

Guerrilla Guide

Writing, Reading, Organizational Resources for Early Career Researchers

Dr. Stephanie Krueger, 15.10.2018

Key Questions

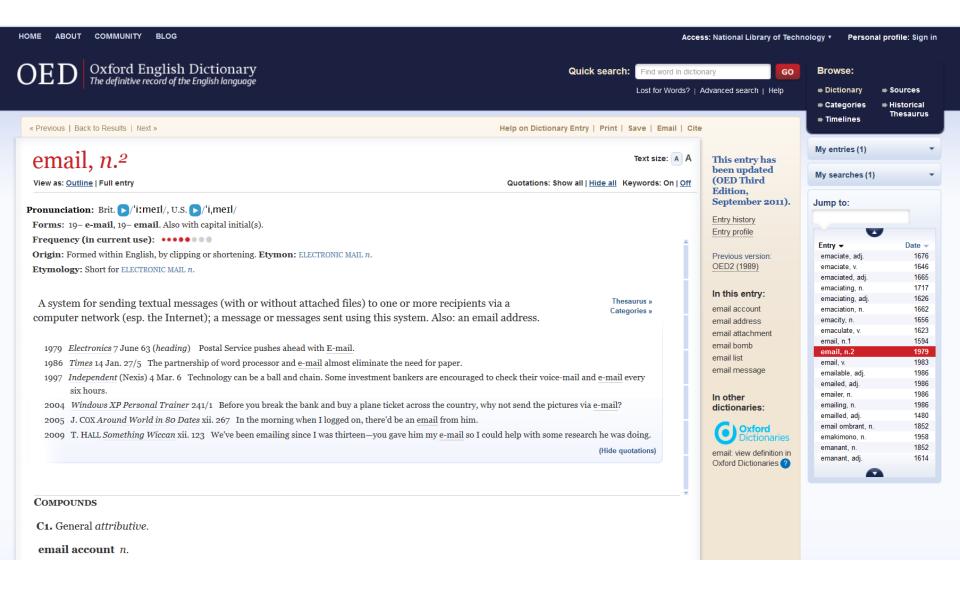
- What can help me as I write, read, and organize myself for writing tasks?
- Who can help me with questions down the road?

Writing in English: OED

- My BFF: The Oxford English Dictionary (OED)
 - Spelling (including US and UK variants)
 - Word origin
 - Pronunciation (US and UK variants)
 - Hyphenation
 - Examples of use and EXACT meanings

...via library subscription; remote access: NTK, Charles

OED Case Study

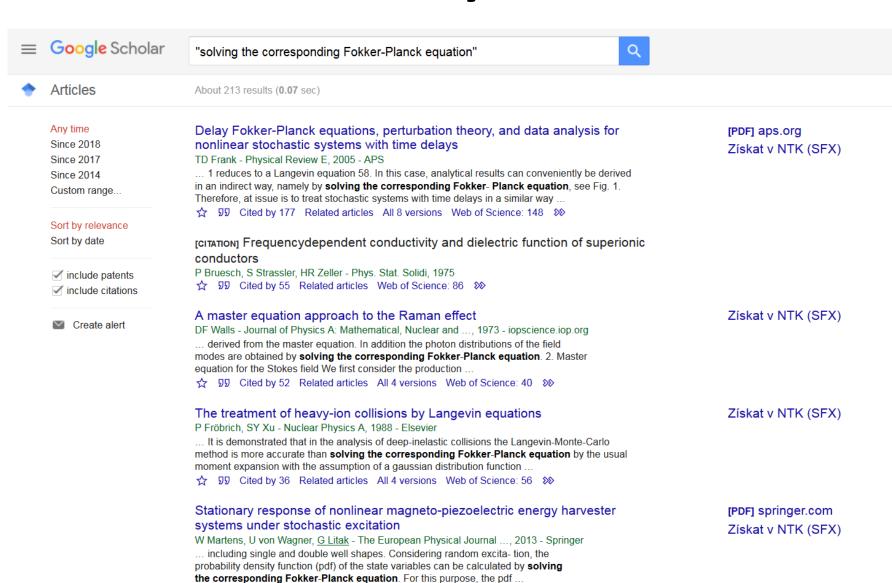


Writing in English: Scholar & Ngrams

- Google Scholar
 - Checking prepositions, appropriate terminology
 - Use quotation marks to search for an exact phrase

