サイバニクス・生体システム工学（黒田　嘉宏）

Cybernics & Biology Systems Engineering (KURODA Yoshihiro)

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感覚フィードバック技術に基づく生体システムの解明と支援技術開発
～皮膚感覚刺激や VR を応用した介入法の開発と応用～

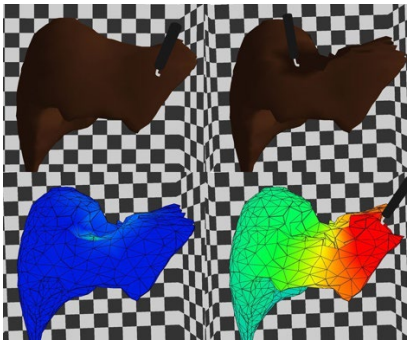
場所や動きに制限が少ない生体計測と、人の誘導や感覚再現のための感覚フィードバック技術の開発を行なっています。近年は、非接触で人に温かい・冷たいという感覚を生じさせる熱フィードバック技術を元に、情動制御や医療支援などの新しい技術に取り組んでいます。また、医用画像や生体信号に機械学習を適用することで診断や手術の支援を行う医用人工知能技術の研究も推進しています。生体信号や運動を計測するだけではなく、人に刺激をフィードバックして生体システムを解明することや、人の支援技術の研究に取り組みたい方はご連絡ください。

Reveal of biology sistems and suppporting technologies based on sensory feedback
-Development and application of intervention based on cutaneous stimuli and VR-

I'm woking on biomedical measurement without restricting the place and movement and on sensory feedback technology for navigation and sensory reproduction. Recently, I focus on an emotional control and medical support with the developed new technology based on thermal feedback technologies to allow a user to feel hot or cold with a non-contact device. Additionally, machine learning technologies are applied to medical images and biological signals for supporting a diagnosis and surgery. Please feel free to contact me if you are interested in working on not only measuring and analyzing the biological signals and movement, but also stimulating sensation of a person to reveal a biology systems and develop a technology to assist human.

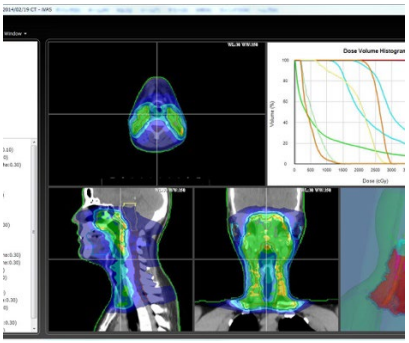
Sensing & display

- Innovative sensation display
- Convenient interface



Biophysics simulation

- Numerical model of human and environment
- Interactive physics simulation



Medical system

- Development of advanced medical system
- Application to medical and healthcare fields