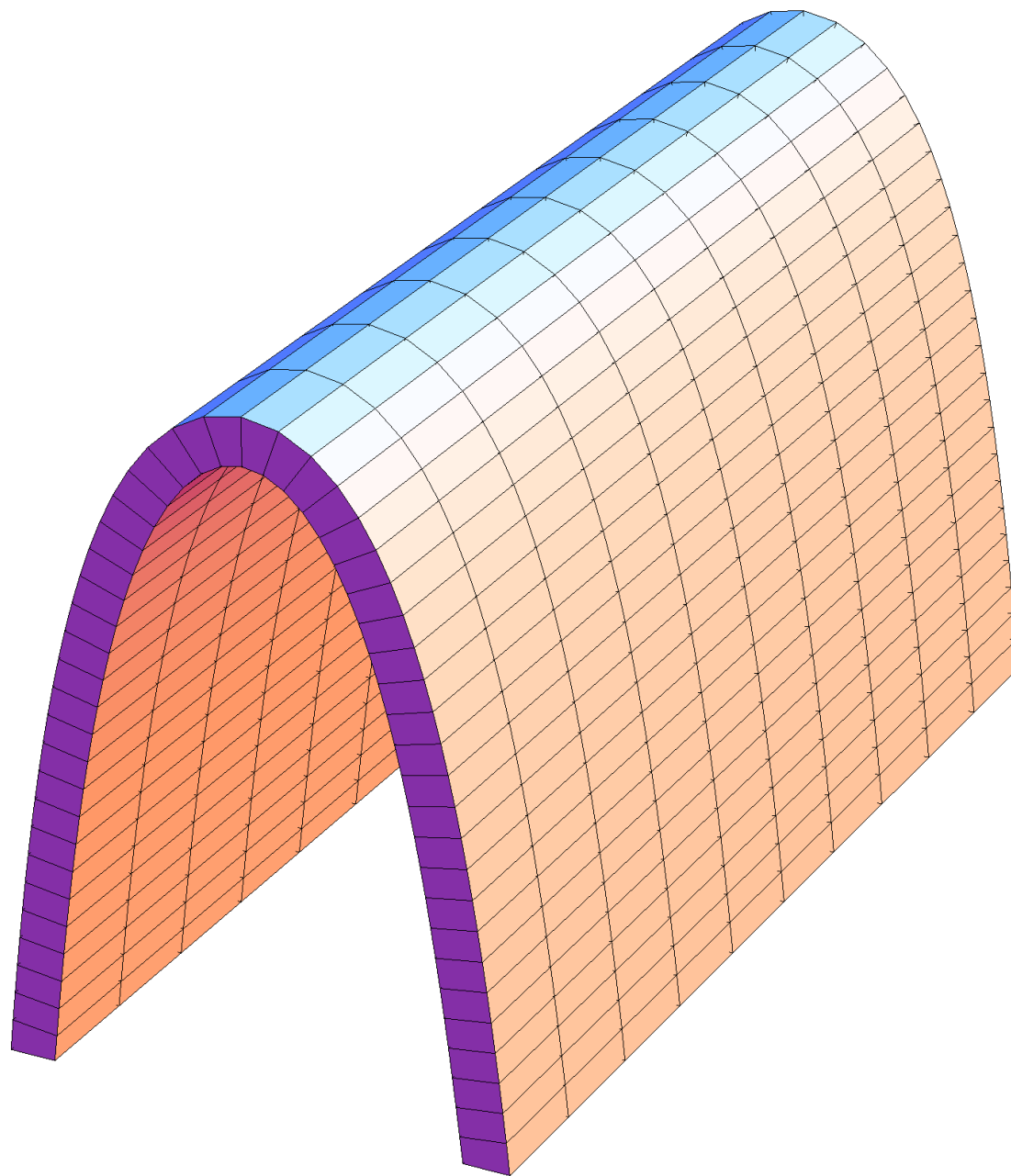
Krčki most (Ilija Stojadinović, 1976. – 1980.)



