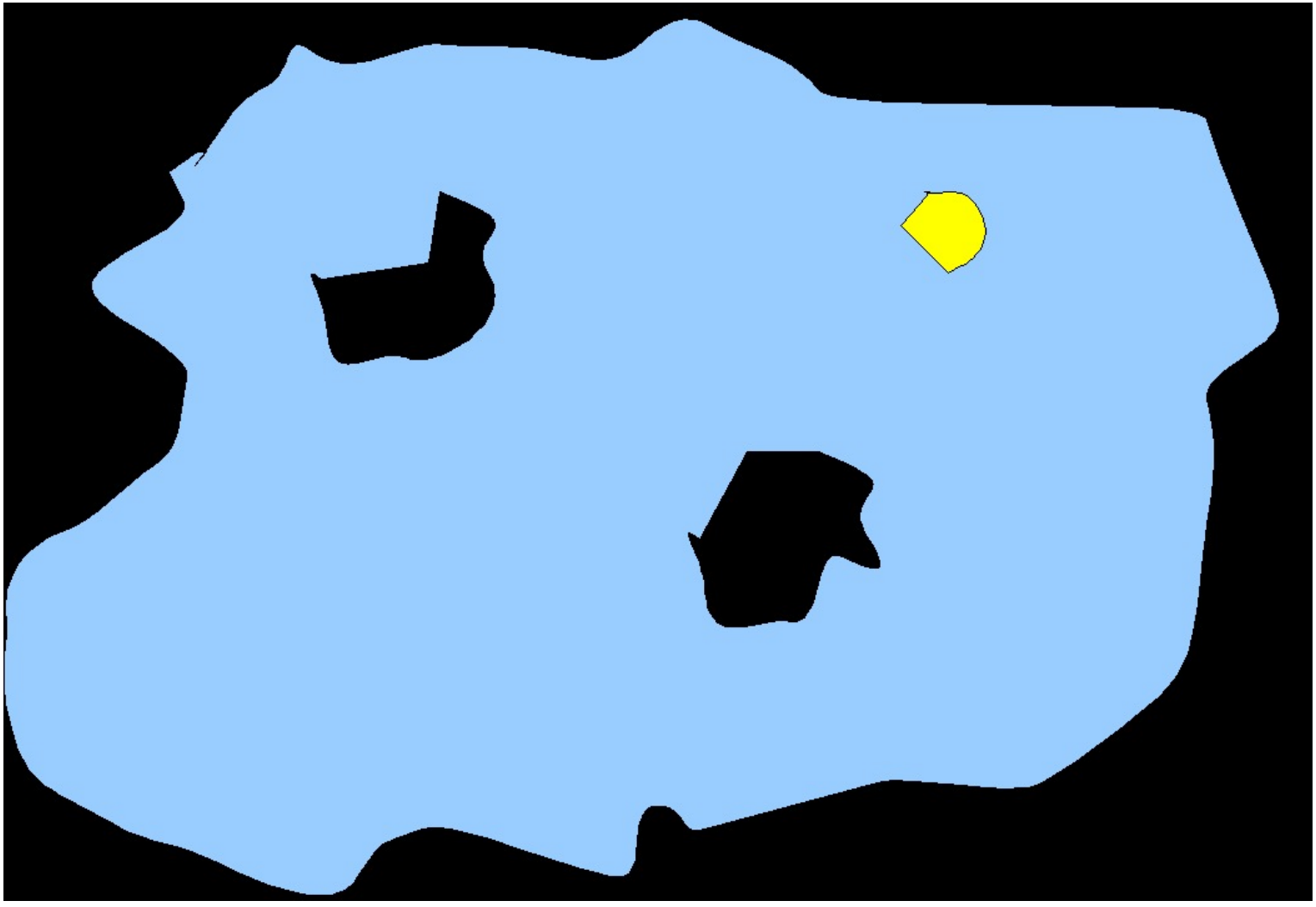
Badatelská komunikace

Vojtěch Svoboda

September 23, 2020

(hrubá zkratka)

