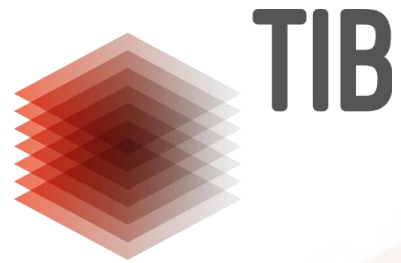


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TIB AV-Portal: A reliable infrastructure for scientific audiovisual media

Margret Plank
9th Conference on Grey Literature and Repositories
Prague, 19 October 2016

Agenda

1. TIB Factsheet
2. Acquisition
3. Indexing
4. Preservation
5. Access
6. Distribution / Linked open data

TIB Factsheet



- World's largest specialized Library for Architecture, Chemistry, Computer Science, Mathematics, Physics, Engineering and Technology
- Financed by German Federal Government and all Federal States
- Global supplier for scientific and technical information
- Long-term preservation of scientific media
- DOI service for referencing digital objects
- Research and development with a focus on Visual Analytics and the Semantic Web
- Competence Centre for non-textual material



What is our AV-collection profile?

Scientific Videos

PHYSICS



Preisträger der Max-Planck-Medaille 2016: Prof. Dr. Dr. h.c. Herbert Wagner Ludwig-Maximili-

MATHEMATICS



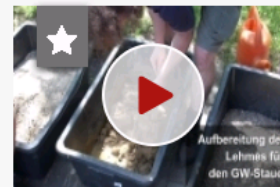
4/4 Motivic periods and the cosmic Galois group

INFORMATION TECHNOLOGY



Algorithms for Internet Applications, WS 2015/2016, gehalten am 19.01.2016

ENGINEERING



Wasser in der Landschaft - Ein Sandkastenmodell

CHEMISTRY



Technik-Salon: "Lecture on Science and Creativity"

ARCHITECTURE



Pritzker Architecture Prize 2016

What is our AV-collection profile?

“A **video abstract** is the motion picture equivalent of a written abstract.”*


*https://en.wikipedia.org/wiki/Video_abstract

PAPER • OPEN ACCESS

Time-resolved x-ray imaging of a laser-induced nanoplasma and its neutral residuals

L Flückiger^{1,2}, D Rupp¹, M Adolph¹, T Gorkhover^{1,3}, M Krikunova¹, M Müller¹, T Oelze¹, Y Ovcharenko^{1,4}, M Sauppe¹, S Schorb^{1,3} [Show full author list](#)

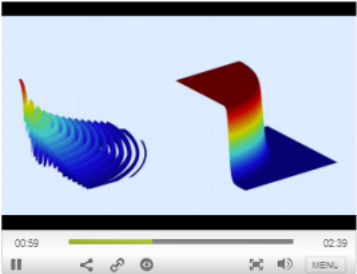
Published 13 April 2018 • © 2018 IOP Publishing Ltd and Deutsche Physikalische Gesellschaft
New Journal of Physics, Volume 18, April 2016

 [Article PDF](#)

[+ Article information](#)

Abstract

The evolution of individual, large gas-phase xenon clusters, turned into a nanoplasma by a high power infrared laser pulse, is tracked from femtoseconds up to nanoseconds after laser excitation via coherent diffractive imaging, using ultra-short soft x-ray free electron laser pulses. A decline of scattering signal at high detection angles with increasing time delay indicates a softening of the cluster surface. Here we demonstrate, for the first time a representative speckle pattern of a new stage of cluster expansion for xenon clusters after a nanosecond irradiation. The analysis of the measured average speckle size and the envelope of the intensity distribution reveals a mean cluster size and length scale of internal density fluctuations. The measured diffraction patterns were reproduced by scattering simulations which assumed that the cluster expands with pronounced internal density



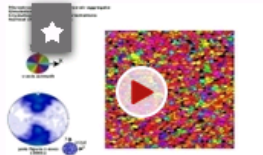



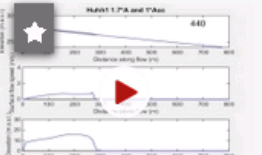

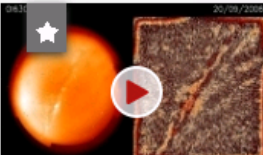

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What is our AV-collection profile?