Koja je ovo krivulja?

Raspon velikog luka:
390 metara

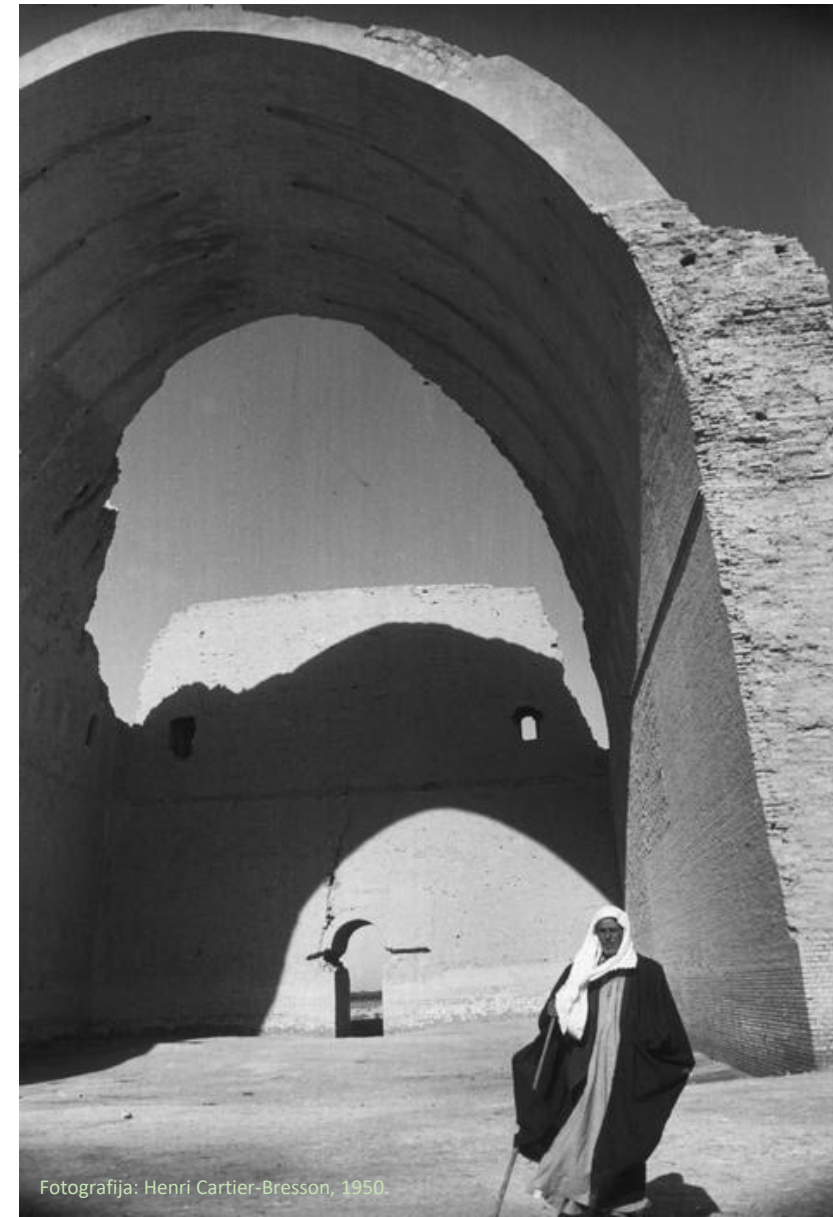




Tāq Kasrā, Ktezifont, Perzija (Irak) (3. – 6. st. n.e.)

