

Minimal Models for Dosimetric Applications

Barbara Bühlmann

Marcel Zefferer

Andreas Christ

Stefan Kuster

ETH FOUNDATION

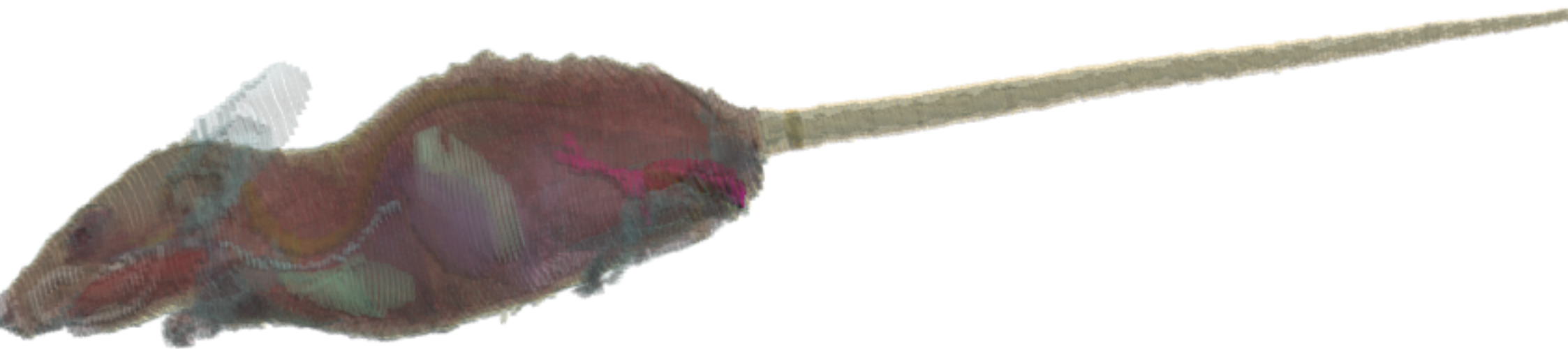
ETH

Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

Contents

specifications of animal models for numerical dosimetry

ouse Models



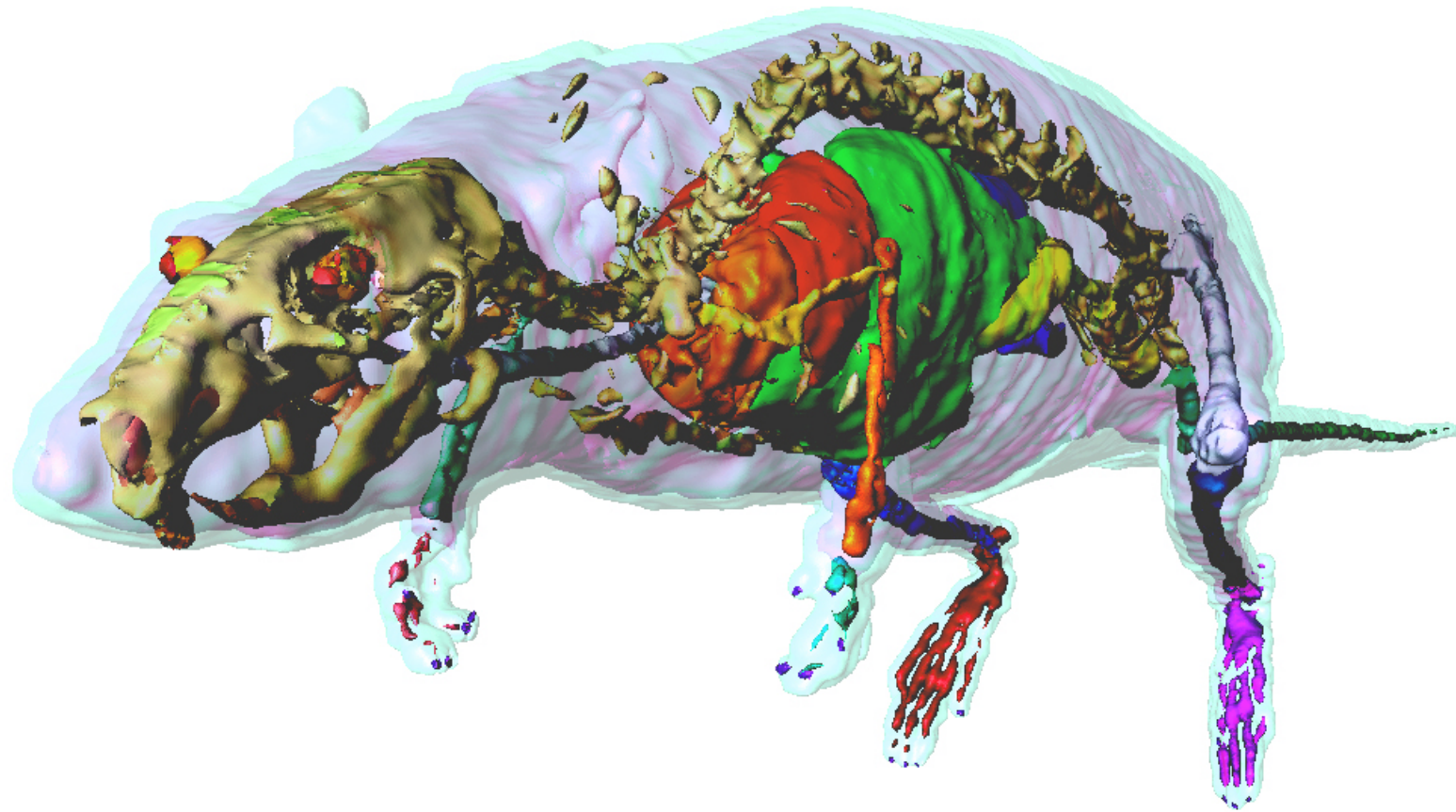
sex	mass [g]	length (snout-vent) [mm]	length (total) [mm]	# tissues	slice distance [mm]
em.	20.2	78	148	48	0.52
em. (pregnant)	28.7	72	141	46	0.36
male	37.6	95	185	50	0.74
male	52.1	98	179	49	0.48

