Stripped Beamer

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in collaboration with John Doe

no bullshit seminar — sometime in 2019

Example

Object tracking from a motionless camera

selected processing pipeline

- ▶ movement detection

  ΣΔ *Sigma-Delta*

- ▶ noise filtering

  mathematical morphology

- ▶ connected components and bounding boxes

  Light Speed Labeling

- ▶ description through covariance matrices

  position, intensity, texture → 7 features

- ▶ tracking by greedy matching between frames

  Jensen-Bregman LogDet divergence

Example

Simplify development to enable improvements

- Adapt *application prototyping and flexibility*
- Optimise *efficiency, explore the implementation space*
- Port *execute on multiple platforms*
- Verify *correct behavior, hold some properties*

C/CUDA/OpenCL are not suited, lack of productivity

- not portable, verbose, time consuming and error-prone
- not composable without performance loss *manual operator fusing*
- troublesome semantics, compiler lacks freedom and knowledge

Thanks!

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