University of Illinois at Chicago

KNOTS IN CHICAGO

September 10, 2010

Legendrian and transverse knots and their invariants

Sergei Chmutov

The Ohio State University, Mansfield

Jean-Gaston Darboux
August 14, 1842, Nîmes – February 23, 1917, Paris

Doctoral advisor: Michel Chasles

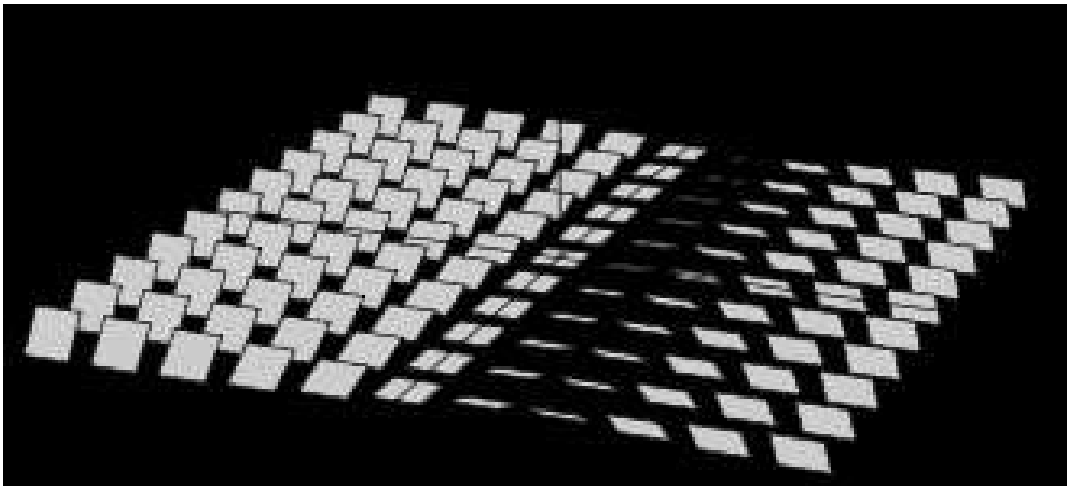
Doctoral students: Émile Borel,
Élie Cartan,
Édouard Goursat,
Charles Émile Picard,
Thomas Stieltjes,
Stanislaw Zaremba

