

ETH

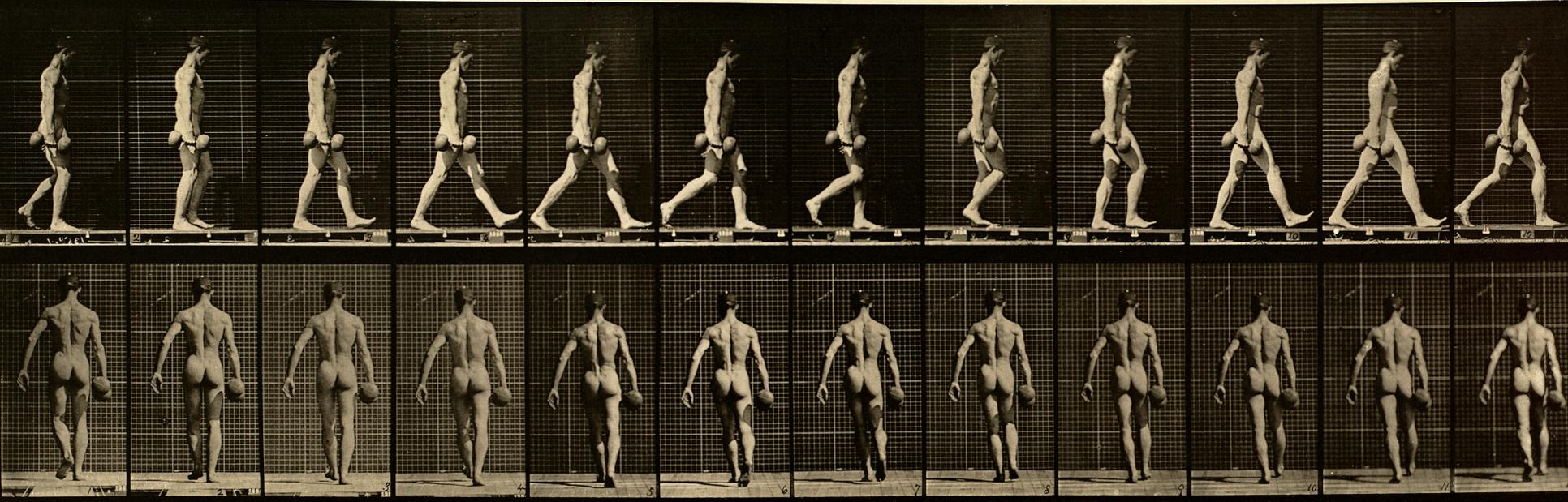
Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

Campus Innovation Hamburg
22.11.2019

Dr. Jeanine Reutemann
audiovisualresearch.org

IMMERSION – SIMULATION – EXPLORATION

VR-360 für ein forschendes Lernen



ANIMAL LOCOMOTION. PLATE 28

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ANIMAL LOCOMOTION.

AN ELECTRO-PHOTOGRAPHIC INVESTIGATION OF CONSECUTIVE PHASES OF ANIMAL MOVEMENTS.

1872—1885.

BY
EADWEARD MUYBRIDGE.

PUBLISHED UNDER THE AUSPICES OF THE

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- ... Messinstrumente
- ... Visualisierungen
- ... Diagramme
- ... Skizzen
- ... Proben
- ... Photos/ Photogram
- ... Infra-red / MRI etc.
- ... Videos / Dokumentation
- ... Zeitraffer / Zeitlupe
- ...

BIBLIOTECA CENTRAL



...VR-360?

FARM
UNIVERS

VR-360 Videos:

- **Technoästhetik (Technologie & Ästhetik)**
- **Eine andere (visuelle) Sprache**
- **Bildevidenz**



1

ETH Zürich

Innovedum Project

Chair for Ecosystem Management

Prof. Dr. Jaboury Ghazoul, 2017



The ETH Zurich Conservation Management field course in Scotland brings students face to face with the realities and complexities of landscape management.



