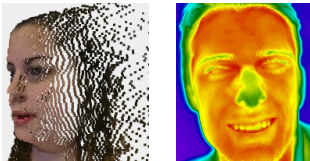


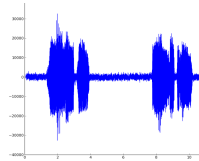
Communication disorders	Symptoms		
	<b>Dysarthria</b> Affects respiration, phonation, resonance, prosody, and articulation.	<b>Apraxia of Speech</b> Causes difficulty in planning and coordinating movements necessary for speech	<b>Stuttering</b> Unwanted repetitions, prolongations, stoppages of sounds and syllables.
Research questions	Causes		
	PD, ALS, Stroke, Bell's Palsy, MS, Cerebral Palsy, ...	Stroke, dementia, brain tumors, ...	genetics, neurophysiology, family dynamics
1. Occurs impairment of facial expressions by motor speech disorders? 2. Severity of motor speech disorder related to emotional inner state? 3. Improvement of motor speech disorders through emotional biofeedback?			

### Multimodal Analysis

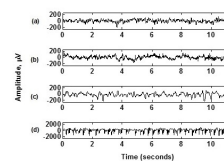
Video: RGB, depth, thermal



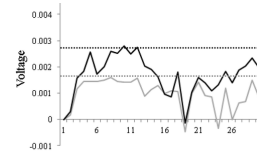
Audio



EEG



GSR



### Machine Learning Framework