- Google Ngrams (=books only, and only books in a particular corpus!)
 - Check terminology changes over time
 - Trends

Scholar Case Study



☆ 99 Cited by 32 Related articles All 11 versions Web of Science: 26 >>>

Scholar Case Study



"solving the corresponding Fokker-Planck equation"



Articles

About 25 results (0.03 sec)

Any time

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Since 2017

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Sort by relevance

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include patents ✓ include citations

Create alert

Numerical methods for the two-dimensional Fokker-Planck equation governing the probability density function of the tempered fractional Brownian motion

X Liu, W Deng - arXiv preprint arXiv:1805.03950, 2018 - arxiv.org

... ciency. By numerically solving the corresponding Fokker-Planck equation, we obtain the mean squared displacement of stochastic processes, which conforms to the characteristics of the tempered fractional Brownian motion ...

☆ 99 Related articles All 2 versions >>>

Taxis of Artificial Swimmers in a Spatio-Temporally Modulated Activation Medium

A Geiseler, P Hänggi, F Marchesoni - Entropy, 2017 - mdpi.com

Contrary to microbial taxis, where a tactic response to external stimuli is controlled by complex chemical pathways acting like sensor-actuator loops, taxis of artificial microswimmers is a purely stochastic effect associated with a non-uniform activation of the particles' self-propulsion ...

☆ 99 Cited by 4 Related articles All 11 versions Web of Science: 4 ১৯১

A statistical significance test for sea-level variability

D Castellana, HA Dijkstra... - EGU General Assembly ..., 2018 - adsabs.harvard.edu

... SSH anomaly). The resulting model of Correlated Additive and Multiplicative (CAM) noise can be analysed through its equilibrium probability density function (PDF)

by solving the corresponding Fokker-Planck equation. The ...

☆ 99

[PDF] Optimal harvesting of a stochastic delay competitive model

M Liu, C Bai - Discrete Contin. Dyn. Syst., Ser. B, 2017 - researchgate.net

... By solving the corresponding Fokker-Planck equation, the authors [7] showed that if "r - $0.5^{-}\sigma2 > 0$, then the optimal harvesting effort is $h* = 0.5(r-0.5^{-}\sigma2)$ and the maximum of expectation of sustainable yield is Y \star =: max{Y ($^{-}$ h)} = 0.25($^{-}$ r - 0.5 $^{-}$ σ2)2/ $^{-}$ a, where Y ($^{-}$ h) ...

☆ ワワ Cited by 15 Related articles All 5 versions Web of Science: 15 🌺

Particle Acceleration in Mildly Relativistic Shearing Flows: The Interplay of Systematic and Stochastic Effects, and the Origin of the Extended High-energy Emission in ...

RY Liu, FM Rieger, FA Aharonian - The Astrophysical Journal, 2017 - iopscience.iop.org This site uses cookies. By continuing to use this site you agree to our use of cookies. To find out more, see our Privacy and Cookies policy ...