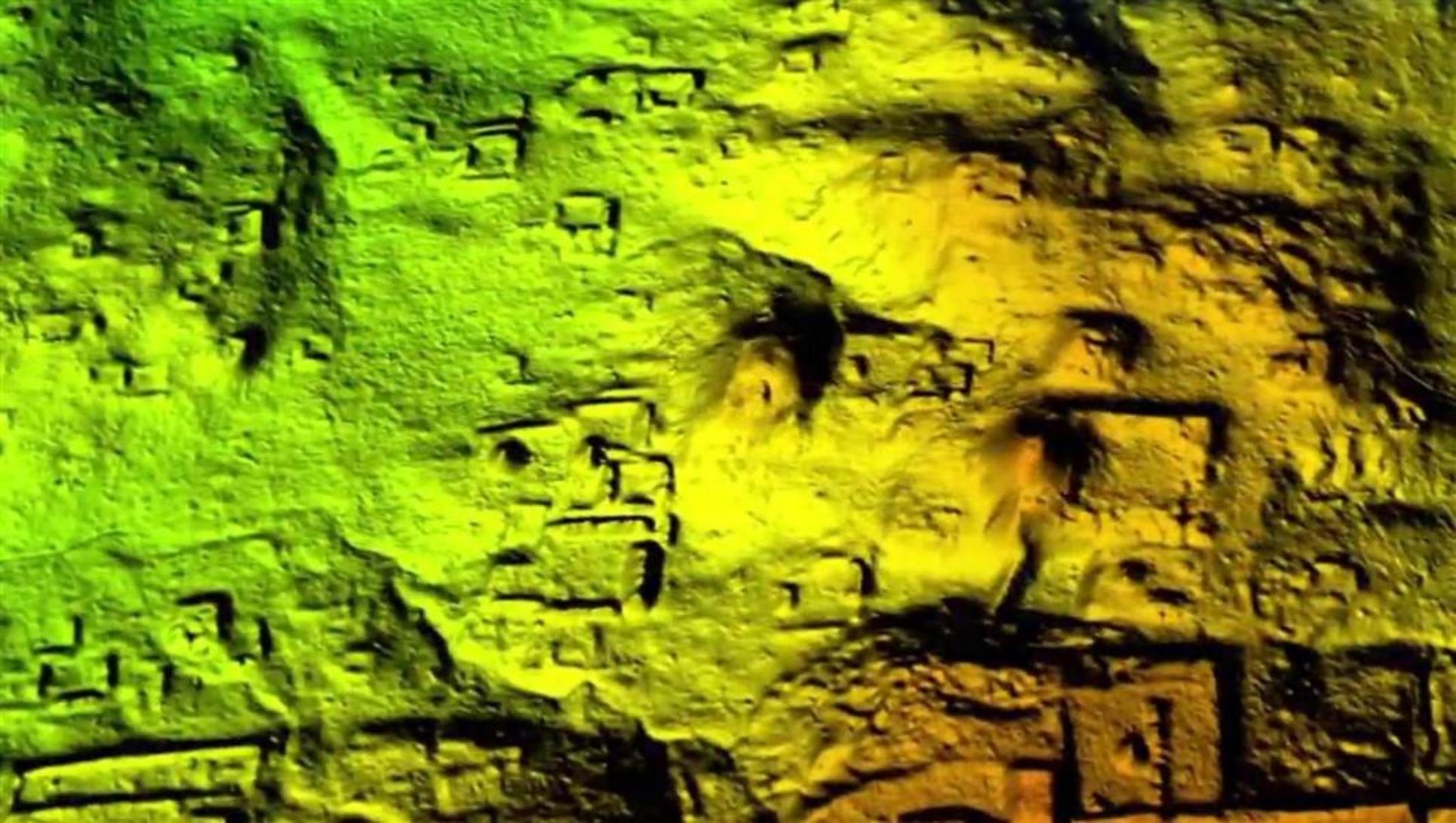
immersion

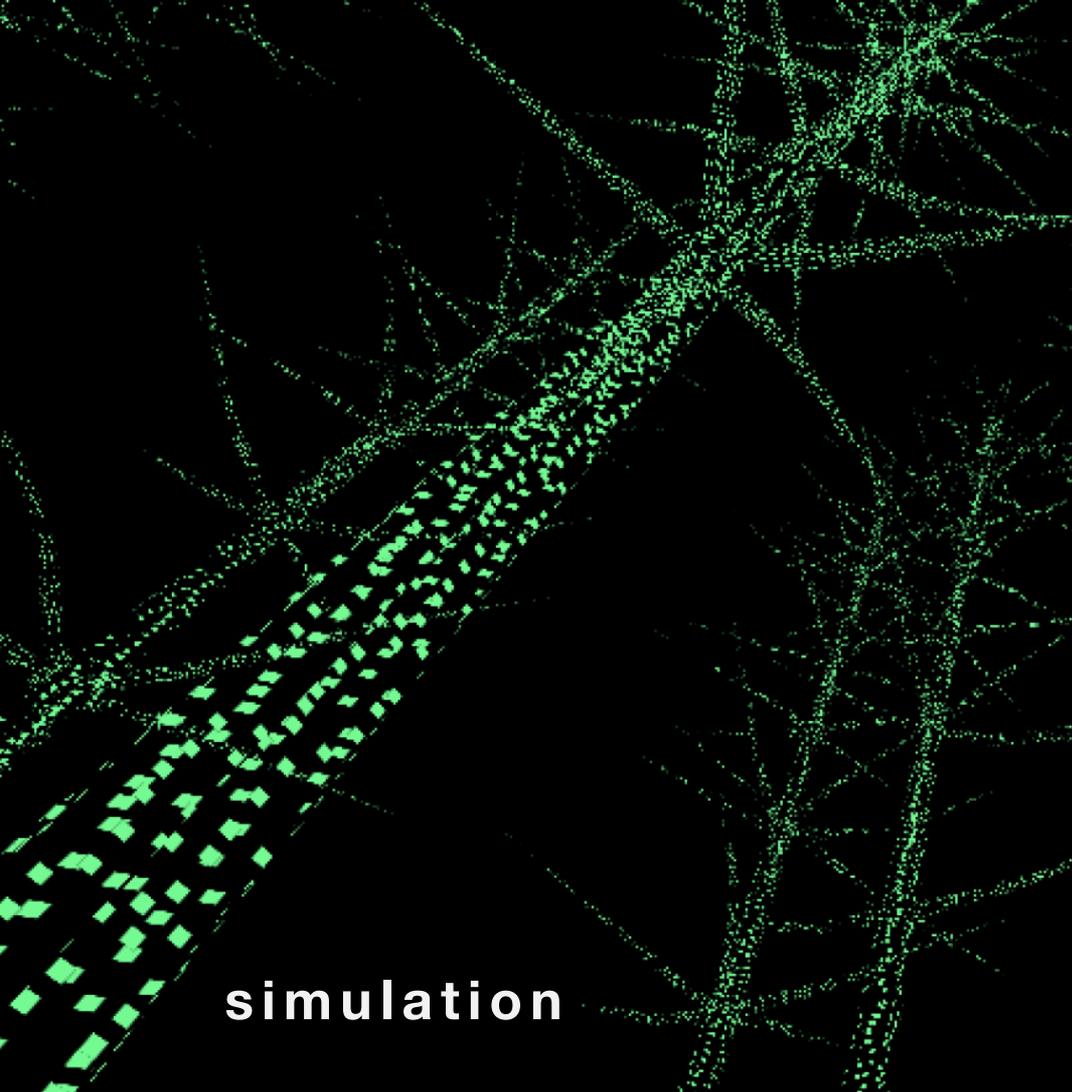


2

Leiden University / Centre for Innovation
„The method of remote sensing“
Environmental Sciences
Dr. Joris Timmermans, 2018







simulation





exploration mit audiovisuelle daten

Math. Z. 127, 10–16 (1972)
 © by Springer-Verlag 1972

Galerkins Lösungsnaerungen bei monotonen Abbildungen

Friedrich Wille

§ 1. Approximation bei stark monotonen Operatoren

Gar mancher hatte Mühe schon
 mit seiner Lösungskonstruktion.
 Drum haben wir uns ausgedacht
 wie man es mit Galerkin macht.