Hranice lidského poznání



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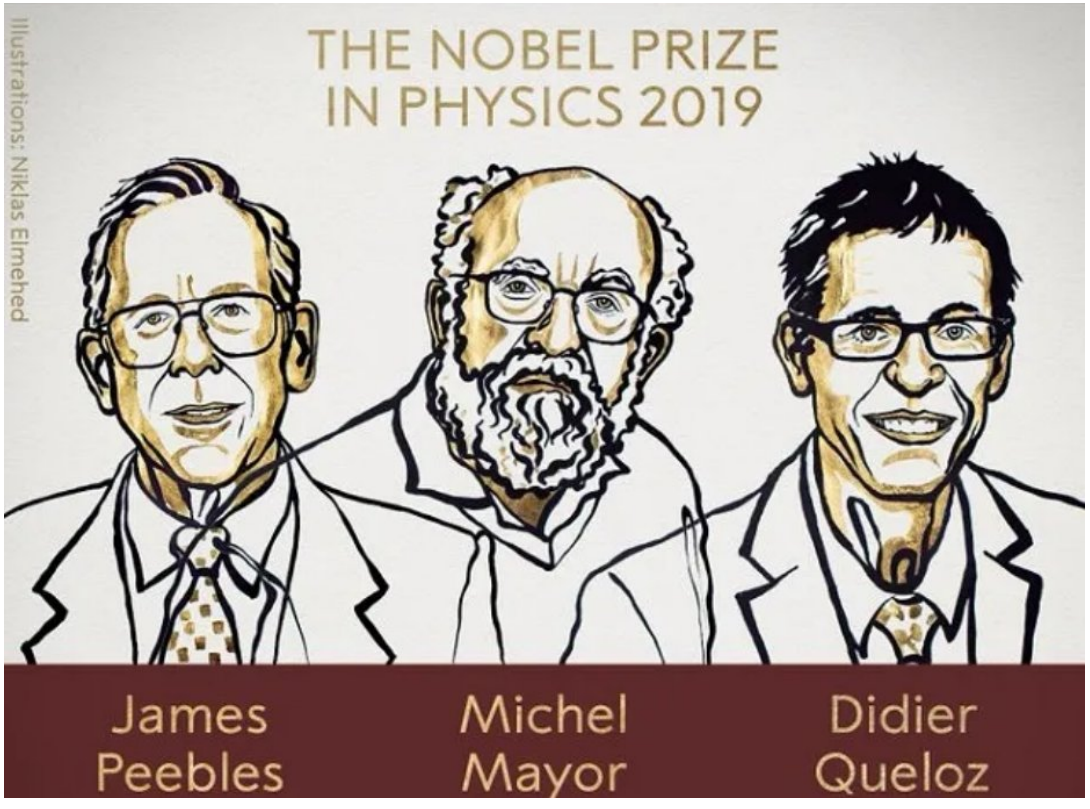
kredit: [V. Svoboda, 2020]

Poslední Nobelovy ceny za fyziku



kredit: [The Nobel Foundation, 2020]

- Zelenáč
- Začátečník
- Novice
- Středně pokročilý
- Pokročilý
- Vědec
- Guru
- Kouzelník

Cesta je dlouhá

Outline

Co obnáší badatelská práce

- Bádání.
- Psaní žádostí o granty.
- Nemůže mít klapky na očích.
- Starost o dorost, výuka.
- Byrokracie (bohužel).
- Prezentování, publikování (konference, články, monografie).
- Oponentská práce.
- Neustálé "keep to date", rešerše.

"Publish or perish" či "Publikuj, nebo se pakuj"

Science citation index

- Články v časopisech.
- Vystoupení na konferenci.

- Publikační životopis.
- Citační životopis.