Notable awards: Sylvester Medal

Wikipedia: `http://en.wikipedia.org/wiki/Jean_Gaston_Darboux`

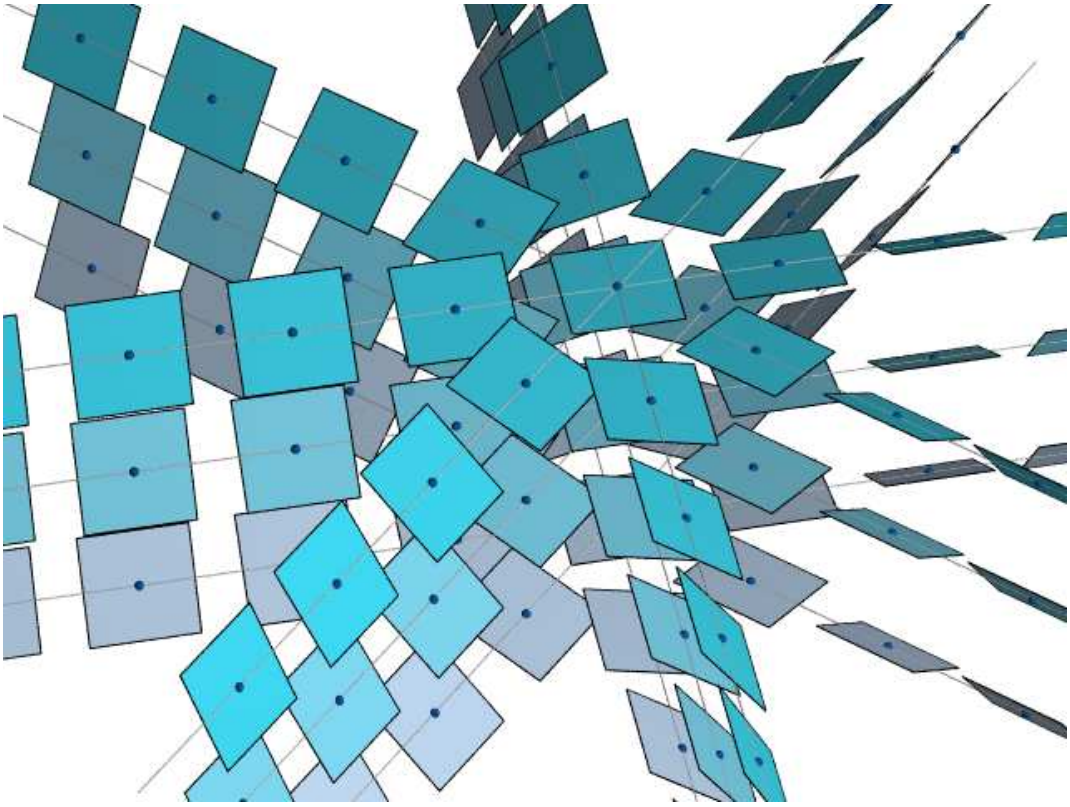
Standard contact structure

Wikipedia:
http://en.wikipedia.org/wiki/File:Standard_contact_structure.svg

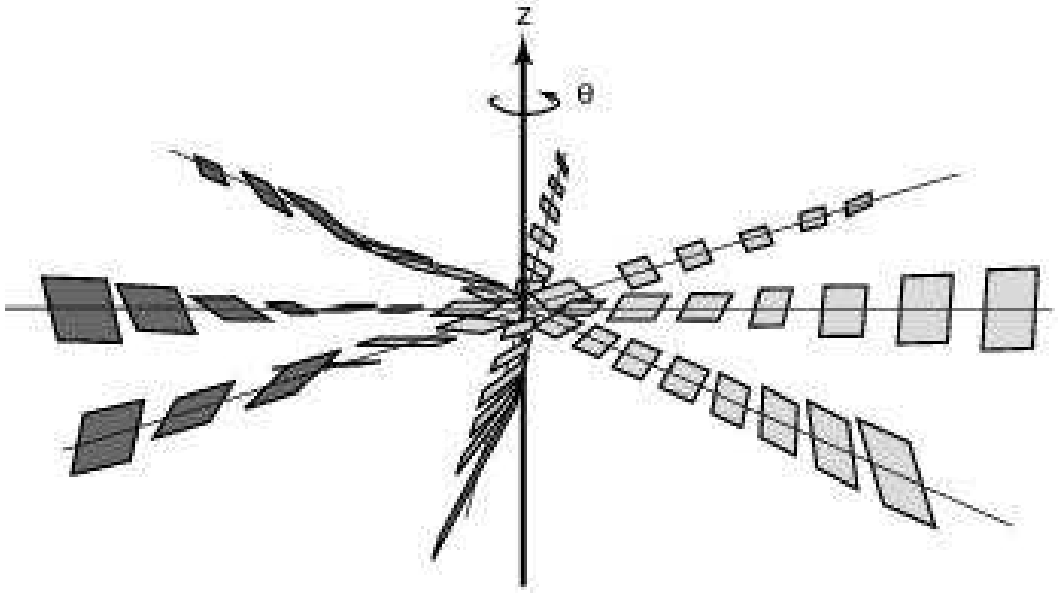


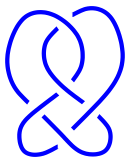
Rotational standard contact structure