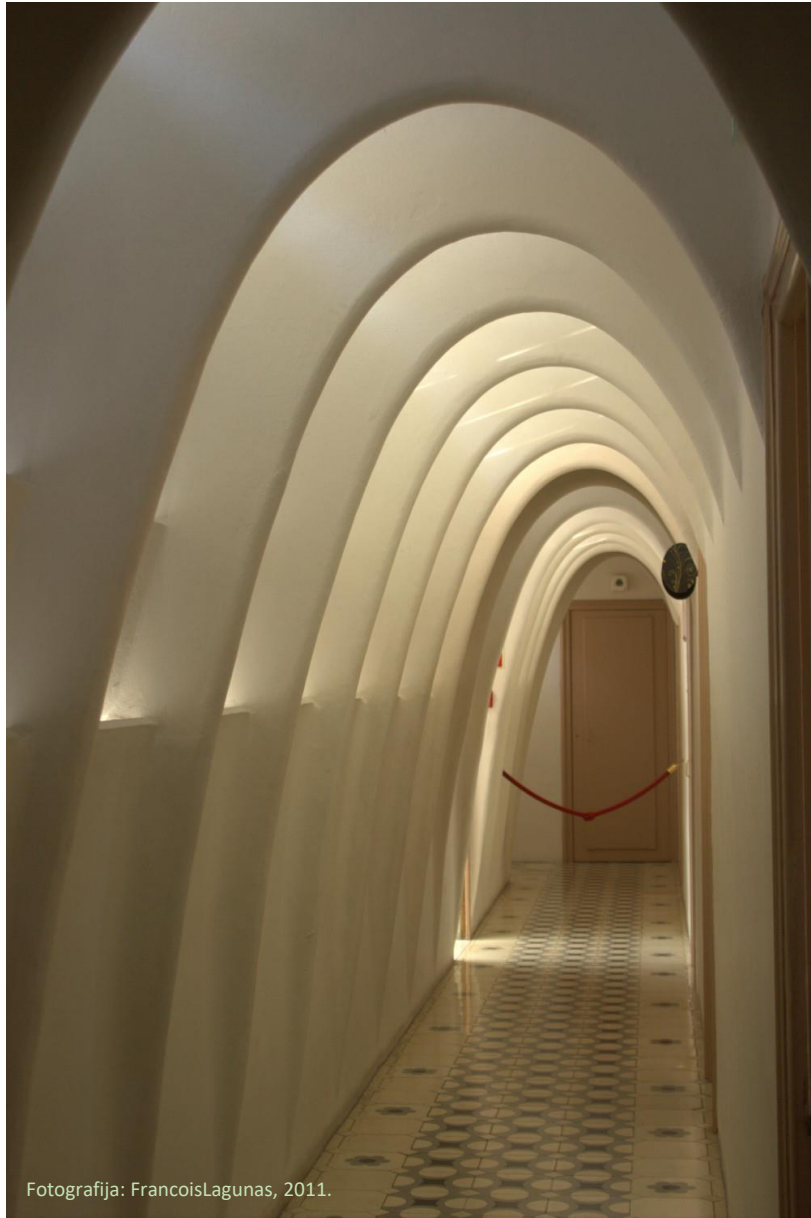


Fotografija: nepoznati autor, 1932.