Komunikace

Outline

Článek

G Model
FUSION-8751; No. of Pages 7

ARTICLE IN PRESS

Fusion Engineering and Design xxx (2016) xxx–xxx

Contents lists available at ScienceDirect

Fusion Engineering and Design

journal homepage: www.elsevier.com/locate/fusengdes

Remote operation of the GOLEM tokamak for Fusion Education

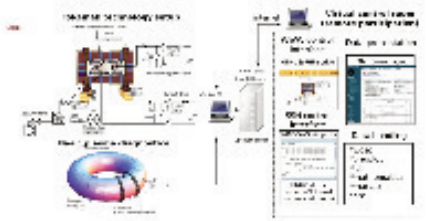
O. Grover[a], J. Kocman[a], M. Odstrcil[c], T. Odstrcil[e], M. Matusu[a], J. Stöckel[a,b], V. Svoboda[a,*], G. Vondrasek[a], J. Zara[d]

[a] Faculty of Nuclear Sciences and Physical Engineering CTU Prague, CZ-115 19, Czech Republic
[b] Institute of Plasma Physics AS CR, Prague CZ-182 21, Czech Republic
[c] University of Southampton, Southampton SO17 1BJ, UK
[d] Faculty of Electrical Engineering CTU Prague, CZ-166 27, Czech Republic
[e] Max-Planck-Institut für Plasmaphysik, D-85748 Garching, Germany

HIGHLIGHTS

- The remote operation of the tokamak GOLEM for educational purposes.

GRAPHICAL ABSTRACT



ARTICLE INFO

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Available online xxx

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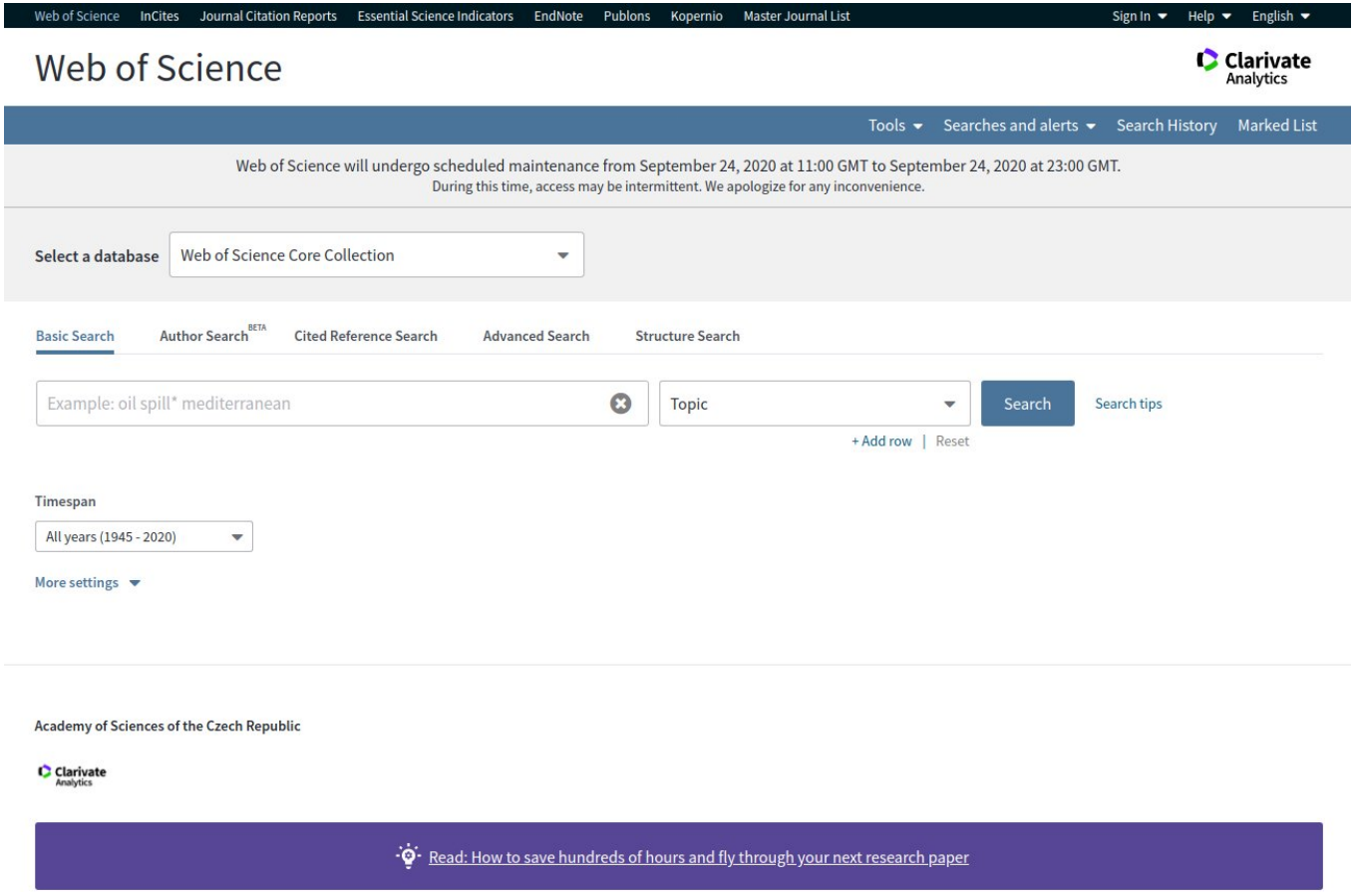
Tokamak technology
Remote participation
Education
Nuclear fusion