http://commons.wikimedia.org/wiki/File:Standard_contact_structure_r_3.png

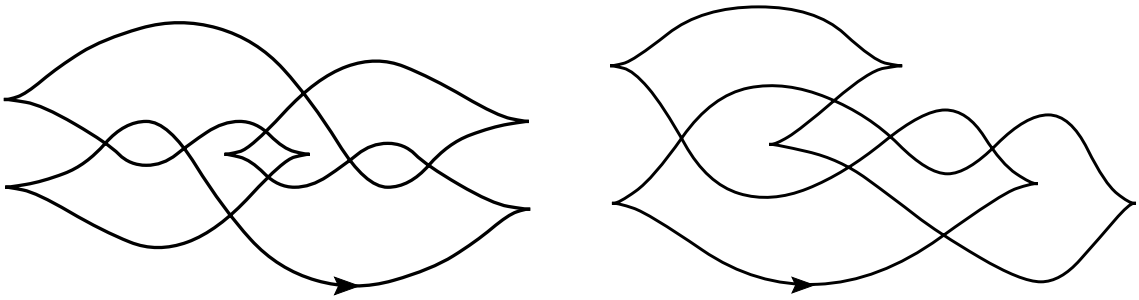


J. Birman, N. Wrinkle, *On transversally simple knots.*
Journal of Differential Geometry, **55** (2000) 325–354.

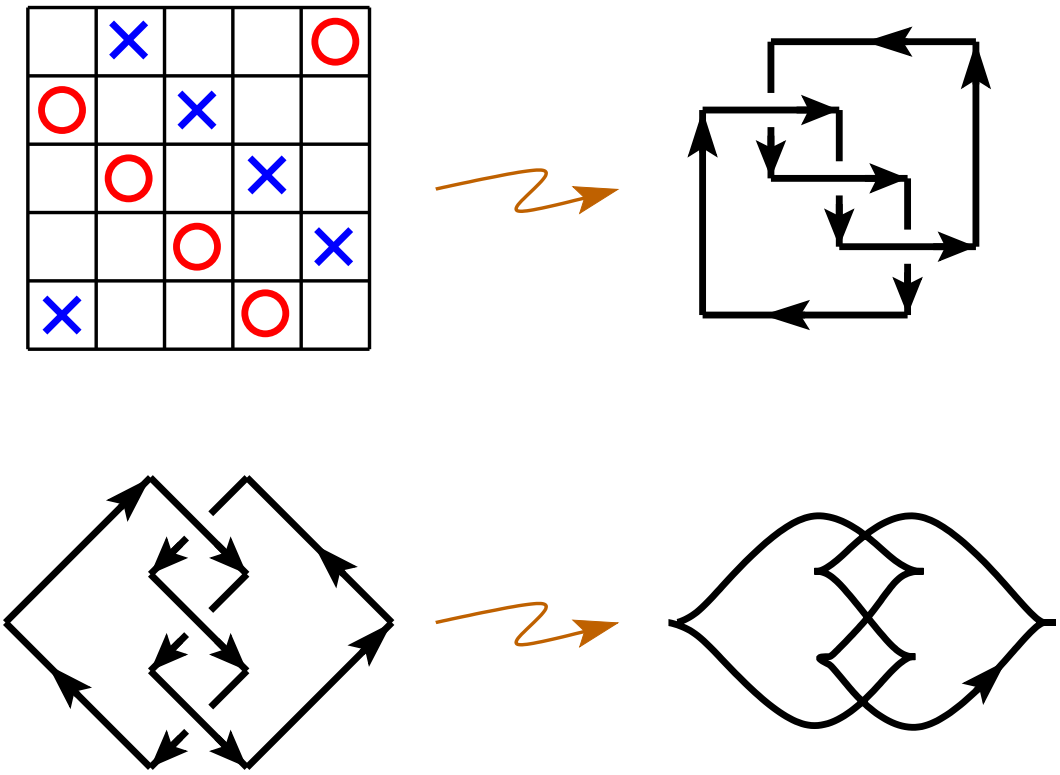


Chekanov's 5_2. (2002) 

$$m(K) = 0, \qquad tb(K) = 1$$



Grid diagrams.



Lenny Ng
http://www.math.duke.edu/~ng/