Scientific Video Supplements

 <p>Simulation F05 - Orientations of c-axes</p> <p>⌚ 00:03</p> <p>Copernicus Publications</p> <p>Silent film 2016</p> <p> Preview</p>	 <p>Simulation F20 - Strain rates</p> <p>⌚ 00:03</p> <p>Copernicus Publications</p> <p>Silent film 2016</p> <p> Preview</p>	 <p>Huhh1 Rockglacier Evolution Experiment 1.7 * A and 1*Acc</p> <p>⌚ 00:10</p> <p>Copernicus Publications</p> <p>Silent film 2016</p> <p> Preview</p>	 <p>Periodic gravity waves in the lower thermosphere</p> <p>⌚ 00:02</p> <p>Copernicus Publications</p> <p>Silent film 2016</p> <p> Preview</p>
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Acquisition

1. Harvesting Scientific Video Channels



2. Harvesting websites of academia and industry worldwide



3. Cooperations with academia, publishers, conference organizers



Licencing

a) Open Access Licence

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- TIB is granted a simple right of use of the audiovisual media, which it is permitted to make available via its portals.
- Users may watch the film online or download it.
- Users may not forward it to third parties or make it available online themselves.

Metadata and DOI

Manual annotation of entire Video

- Title
- Author
- Description
- Publisher
- Publication year
- Rightsholder



NTM-Metadata-Schema Metadata-Schema for non-textual Materials

Based on DataCite metadata scheme version 2.1
Version 2.1

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Very precise citation of videos:

resolver

DOI

MFID

<http://dx.doi.org/10.5446/14663#t=02:05,03:58>

Digital Preservation

Working today to save the past for the future

- Preserving our own materials
- Offering digital preservation as a service to smaller institutions
- Hosting a consortial system
- Collaborating internationally to further digital preservation
- Participating in applied research and integrating results into our processes
 - EU FP7 project DURAARK (3D)
 - DFG project LaZAR (multimedia, AV)



Metadata Enrichment

Scene Recognition



Speech Recognition



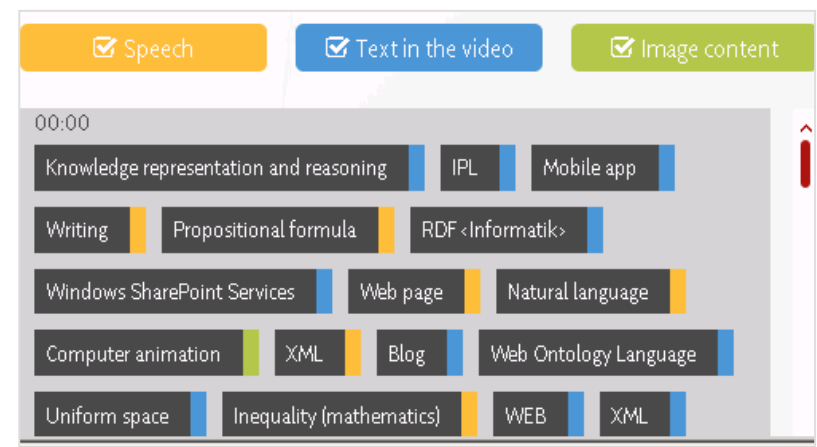
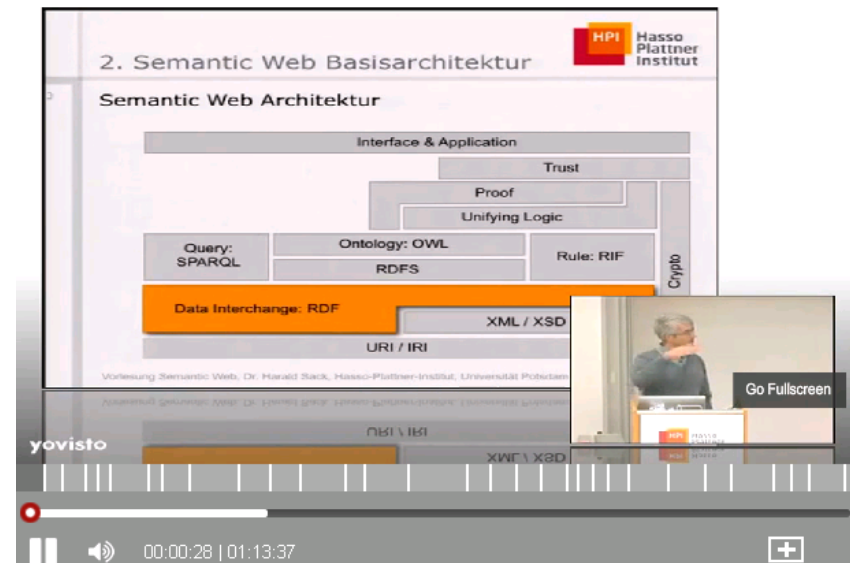
Video OCR