ABSTRACT

Practically oriented education in the field of thermonuclear fusion is highly requested. However, the high complexity of appropriate experiments makes it difficult to develop and maintain laboratories where students can take part in hands-on experiments in this field of study. One possible solution is to establish centres with specific high temperature plasma experiments where students can visit such a laboratory and perform their experiments in-situ. With the advancements of IT technologies it naturally follows to make a step forward and connect these with necessary plasma physics technologies and thus allow to access even sophisticated experiments remotely. Tokamak GOLEM is a small, modest device with its infrastructure linked to web technologies allowing students to set-up necessary discharge parameters, submit them into a queue and within minutes obtain the results in the form of a discharge homepage.

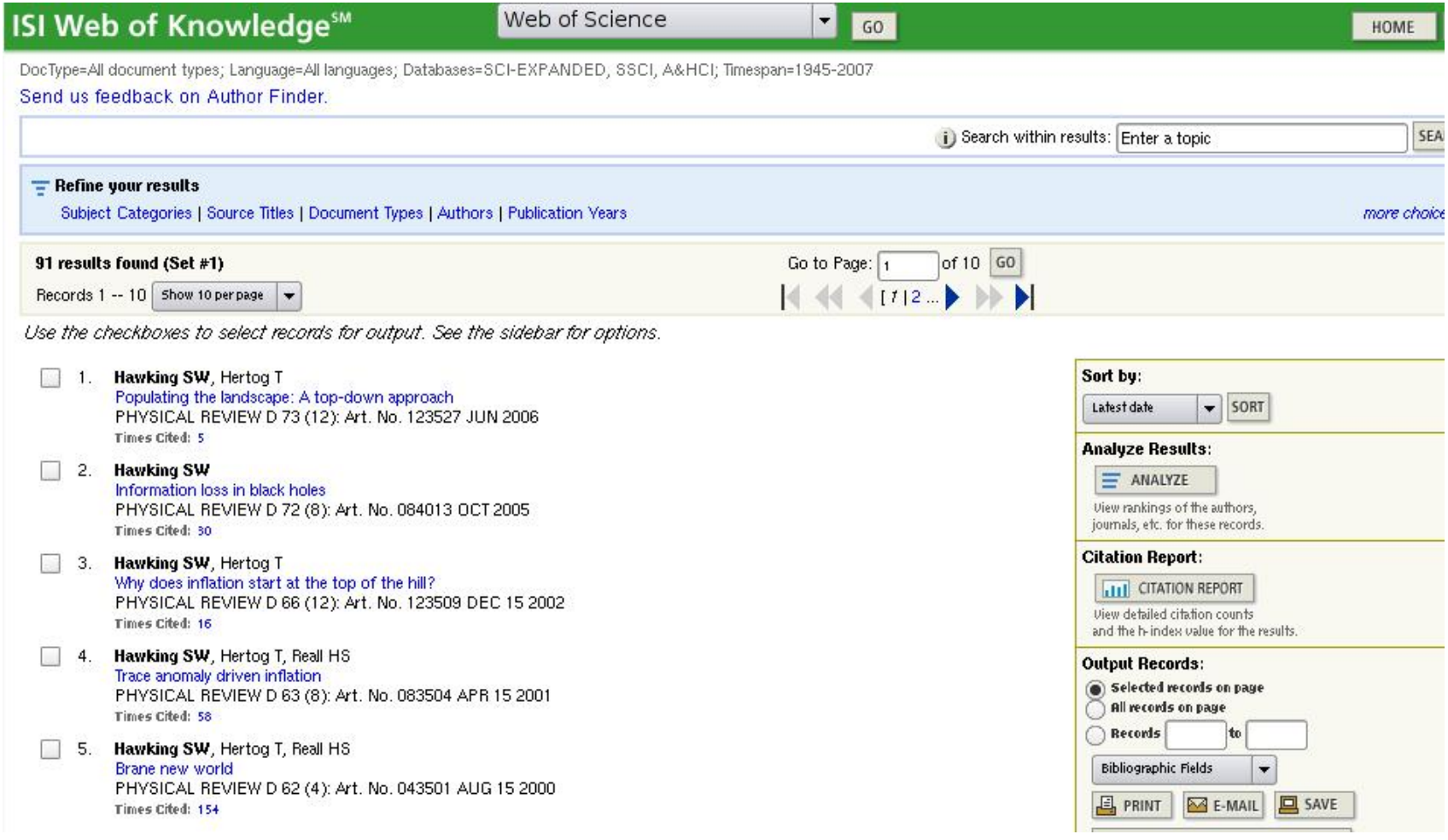
Web of Science (vzdáleně skrz Shibboleth)



