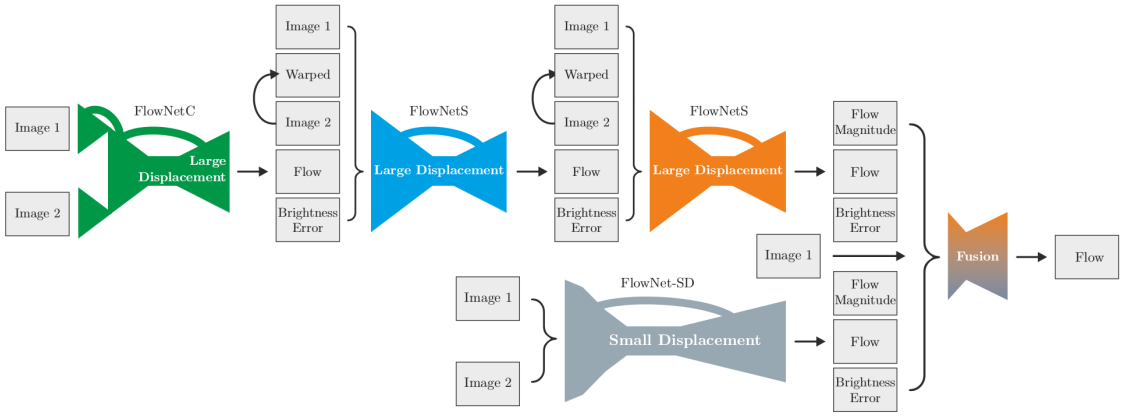
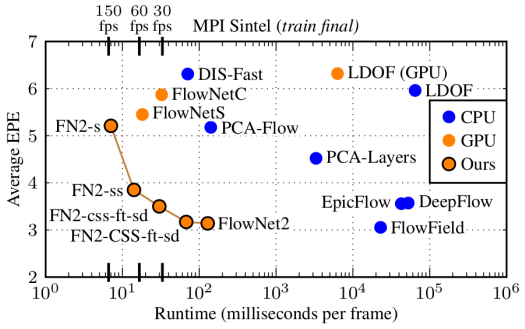
FlowNet 2.0: Evolution of Optical Flow Estimation with Deep Networks

E. Ilg, N. Mayer, T. Saikia, M. Keuper, A. Dosovitskiy, and T. Brox (Arxiv 2016)





- Improving end-to-end optical flow estimation with a CNN
- A learning schedule consisting of multiple datasets
  - Training on Chairs first and fine-tuning on Things3D
  - FlowNetC outperforms FlowNetS
- A stacked architecture by warping of the second image with intermediate optical flow
- Different variants of the network (trade-off between accuracy and speed)
- A sub-network specializing on small motions trained on a special dataset
- Adding another network that learns to fuse the stacked network with the small displacement network
- Better than FlowNet and on par with state-of-the-art on Sintel and KITTI