Image Recognition



Named Entity Recognition



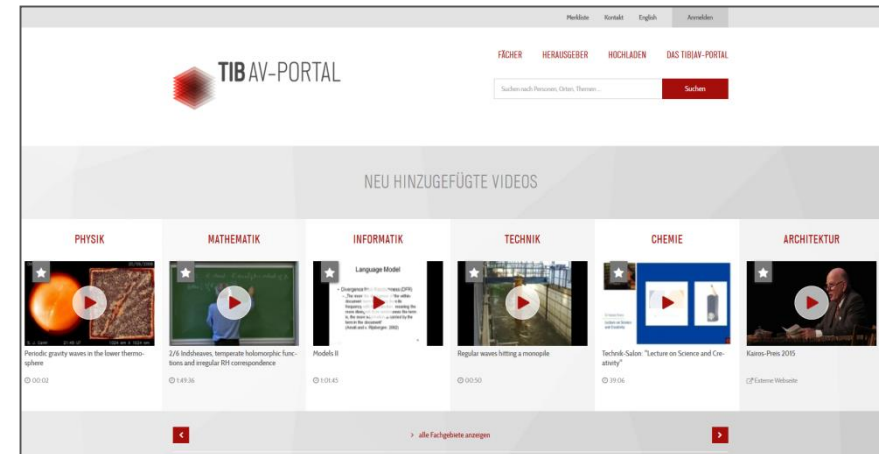
Access via TIB AV-Portal

Profile

TIB AV-Portal provides free access to high grade videos from Architecture, Chemistry, Computer Science, Mathematics, Physics and Engineering Technology