Přístup pro ČVUT

http://knihovna.cvut.cz/podpora-vedy/citacni-databaze/web-of-science

Publikace - jiná liga



kredit: web of science [Clarivate, 2020]

Článek - jiná liga

PHYSICAL REVIEW D **73,** 123527 (2006)

Populating the landscape: A top-down approach

S. W. Hawking[1] and Thomas Hertog[2]

[1]*DAMTP, University of Cambridge, Wilberforce Road, Cambridge CB3 0WA, UK*
[2]*Physics Department, Theory Division, CERN, CH-1211 Geneva 23, Switzerland*

(Received 20 February 2006; published 23 June 2006)

We put forward a framework for cosmology that combines the string landscape with no boundary initial conditions. In this framework, amplitudes for alternative histories for the universe are calculated with final boundary conditions only. This leads to a top-down approach to cosmology, in which the histories of the universe depend on the precise question asked. We study the observational consequences of no boundary initial conditions on the landscape, and outline a scheme to test the theory. This is illustrated in a simple model landscape that admits several alternative inflationary histories for the universe. Only a few of the possible vacua in the landscape will be populated. We also discuss in what respect the top-down approach differs from other approaches to cosmology in the string landscape, like eternal inflation.

DOI: 10.1103/PhysRevD.73.123527 PACS numbers: 98.80.Qc, 11.25.−w, 98.80.Cq

I. INTRODUCTION

It seems likely that string theory contains a vast ensemble of stable and metastable vacua, including some with a small positive effective cosmological constant [1] and the low energy effective field theory of the standard model. Recent progress on the construction of metastable de Sitter vacua [2] lends further support to the notion of a string landscape [3], and a statistical analysis gives an idea of the distribution of some properties among the vacua [4]. But it has remained unclear what is the correct framework for cosmology in the string landscape. There are good reasons to believe, however, that a proper understanding of the cosmological dynamics will be essential for the landscape to be predictive [5].

In particle physics, one usually computes S-matrix elements, and there is certainly no opportunity for observing multiple copies of the universe.

In fact if one does adopt a bottom-up approach to cosmology, one is immediately led to an essentially classical framework, in which one loses all ability to explain cosmology's central question—why our universe is the way it is. In particular a bottom-up approach to cosmology either requires one to postulate an initial state of the universe that is carefully fine-tuned [10]—as if prescribed by an outside agency—or it requires one to invoke the notion of eternal inflation [11], which prevents one from predicting what a typical observer would see.

