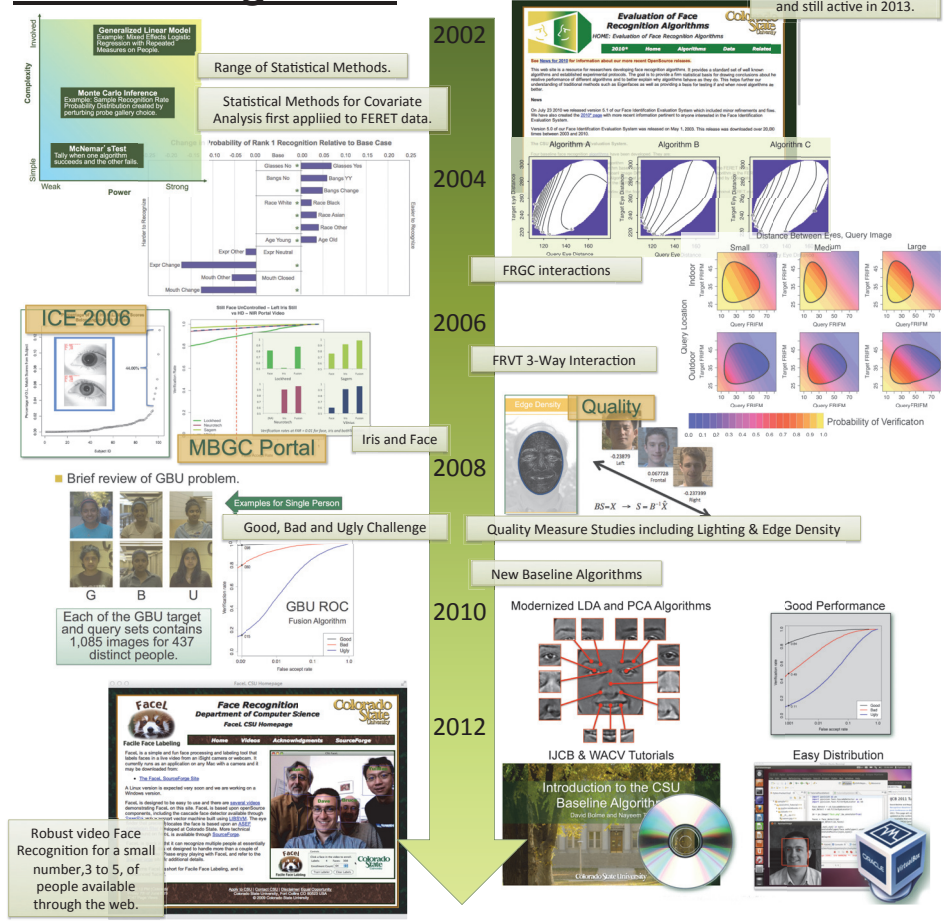


Face and Activity Recognition at CSU

Computer Vision Lab Co-Directors
J. Ross Beveridge and Bruce A. Draper



Face Recognition



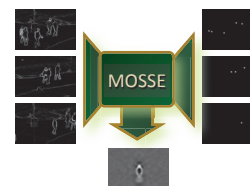
Video Activity Recognition

Demonstration with iRobot (Fort Indiantown Gap, June 2012)



Unique Underlying Technology

MOSSE Tracking

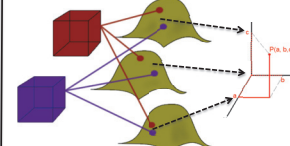


- Correlation filter based tracking
- Faster than real time
- MOSSE filters are also be used for object detection

Real-Time Action

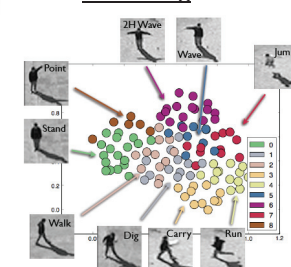
Matching

- Video snippets as 3D tensors
- Video comparison via geodesic distances on 3 Grassmann manifolds
- Fast nearest neighbor lookup in a generalized metric space



Latent Configuration

Clustering



- Clusters video snippets
- $O(n \log(n))$

Next: Combining biometrics and activity recognition
In other words, who did what?