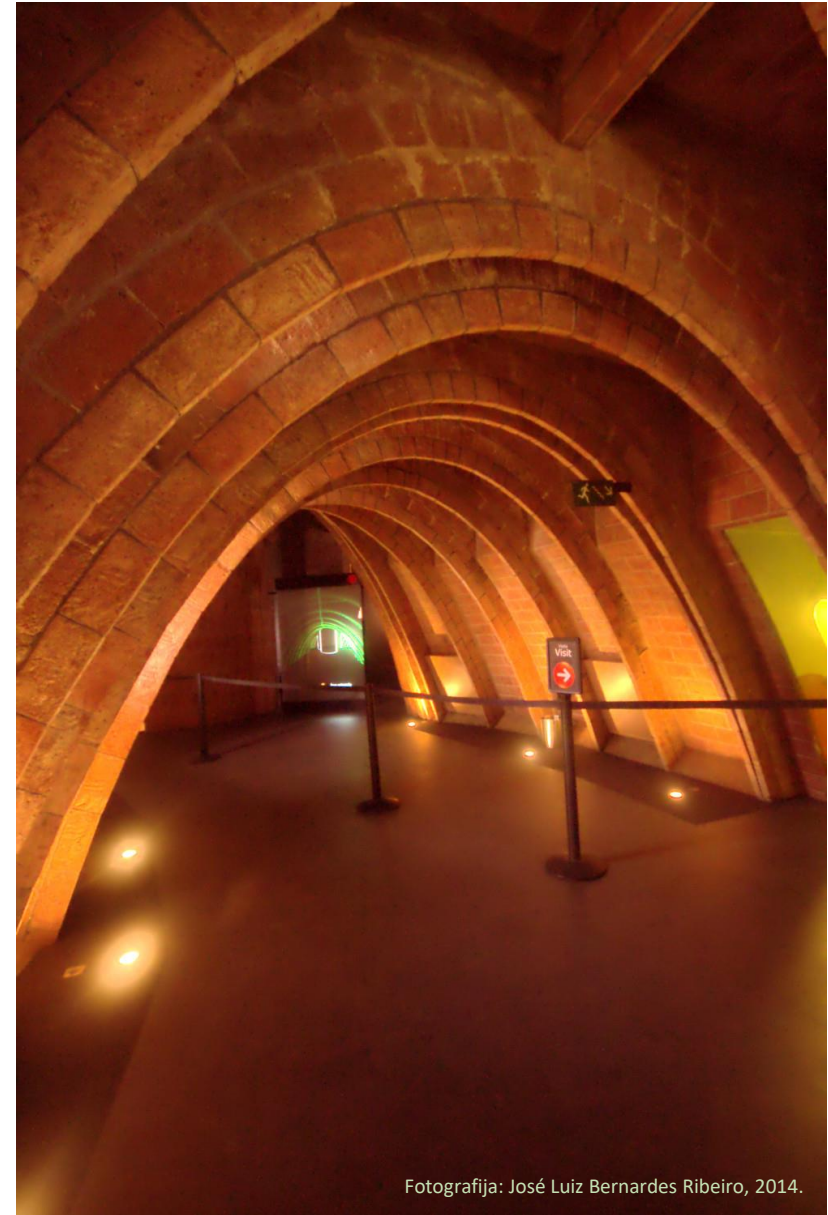


Fotografija: Henri Cartier-Bresson, 1950.

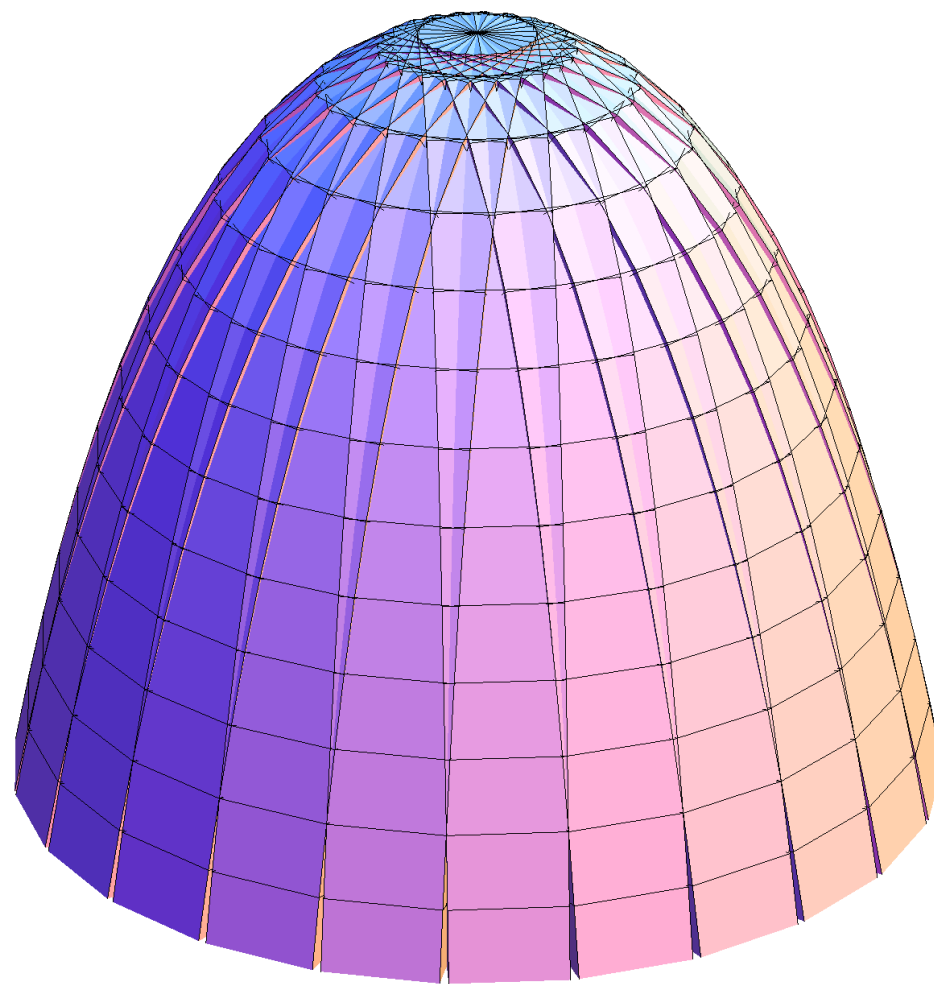
Casa Batlló i Casa Milà u Barceloni (Antoni Gaudí, 1906.)