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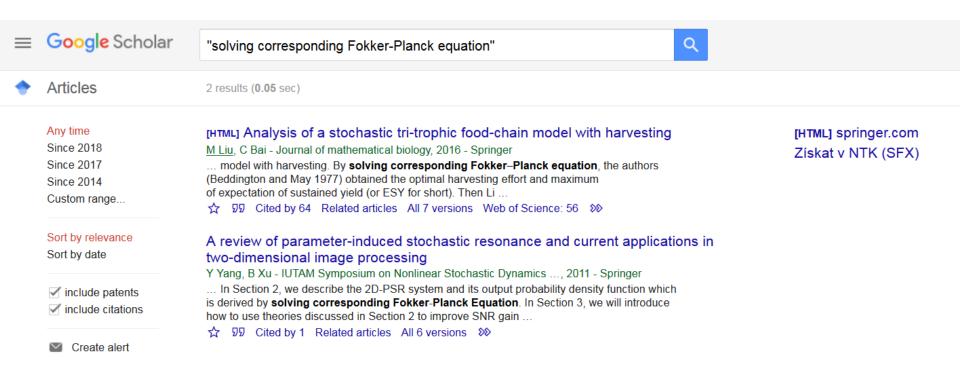
[PDF] arxiv.org

[HTML] mdpi.com Získat v NTK (SFX)

[PDF] researchgate.net Získat v NTK (SFX)

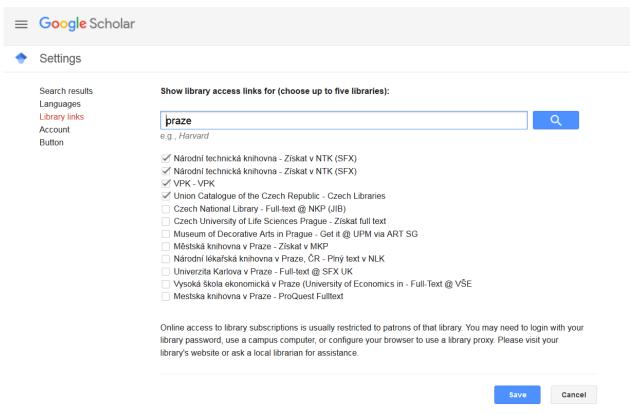
[PDF] arxiv.org

Scholar Case Study



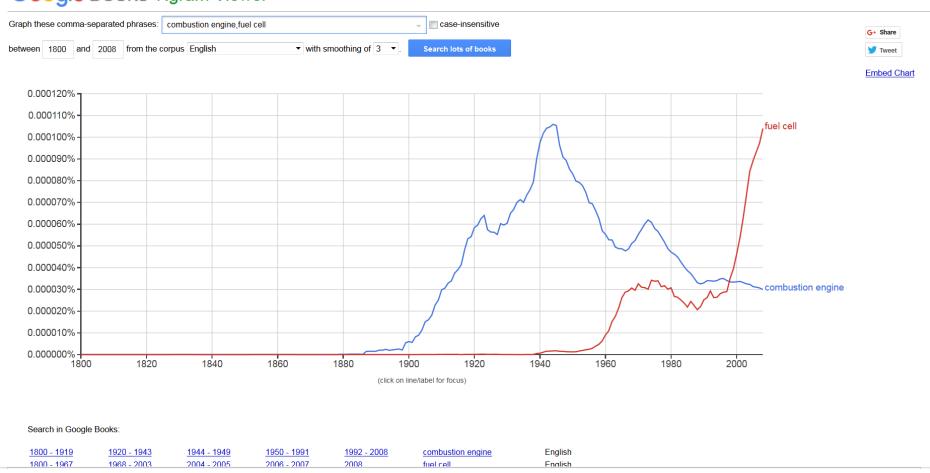
Note:

Make sure, if you use Google Scholar, your library links are active



Ngrams Case Study





Writing in English: Wikipedia EN

- Fact checking
- Exactness in terminology for fields you are not an expert in and which may not be in a dictionary
- Correct capitalization for technical terms, names of equations and theories

Wikipedia Case Study

Eulerian description [edit]

Continuity allows for the inverse of $\chi(\cdot)$ to trace backwards where the particle currently located at \mathbf{x} was located in the initial or referenced configuration $\kappa_0(\mathcal{B})$. In this case the description of motion is made in terms of the spatial coordinates, in which case is called the spatial description or Eulerian description, i.e. the current configuration is taken as the reference configuration.

