ICCV HONOLULU HAWAII
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Universidad Zaragoza
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AnyCalib:

On-Manifold Learning for Model-Agnostic Single-View Camera Calibration

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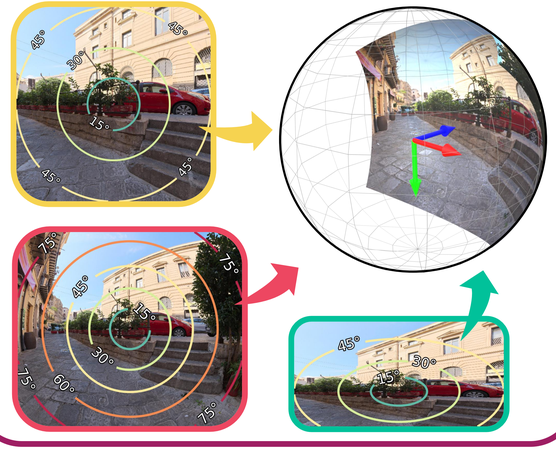
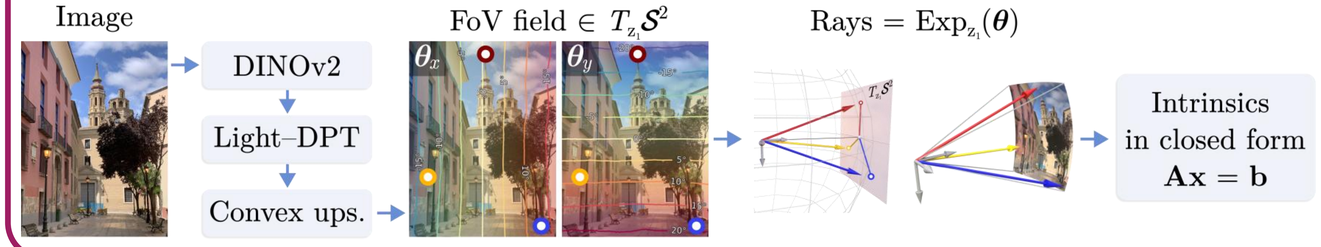
github.com/javrtg/AnyCalib

Calibration as rays from pixels

For perspective, distorted & edited images



FoV field + solving a linear system to calibrate a camera

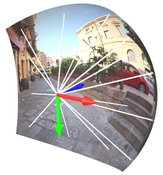


Free Choice of Cam. Model

Pinhole, Radial, KB, UCM, EUCM...

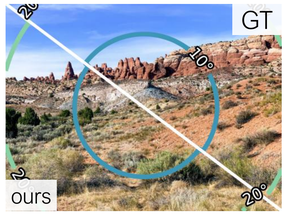
$$\pi(\mathbf{p}) = \begin{bmatrix} u \\ v \end{bmatrix} = f\,\phi(R, Z) \begin{bmatrix} X \\ aY \end{bmatrix} + \begin{bmatrix} c_x \\ c_y \end{bmatrix}$$

model-agnostic calibration from 2D-Ray correspondences

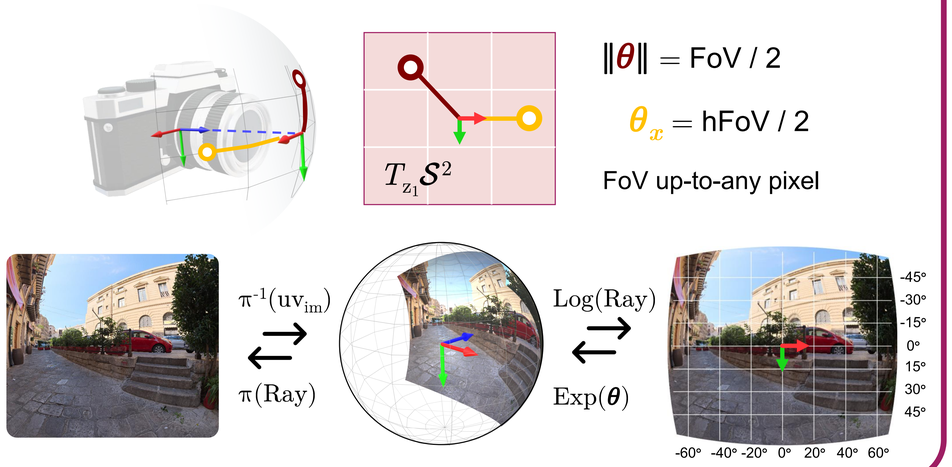


$\mathbf{Ax} = \mathbf{b}$

& w/o clear cues

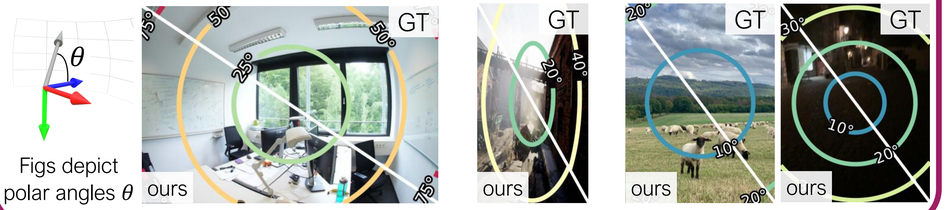


FoV Field as intermediate representation



Qualitative examples w. clear cues

(visible parallel lines, vanishing points, horizon...)



Accurate Calibrations