Fotografija: FrancoisLagunas, 2011.



Fotografija: José Luiz Bernardes Ribeiro, 2014.



Kupola katedrale sv. Pavla u Londonu



(Christopher Wren
i Robert Hooke,
1675. – 1710.)

OPET JA...



Antoni Gaudí: maketa crkve Colònia Güell



Fotografija: nepoznati autor, oko 1898.-1908.



Fotografija: Canaan, 2009.

Antoni Gaudí: maketa crkve Colònia Güell



Fotografija: Canaan, 2009.

Antoni Gaudí: kriptna crkve Colònia Güell



Antoni Gaudí: kriptna crkve Colònia Güell



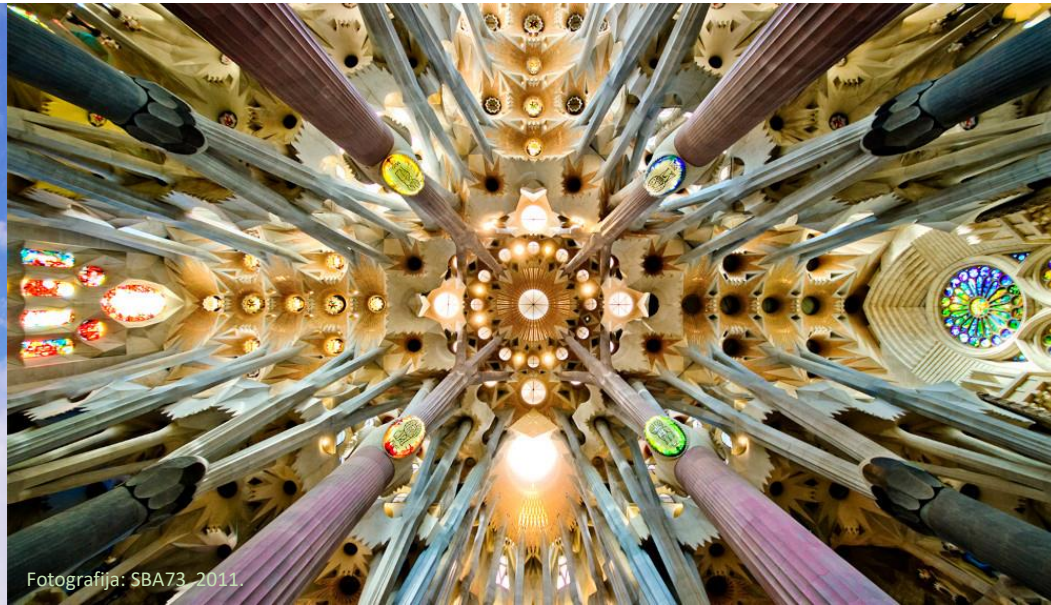
Fotografija: Kent Wang, 2024.