Here we put forward a different approach to cosmology in the string landscape, based not on the classical idea of a single history for the universe but on the quantum sum over

Citace

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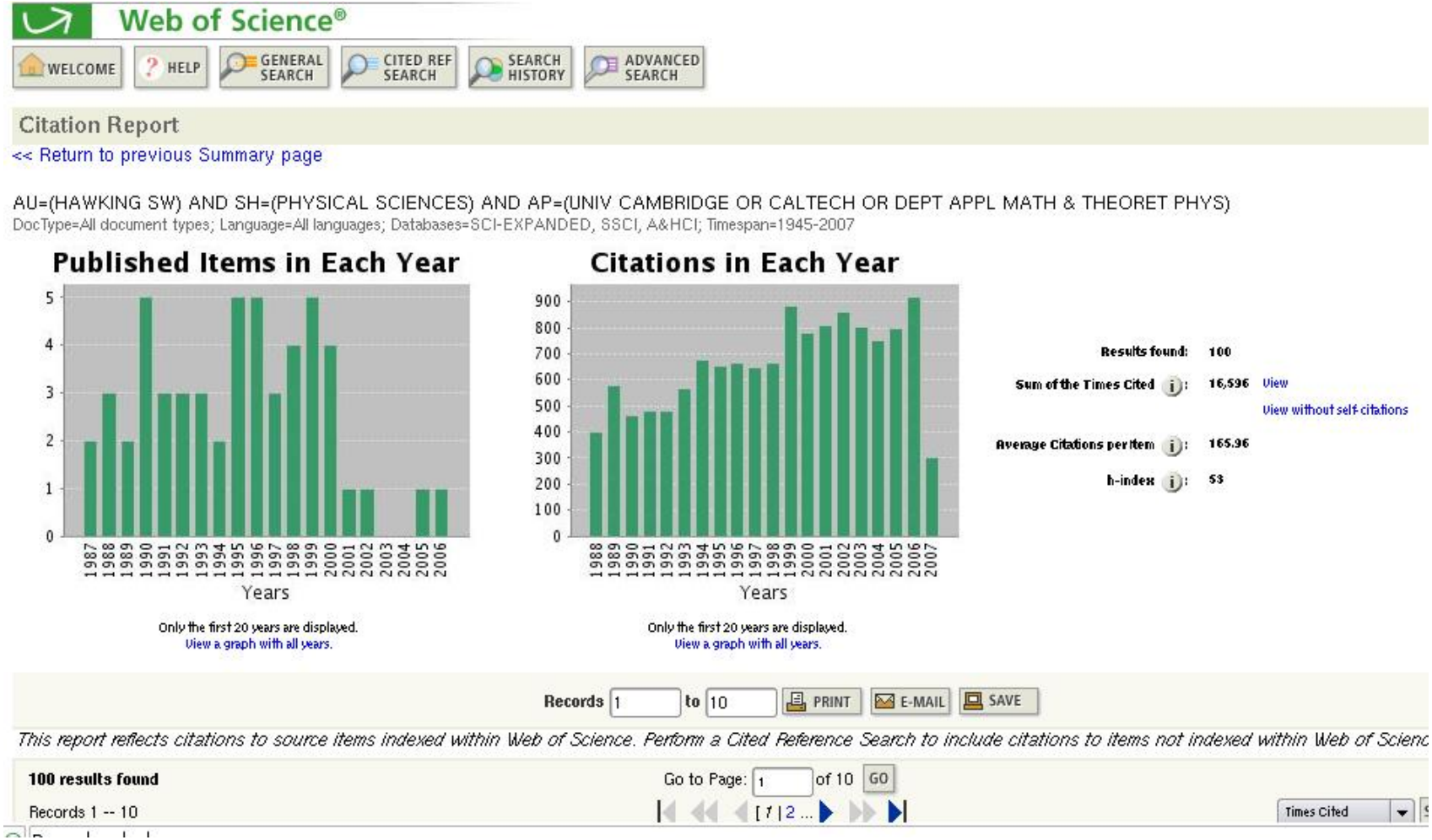
kredit: web of science [Clarivate, 2020]