X sei reeller Banachraum,
 der außerdem, sonst klappt es

kaum,
 in uns'rer mathemat'schen Fabel
 ist reflexiv und separabel.

Die Dimension ist endlich nicht,
 sonst wär' zu einfach dies Gedicht.
 Mit X^* wird, wie wohlbekannt,
 der konjugierte Raum benannt.

Aus diesem folgern wir nun schon:
 Zu jedem n als Dimension
 gibt's einen Raum E_n in X
 mit folgenden erlaubten Tricks:

$$E_1 \subset E_2 \subset E_3 \subset \dots, \bigcup_{n=1}^{\infty} E_n = X.$$

Nun sei der Operator T ,

$$T: X \rightarrow X^*,$$

den ich als stetigen versteh',
 im Folgenden stets monoton,
 das heißt (wir kennen dieses schon):

$$\forall x_1, x_2 \in X:$$

$$\langle T(x_1) - T(x_2), x_1 - x_2 \rangle \geq 0.$$

Wir wissen dabei aus Erfahrung:
 die Winkelklammern sind die
 Paarung:

$$\forall y \in X^* \forall x \in X: \langle y, x \rangle = y(x).$$

Stark monoton ist unser T ,
 wenn Folgendes erfüllt ich seh':

$$\exists \alpha > 0 \forall x_1, x_2 \in X:$$

$$\langle T(x_1) - T(x_2), x_1 - x_2 \rangle$$

[\[BUCH\] Digital dominance: the power of Google, Amazon, Facebook, and Apple](#)
 M Moore, D Tambini - 2018 - books.google.com
 ... asks whether we need to reconceptualize our interpretations of power in order to understand
 the nature of the **tech giants** ... Patrick Barwise and Leo Watkins provide context for the sub-sequent
 chapters and explain how five US **technology** companies came ... 8] Digital **Dominance** ...
 ☆ 97 Zitiert von: 28 Ähnliche Artikel Alle 5 Versionen

[\[PDF\] The Evolution of Digital Dominance](#) london.edu
 P Barwise, L Watkins - Digital **Dominance: The Power of Google** ..., 2018 - books.google.com
 ... Amazon Web Services sells both to Amazon itself (it grew out of a 2005 restructuring of the company's
 backend **technology**) and, increasingly, to others, making it the leading the evolution of digital ...
 WILL THE MARKET END THE **TECH GIANTS' DIGITAL DOMINANCE** ...
 ☆ 97 Zitiert von: 12 Ähnliche Artikel Alle 4 Versionen

[\[PDF\] Tech giants and civic power](#) kcl.ac.uk
 M Moore - Centre for the Study of Media, Communication and ..., 2016 - kclpure.kcl.ac.uk
 ... And, by identifying some of the potential dangers of digital **dominance**, it is to help start to inform
 the inevitable government responses to these ... There is considerable confusion as to what
 constitutes a 'tech giant' beyond simply their size and their focus on **technology** ...
 ☆ 97 Zitiert von: 23 Ähnliche Artikel Alle 4 Versionen

[\[PDF\] A fearless culture fuels US tech giants](#) mathleague.cn
 JB Stewart - The New York Times, 2015 - mathleague.cn
 ... filed suit against a European **technology** company for market **dominance**? (Answer: never.)
 "There aren't many European **tech** firms with market power in the US ... Page 2. 6/23/2015
 A Fearless Culture Fuels US **Tech Giants** The New York Times ...
 ☆ 97 Zitiert von: 8 Ähnliche Artikel

Mediale Transformationsprozesse



«The development of audio-visual techniques in all fields – the need to promote interdisciplinary cooperation demand the creation of a specialized training so as to permit close collaboration between scientists and audio-visual technologists in the field of scientific research.»