Fotografija: Maria Rosa Ferre, 2010.

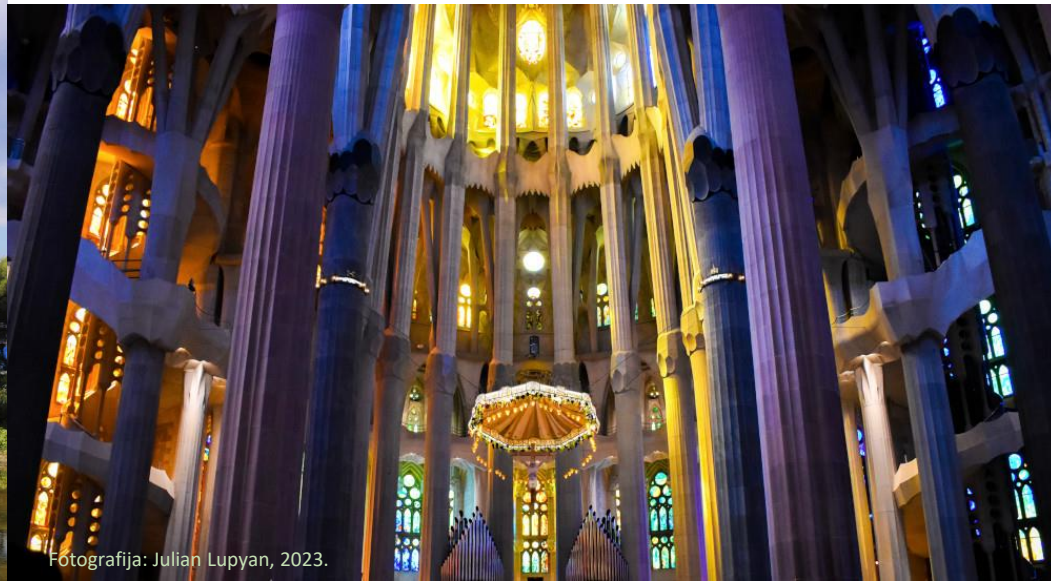
Antoni Gaudí: bazilika Sagrada Família u Barceloni



Fotografija: C messier, 2017.



Fotografija: SBA73, 2011.



Fotografija: Julian Lupyan, 2023.



Fotografija: Yeonu0407, 2023.

