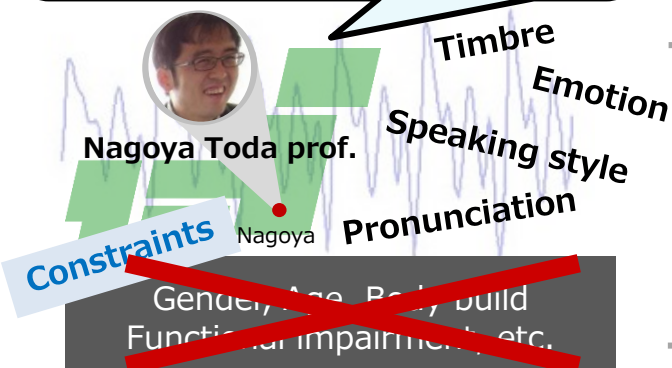


Let's talk with anyone, anytime and anywhere

~Speech synthesis technology to carve out a future~

Goal of the research

Overcome **constraints** to communicate with others using **desired voice**



Voice control



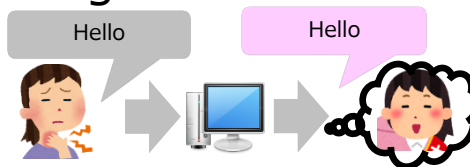
Realize ideal singing for user!

Kobayashi (D3)



- Control singing voice timbre based on perceived age.
- Modeling for voice timbre variations based on voice expression words.
- Implement real-time voice changer

Speaking-aid



Reconstruct natural sounding speech!

Tanaka (D3)



- Intonation: Statistical method considering physical model of vocal chords vibration
- Timbre: Signal processing for spectral emphasis

Previous research area

Fundamental research	Kishimoto · Moriguchi · Inukai · Takamichi
Speech control	Kubo · Nishigaki · Yamane
Speech emphasis	Ishii · Tsuruta · Tajiri
For disorders	Doi · Jimbo
English learning support	Oshima · Kura

Basis of speech synthesis



Synthesize speech by imitating the movements of the speech organs

Model the movements of mouth and tongue, then use for speech synthesis!

Patrick (M2)



- Statistically model and estimate the unobserved articulatory movements within a speech utterance
- Synthesize speech using the articulatory constraints

Improve speech control



Control voice flexibly based on movements of vocal organs!

Isa (M2)



- Control speech based on simultaneously controlling with vocal organs and vocal chords models
- Modify flexibly not only articulation but speech speed and accent