The Eulerian description, introduced by d'Alembert, focuses on the current configuration $\kappa_t(\mathcal{B})$, giving attention to what is occurring at a fixed point in space as time progresses, instead of giving attention to individual particles as they move through space and time. This approach is conveniently applied in the study of fluid flow where the kinematic property of greatest interest is the rate at which change is taking place rather than the shape of the body of fluid at a reference time. [16]

Mathematically, the motion of a continuum using the Eulerian description is expressed by the mapping function

$$\mathbf{X} = \chi^{-1}(\mathbf{x},t)$$

which provides a tracing of the particle which now occupies the position \mathbf{x} in the current configuration $\kappa_t(\mathcal{B})$ to its original position \mathbf{X} in the initial configuration $\kappa_0(\mathcal{B})$.

A necessary and sufficient condition for this inverse function to exist is that the determinant of the Jacobian Matrix, often referred to simply as the Jacobian, should be different from zero. Thus,

$$J = \left| rac{\partial \chi_i}{\partial X_J}
ight| = \left| rac{\partial x_i}{\partial X_J}
ight|
eq 0$$

In the Eulerian description, the physical properties $\ P_{ij\dots}$ are expressed as

$$P_{ij\dots}=P_{ij\dots}(\mathbf{X},t)=P_{ij\dots}[\chi^{-1}(\mathbf{x},t),t]=p_{ij\dots}(\mathbf{x},t)$$

where the functional form of $P_{ij...}$ in the Lagrangian description is not the same as the form of $p_{ij...}$ in the Eulerian description.

The material derivative of $p_{ii...}(\mathbf{x},t)$, using the chain rule, is then

$$rac{d}{dt}[p_{ij\dots}(\mathbf{x},t)] = rac{\partial}{\partial t}[p_{ij\dots}(\mathbf{x},t)] + rac{\partial}{\partial x_k}[p_{ij\dots}(\mathbf{x},t)]rac{dx_k}{dt}$$

The first term on the right-hand side of this equation gives the *local rate of change* of the property $p_{ij...}(\mathbf{x},t)$ occurring at position \mathbf{x} . The second term of the right-hand side is the *convective rate of change* and expresses the contribution of the particle changing position in space (motion).

Continuity in the Eulerian description is expressed by the spatial and temporal continuity and continuous differentiability of the flow velocity field. All physical quantities are defined this way at each instant of time, in the current configuration, as a function of the vector position x.

Displacement field [edit]

The vector joining the positions of a particle P in the undeformed configuration and deformed configuration is called the displacement vector $\mathbf{u}(\mathbf{X},t)=u_i\mathbf{e}_i$, in the Lagrangian description, or $\mathbf{U}(\mathbf{x},t)=U_J\mathbf{E}_J$, in the Eulerian description.

A displacement field is a vector field of all displacement vectors for all particles in the body, which relates the deformed configuration with the undeformed configuration. It is convenient to do the analysis of deformation or motion of a continuum body in terms of the displacement field, In general, the displacement field is expressed in terms of the material coordinates as

$$\mathbf{u}(\mathbf{X},t) = \mathbf{b} + \mathbf{x}(\mathbf{X},t) - \mathbf{X} \qquad ext{or} \qquad u_i = lpha_{iJ} b_J + x_i - lpha_{iJ} X_J$$

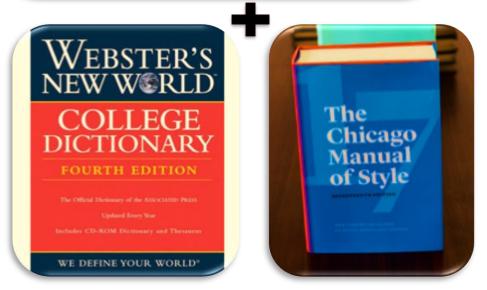
Writing in English: Style Guides and Manuals