Lančanica u nastavi: MakingMathVisible.com

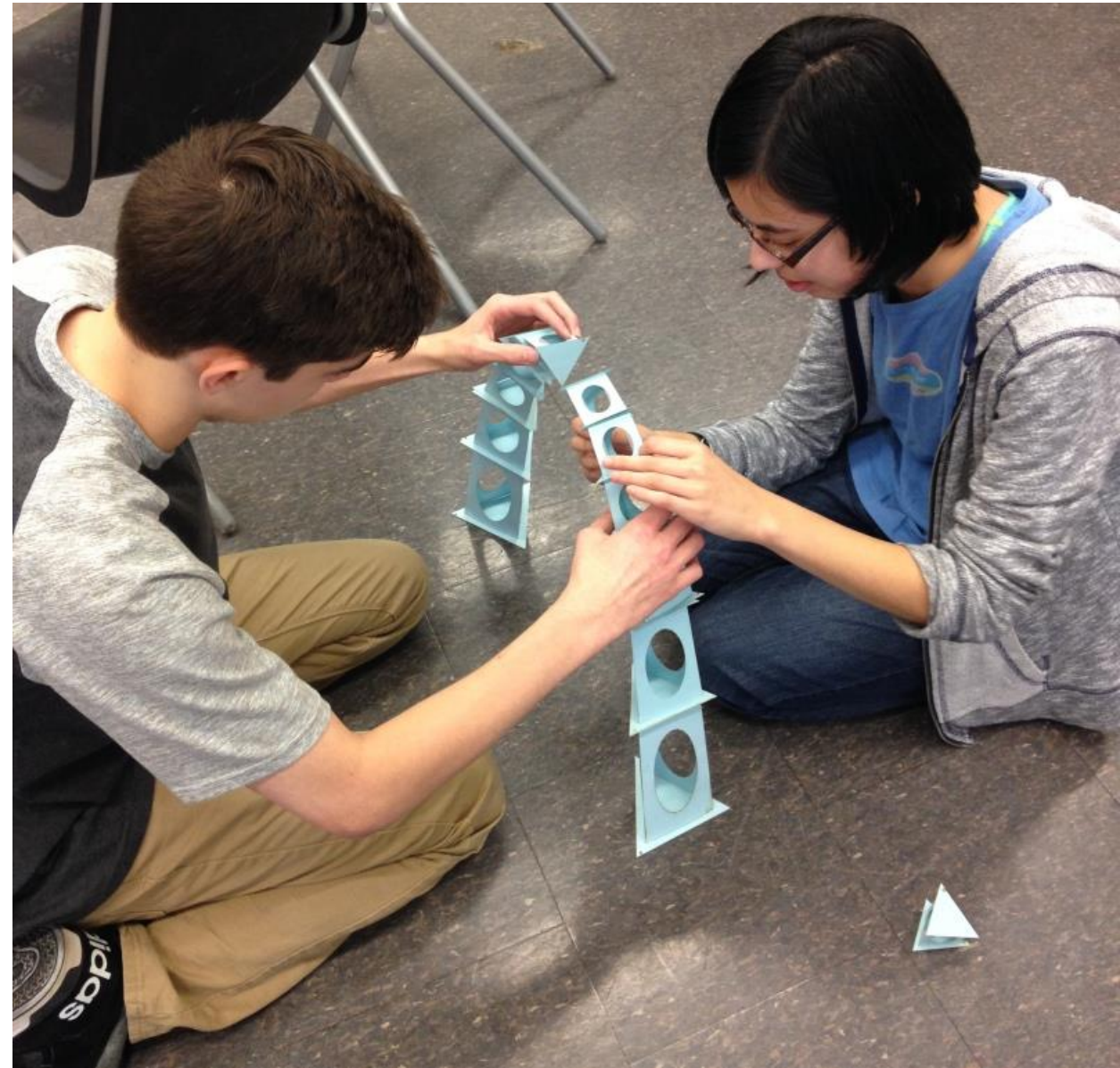


George Hart,
sculptor and applied mathematician.