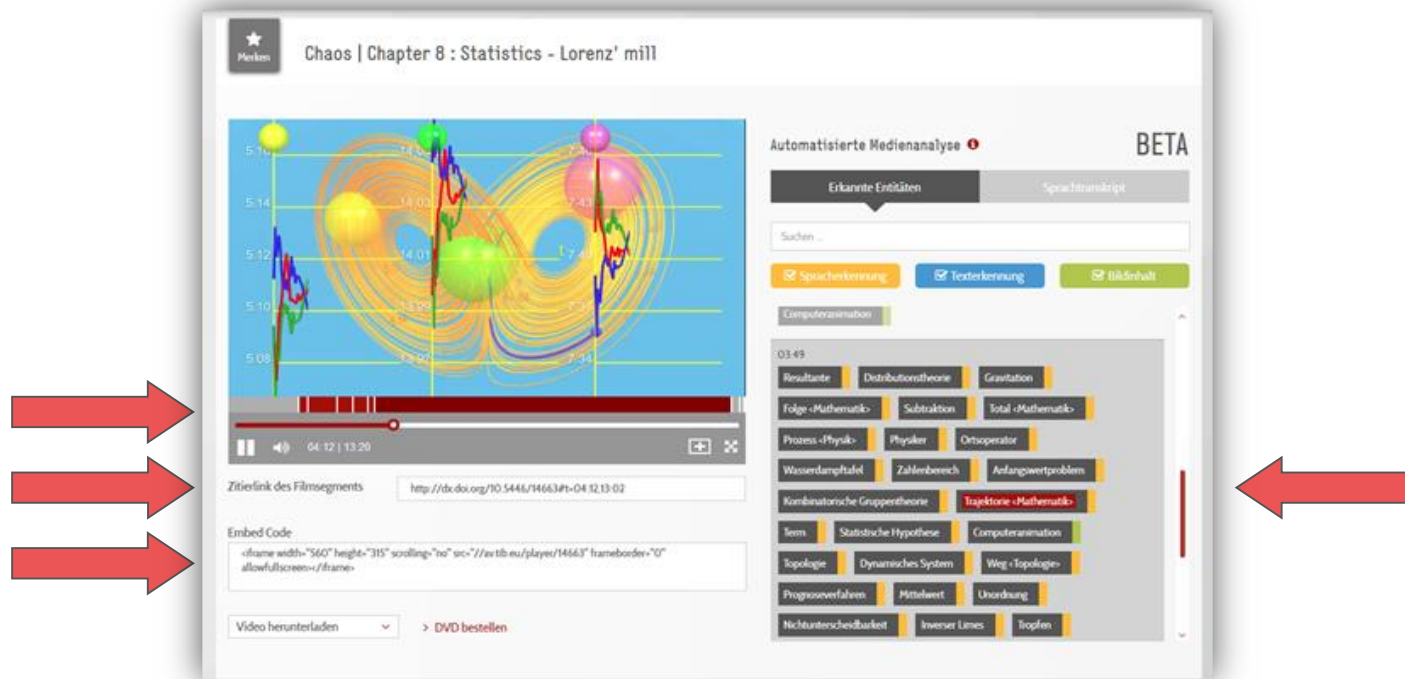
Development

- TIB and Hasso Plattner Institute
- 2011-2014; Launch: April 2014
- Relaunch: January 2016



av.tib.eu

Example: Search for „Trajectory“



Chaos | Chapter 8 : Statistics - Lorenz' mill

Automatisierte Medienanalyse BETA

Erkannte Entitäten Sprachtranskript

Suchen ...

Spracherkennung Texterkennung Bildinhalt

Computeranimation

03:49

Resultate Distributionstheorie Gravitation

Folge «Mathematik» Subtraktion Total «Mathematik»

Prozess «Physik» Physiker Orboperator

Wasserdampftafel Zahlenbereich Anfangswertproblem

Kombinatorische Gruppentheorie Trajektorie «Mathematik»

Item Statistische Hypothese Computeranimation

Topologie Dynamisches System Weg «Topologie»

Prognoseverfahren Mittelwert Unordnung

Nichtunterschiedbarkeit Inverser Limes Tropfen

Zitierlink des Filmsegments <http://dx.doi.org/10.5446/14663#t=04:12:13:02>

Embed Code

```
<iframe width="560" height="315" scrolling="no" src="//www.tib.eu/player/14663" frameborder="0" allowfullscreen="/>
```



Video herunterladen > DVD bestellen

Source: DOI [10.5446/14624](https://doi.org/10.5446/14624)

Metadata

Metadata

Formal Metadata

Title	Chaos Chapter 8 : Statistics - Lorenz' mill
Title of Series	Chaos - A mathematical adventure
Part Number	8
Number of Parts	9
Author	Leys, Joe (Images and Animations) Ghys, Étienne (Scenario and Mathematics) Alvarez, Aurélien (Image Rendering and Post-production)
Contributors	Schleimer, Saul (Speaker) Mocini, Stefano (Music) Beffa, Karol (Music) Bertoglio, Chiara (Music)
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DOI	10.5446/14663 
Publisher	Joe Leys, Étienne Ghys, Aurélien Alvarez
Release Date	2012
Language	English
Producer	École Normale Supérieure de Lyon (ENS-Lyon)

Technical Metadata

File Size	200MB
Duration	13:20

Content Metadata

Subject Area	Mathematics
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Linked open data

STRUCTURE OF THE DATA

This section will introduce the structure of the TIB|AV-Portal RDF data.

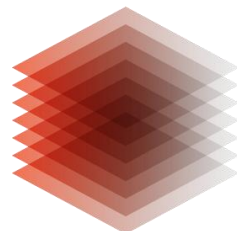
The following table shows the RDF prefixes used in the dumps.

Prefix	Namespace	Vocabulary
bibframe	http://bibframe.org/vocab/	Bibframe Vocabulary
dbp	http://dbpedia.org/resource/	DBpedia Resources
dcterms	http://purl.org/dc/terms/	Data Terms
dctypes	http://purl.org/dc/dcmitype/	
foaf	http://xmlns.com/foaf/0.1/	
gnd	http://d-nb.info/gnd/	
schema	http://schema.org/	
tib	http://av.tib.eu/resource/	
cnt	http://www.w3.org/2011/content#	
itsrdf	http://www.w3.org/2005/11/its/rdf#	Internationalization
nif	http://persistence.uni-leipzig.org/nlp2rdf/ontologies/nif-core#	NLP Interchange Format
oa	http://w3.org/ns/oa#	Open Annotation Data Model
rdf	http://www.w3.org/1999/02/22-rdf-syntax-ns#	Resource Description Framework

EXAMPLE 3: SHOW ALL VIDEOS HAVING THE TERM 'BIG DATA' IN THEIR TITLE

```
SELECT DISTINCT ?movie ?name
WHERE {
  ?movie rdf:type schema:Movie .
  ?movie schema:name ?name .
  FILTER REGEX(STR(?name), 'big data', 'i') .
}
```

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Contact

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T +49 511 762-4884 // margret.plank@tib.eu