- English does not have an international or national "standardization board"
- Every publication has its own style guide to govern:
 - Punctuation and capitalization
 - Heading style and other formatting issues
 - Citation/referencing styles
 - Preferred English variant

Style Guides and Manuals Example

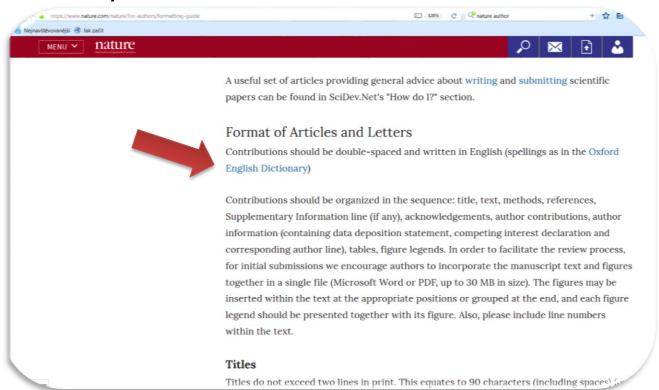


Note: IEEE is updating its style manual any day now! The 2017 version will soon be obsolete.



Writing in English: Style Guides and Manuals

- Always check journal guidelines! Editorial staff can modify publisher-wide guidelines
- Sometimes, hard to find



Style Guide Case Study

Formatting of funding sources

List funding sources in this standard way to facilitate compliance to funder's requirements:



Funding: This work was supported by the National Institutes of Health [grant numbers xxxx, yyyy]; the Bill & Melinda Gates Foundation, Seattle, WA [grant number zzzz]; and the United States Institutes of Peace [grant number aaaa].

It is not necessary to include detailed descriptions on the program or type of grants and awards. When funding is from a block grant or other resources available to a university, college, or other research institution, submit the name of the institute or organization that provided the funding.

If no funding has been provided for the research, please include the following sentence:

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

AUTHOR INFORMATION PACK 12 Oct 2018

www.elsevier.com/locate/ijsolstr

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Nomenclature and units

Follow internationally accepted rules and conventions: use the international system of units (SI). If other quantities are mentioned, give their equivalent in SI. Authors wishing to present a table of nomenclature should do so on the second page of their manuscript.

Math formulae

Please submit math equations as editable text and not as images. Present simple formulae in line with normal text where possible and use the solidus (/) instead of a horizontal line for small fractional terms, e.g., X/Y. In principle, variables are to be presented in italics. Powers of e are often more conveniently denoted by exp. Number consecutively any equations that have to be displayed separately from the text (if referred to explicitly in the text)

Writing in English: Choosing Keywords

- Why are keywords important?
- MeSH (Medical Subject Headings)
- IEEE Thesaurus and Taxonomy
- Mathematics Subject Classification
- Journal style guide or manual: sometimes list suggested keywords and encourage authors to ask editors about appropriate keywords
- Use keywords from articles in your field, suggested by your mentor, from articles written by authors you admire

Choosing Keywords Case Study



> Visit journal homepage

Submit your paper

Guide for authors

Track your paper

> Order journal

> View articles

> Free sample

> Abstracting

Browse journals > International J... > IJSS keywords

IJSS keywords

The *International Journal of Solids and Structures* has traditionally contained author indexes and contents lists at the end of each year. Useful though these are, we believe that they would be enhanced by the addition of indexes compiled from keywords associated with each paper. This would allow readers to identify groups of papers in similar areas.

In an electronic environment, the need for a uniform keyword system is particularly important to facilitate effective information searchand retrieval. To ensure a consistent approach we have prepared a list of preferred keywords for use. This list is not exhaustive and should be used as a guideline. If you feel there are serious omissions please do not hesitate to contact the Editors-in-Chief or Publisher to ensure that new terms are added.

