

# 一生涯の多元計算解剖学：胚子から死後までの時空間モデル

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**概要：**本講演では、文部科学省・科学研究費補助金・新学術領域研究「医用画像に基づく計算解剖学の多元化と高度知能化診断・治療への展開（略称：多元計算解剖学、2014～2018年）」の目標の一つである、人の生涯（胚子～死後）にわたる時空間モデルの構築について述べる。まずは、先行プロジェクトである2009～2013年実施の新学術領域研究「医用画像に基づく計算解剖学の創成と診断・治療支援の高度化（略称：計算解剖学）」の概要について簡単に触れ、そこで構築された計算解剖モデルとそれをを用いた医用画像セグメンテーションなどの例について紹介する[1-6]。続いて、現在多元計算解剖学の一部として行われている、胎児から死後までの時空間モデルへの拡張について[7]、現状とその将来構想も含めて述べる。

**キーワード：**統計モデル、時空間、計算解剖、胚子、死亡時画像診断

## Multi-disciplinary computational anatomy of human lifetime; Spatiotemporal modeling from embryo to cadaver

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**Abstract:** This talk presents spatio-temporal modeling of human anatomy from embryo to cadaver that is one of goals in the project on “Multidisciplinary Computational Anatomy and its Application to Highly Intelligent Diagnosis and Therapy (multidisciplinary computational anatomy in short)” funded by MEXT Grant-in-Aid for Scientific Research on Innovative Areas from 2014 to 2018. First, I will give an outline of the previous project “Computational Anatomy for Computer-aided Diagnosis and Therapy: Frontiers of Medical Image Sciences” funded by Grant-in-Aid for Scientific Research on Innovative Areas from 2009 to 2013, followed by presentation on the developed segmentation algorithms based on computational anatomy models[1-6]. Subsequently, I will present an example [7] of extensions of conventional computational anatomy models for spatio-temporal modeling of human anatomy from embryo to cadaver, and remaining future works.

**Keywords:** Statistical model, spatio-temporal, computational anatomy, embryo, autopsy imaging

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