**Virgilio Tosi/International Scientific Film Association:
Cinematography and Scientific Research UNESCO,
1977: 39.**



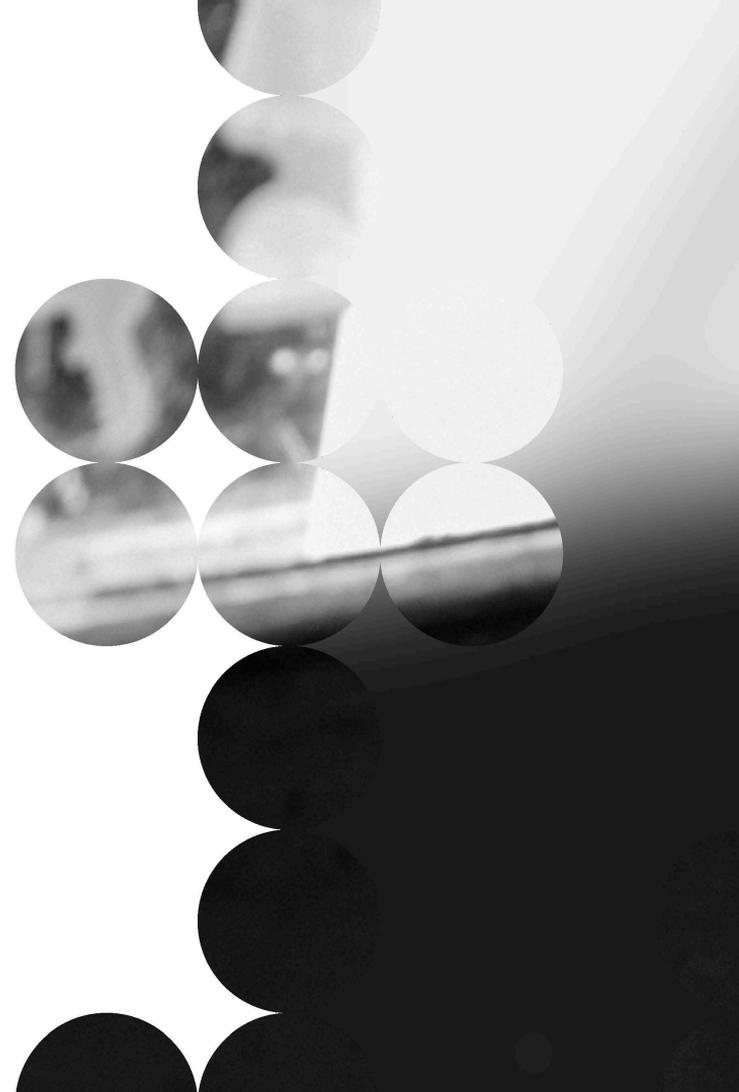
Was wird benötigt?
Co-Design mit „Boundary spanners“

WORLD'S COLLIDE!

***Filmmakers; educators;
learning experience desi-
gners; nerds; technicians...***

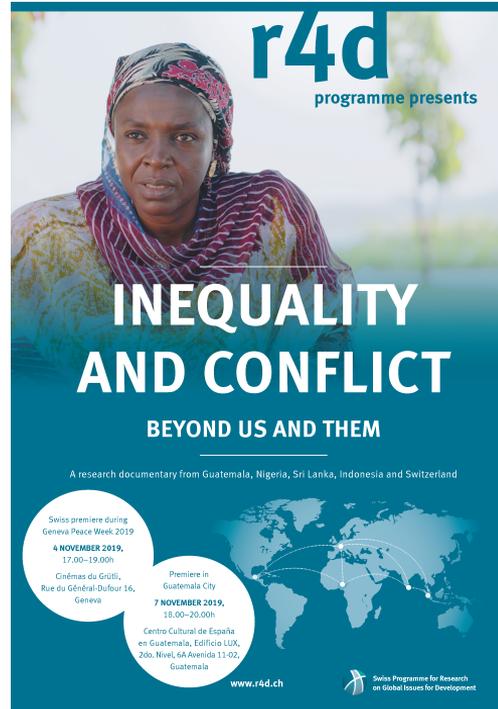
***Embrace the unique perspec-
tives of those involved in
the production processes.
They might even shape
your own thought processes.***

**MANIFESTO
VIDEOS IN
HIGHER
EDUCATION**





**Buchpublikation;
Büchner-Verlag**



**Researchfilm (68min),
Syntheseprojekt 'Social Conflicts';
Schweizerischer Nationalfonds**



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