Absorption

Acoustic

Adaptive structures

Adhesion

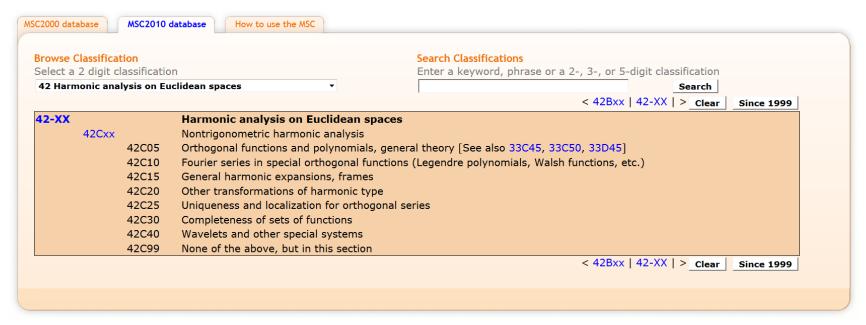
Ageing of materials

Algorithms

Alloy

Aluminium alloy Analytical solutions

Choosing Keywords Case Study





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https://mathscinet.ams.org/mathscinet/msc/msc2010.html

https://en.wikipedia.org/wiki/Snail#/media/File:Grapevinesnail 01

Reading in English: Slow, Careful Reading Means Better Writing

- Journals in your field
 - Do you know what they are? (MJ/JZ lecture)
 - Form a journal reading club
- Beyond your field
 - Old school
 - Use print to slow down
 - Browsing (Periodicals Reading Room, Floor 3)
 - Reading standard English textbooks
 - Library <u>discovery</u>
 - Everything library owns in print or <u>subscribes to</u>
 - Well-edited journals covering many fields
 - Science, Nature, National Geographic



What We Have -

Services & Support +

Culture & Events -

Or browse: Catalog, eBooks A-Z, eJournals A-Z, All eResources, 2

Who We Are -

Projects & Innovation -

Search NTK pages... Q

Homepage / What We Have / eResources

Electronic Resources

Most of these eResources can be accessed outside the library. To search a specific database, select *via NTK*. To search all eResources at once, use the *Search Our Collections* box above.

Use filters to find resources relevant to a particular subject, in a particular format, or by language.

Title	Access	Description
Academic Search Complete	via NTK	Description
Academic Search Ultimate	via NTK	Description
AccessScience	via NTK	Description
ACM Digital Library	via NTK	Description
American Institute of Physics - Complete	via NTK	Description
Analytical Abstracts	via NTK	Description
Anopress IT	Periodicals Reading Room	Description
Apress	via NTK	Description

Search and Filters

Type to filter

- RESOURCE TYPE
 CONTENT TYPE
- SUBJECTS
- ACCESS
- CONTENT LANGUAGE



Contacts

eResources Acquisition

- eiz@techlib.cz
- **(**+420) 232 002 572

eResources Administration

- eservices@techlib.cz
- (+420) 232 002 553

See also

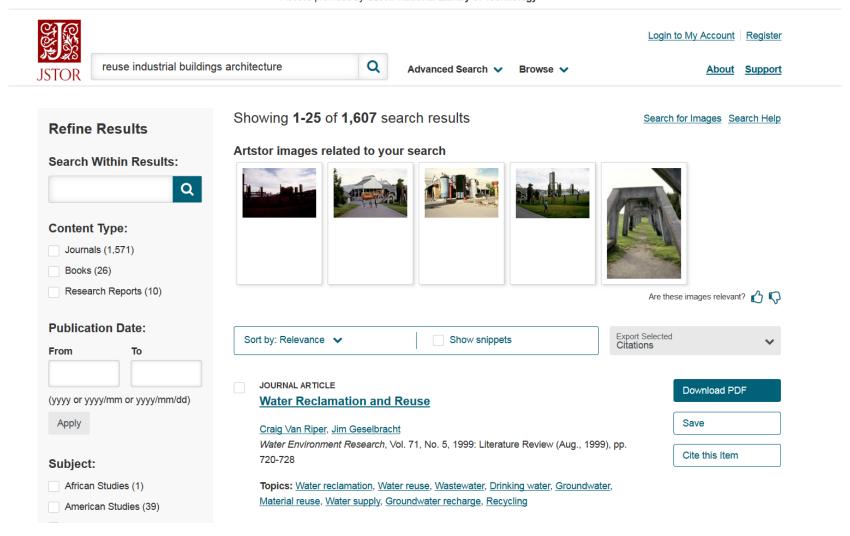
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- eBooks A-Z
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- Remote Access
- Access & Privileges
- Interlibrary Loan and Document Delivery
- Suggest a purchase
- Reference and Research Help
- Library Rules
- Catalog

