

**NON-HYPERBOLIC SLOW-FAST SYSTEMS AND
CHAOTIC DYNAMICS IN A 3D PREDATOR-PREY
SYSTEM**

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We discuss some benefits of studying purely non-hyperbolic slow-fast systems, at first in the plane, and indicate some directions of ongoing research where these vector fields are relevant. One application will be covered in more detail: we prove that any 1D map (diffeomorphism or not) can be realized as first return map of a 3d-slow fast system with one fast and two slow variables