

# Coordinates along neck pinches for moduli of convex real projective structures

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It is well-known that the boundary of the Deligne-Mumford compactification of the moduli space of hyperbolic structures on a surface of genus at least 2 can be described in terms of Fenchel-Nielsen coordinates for a pants decomposition of the surface for which the necks to be pinched are boundaries of the pants. Along each loop which is pinched, the length parameter goes to zero, while the twist parameter disappears. These coordinates can be used to form orbifold coordinates for the Deligne-Mumford compactification. I will discuss the analogous degenerations for convex real projective structures, and how to extend a version of Goldman's Fenchel-Nielsen type coordinates to degenerations along necks. This involves some new classes of geometric limits, and involves a version of Goldman's interior parameters due to Zhang. I will also discuss how this relates to the complex structure on the moduli space as described via cubic differentials.

## References

- [1] JOHN LOFTIN, TENGREN ZHANG , *arXiv:1812.11389* , submitted