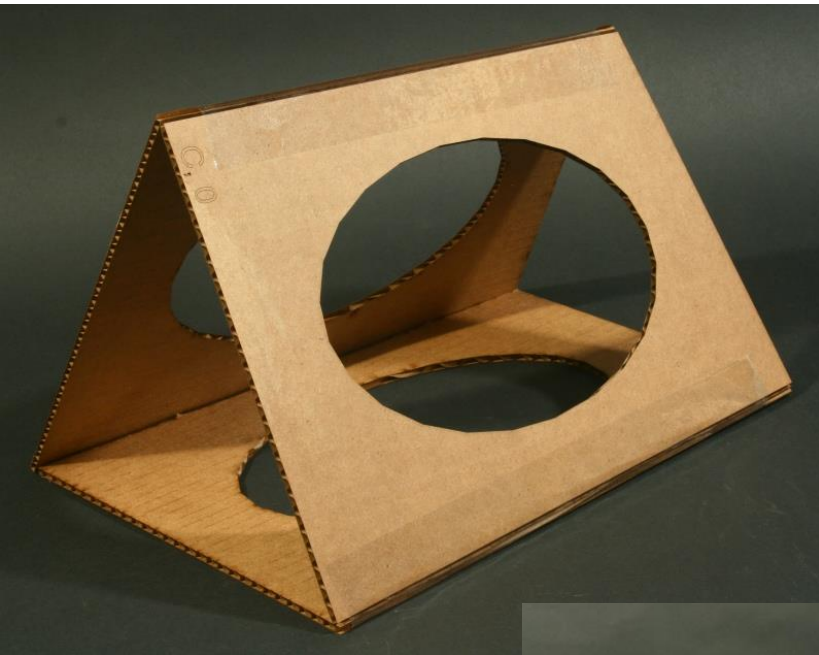


Elisabeth Heathfield,
certified teacher, math facilitator,
and an artist.

Lančanica u nastavi: MakingMathVisible.com



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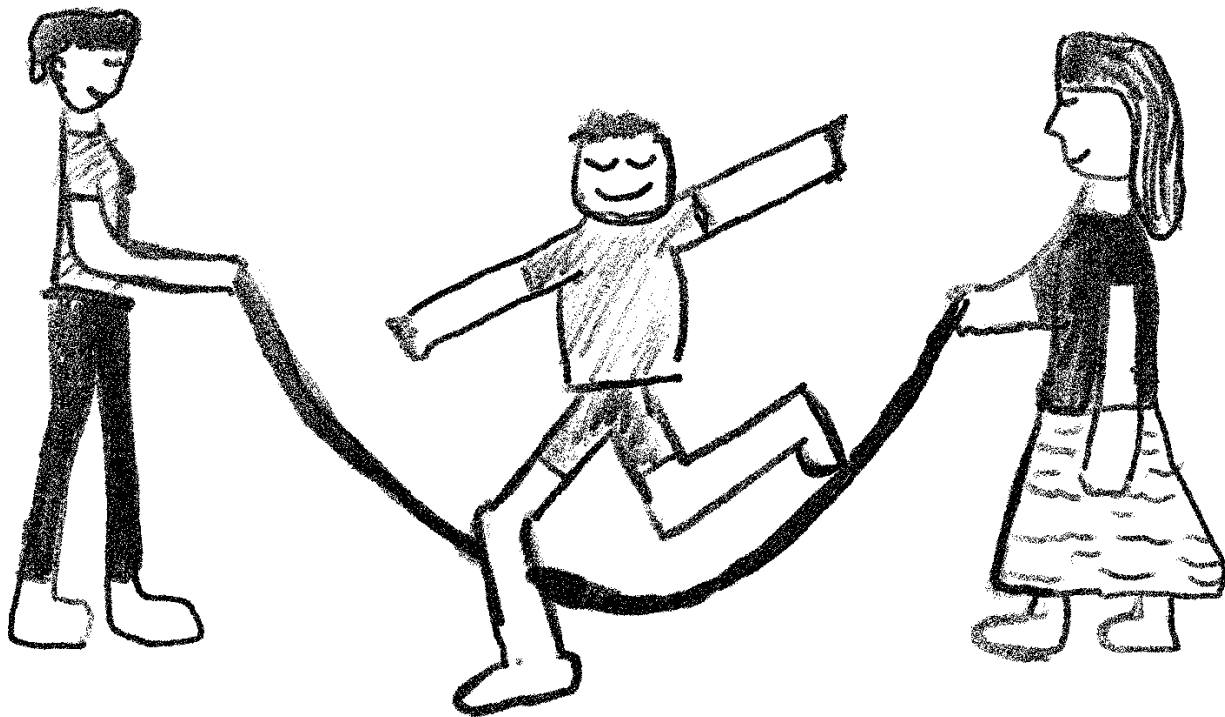


Lančanica u nastavi: MakingMathVisible.com



Hvala na pažnji!

Molimo ispunite anketu:



<https://photos.app.goo.gl/fgqu3VrVPVeaAkSz8>