at Models



sex	mass [g]	length (snout-vent) [mm]	length (total) [mm]	# tissues	slice distance [mm]
em. (7 days)	16.6		93	49	0.48
em.	275	170	335	52	0.60
em.	479	225	385	50	1.05
male	232	185	340	52	1.15
male	597	260	470	50	1.05

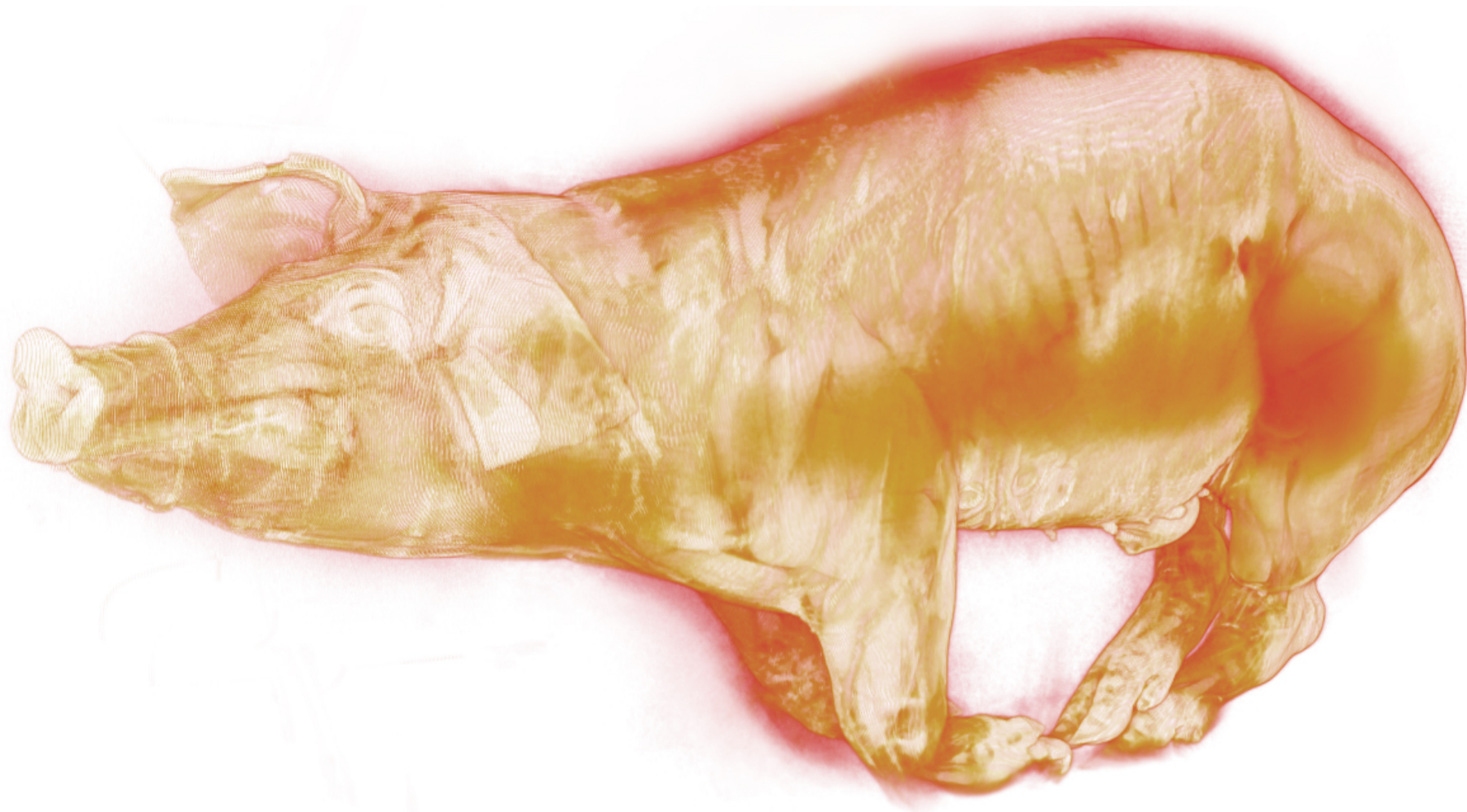
Changing the Posture of the Models



resegmentation and adaptation for SEMCAD X Poser

curved spine (sleeping), raised (drinking)

Development of Pig Models



2 MRI image sets of pigs, 2mm slice distance
approximately 1m length

Summary

High resolution models of male and female rats and mice of different weights are available.

They are currently being revised and extended for articulation of their posture.

The development of a model of a pig is ongoing.