Reading in English: Built Environment & Architecture Students

- <u>Le Corbusier PLANS</u>
 - Notes, diagrams, plans and drawings
- Artstor
 - 5+ million images of the world's cultural heritage,
 all rights-cleared for use in education
- JSTOR
 - Key architecture, art, garden & landscape journals

Built Environment & Architecture Students Case Study

Access provided by Czech National Library of Technology



Built Environment & Architecture Students Case Study



LE CORBUSIER PLANS ONLINE

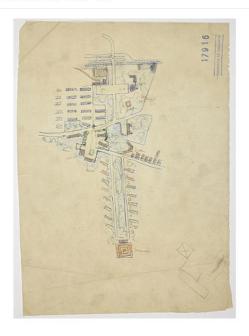
16

School Home > Image Search > 17916



non-titled (1 of 6)

FLC Number: 17916 / Urbanisme de Bat'a Year: 1935 / Place: Zlin, Czech / Built: \times



Description "Sketch study of mass plan v	with museum schools ho	stal color / Skatchas"	
Date	with muscum, schools, no	ici, color / Sketches	
-			
Image Scale		Original Size	
-		0.284 x 0.386m	
Signature			
Atelier			
Instrument		Medium	
"Blue ink, color pastel"		Vellum	
	Show Printable Image	Show HD Image	l

knihovna •

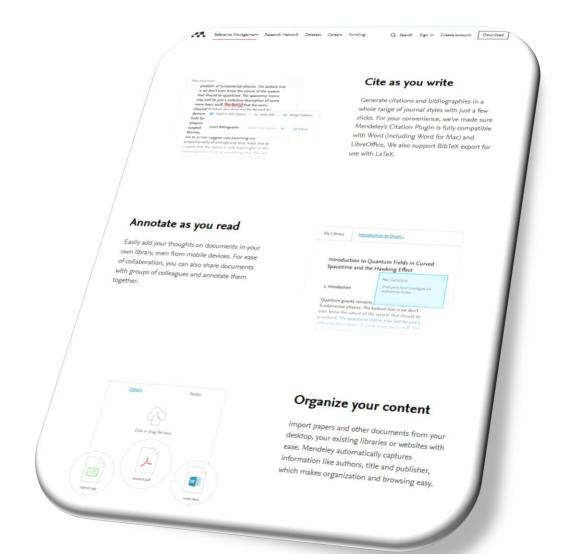
Recommendations •

My Bookmarks

Organizing

- Get an <u>ORCID</u> (your author identifier through time)
- Use an article organization/reference management tool
 - Mendeley
 - <u>JabRef</u> (excellent LaTeX integration + integrated search)
 - Zotero
 - EndNote (UCT Prague and IOCB)
 - Old School: Paper

Example: Mendeley



Key Questions

 What key resources can help me as I write, read, and organize myself?

More Help?

- Schedule a consultation
 - Please don't be shy; our team includes doctoral students who know the issues you face
- Drop-in sessions (no scheduling needed/Floor 2)
 - Cite Properly: Mondays, 16:00-17:00
 - LaTeX: Mondays, 17:00-18:00
 - Scientific Writing in English: Wednesdays, 15:00-16:00
 - International Student Support: Wednesdays, 17:00-18:00
- Architecture specialist

NTK

Národní technická knihovna