Citační analýza

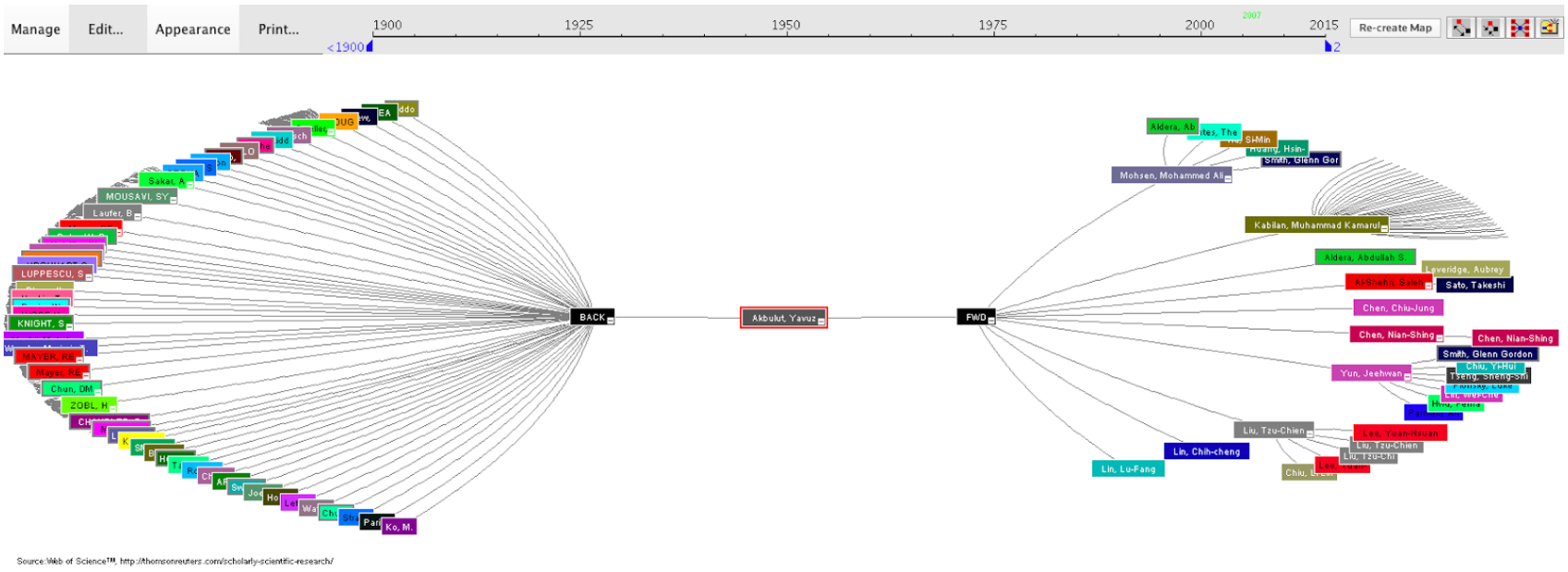


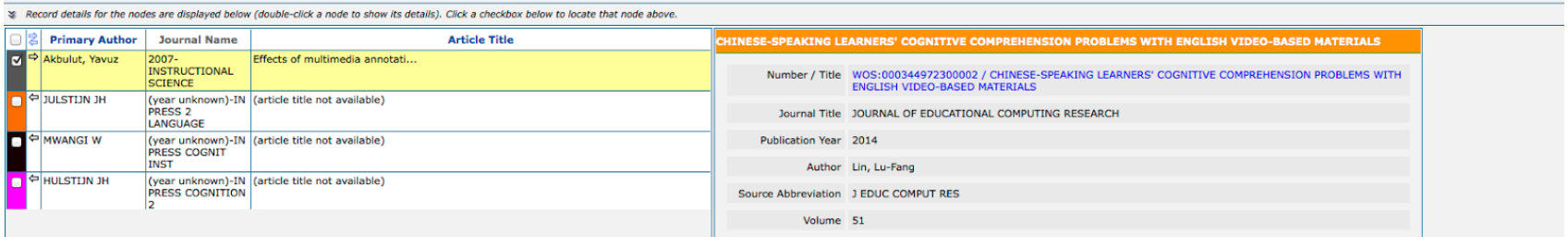
kredit: web of science [Clarivate, 2020]

Reference na článek

kredit: web of science [Clarivate, 2020]

Citační mapa





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kredit: web of science [Clarivate, 2020]

Outline

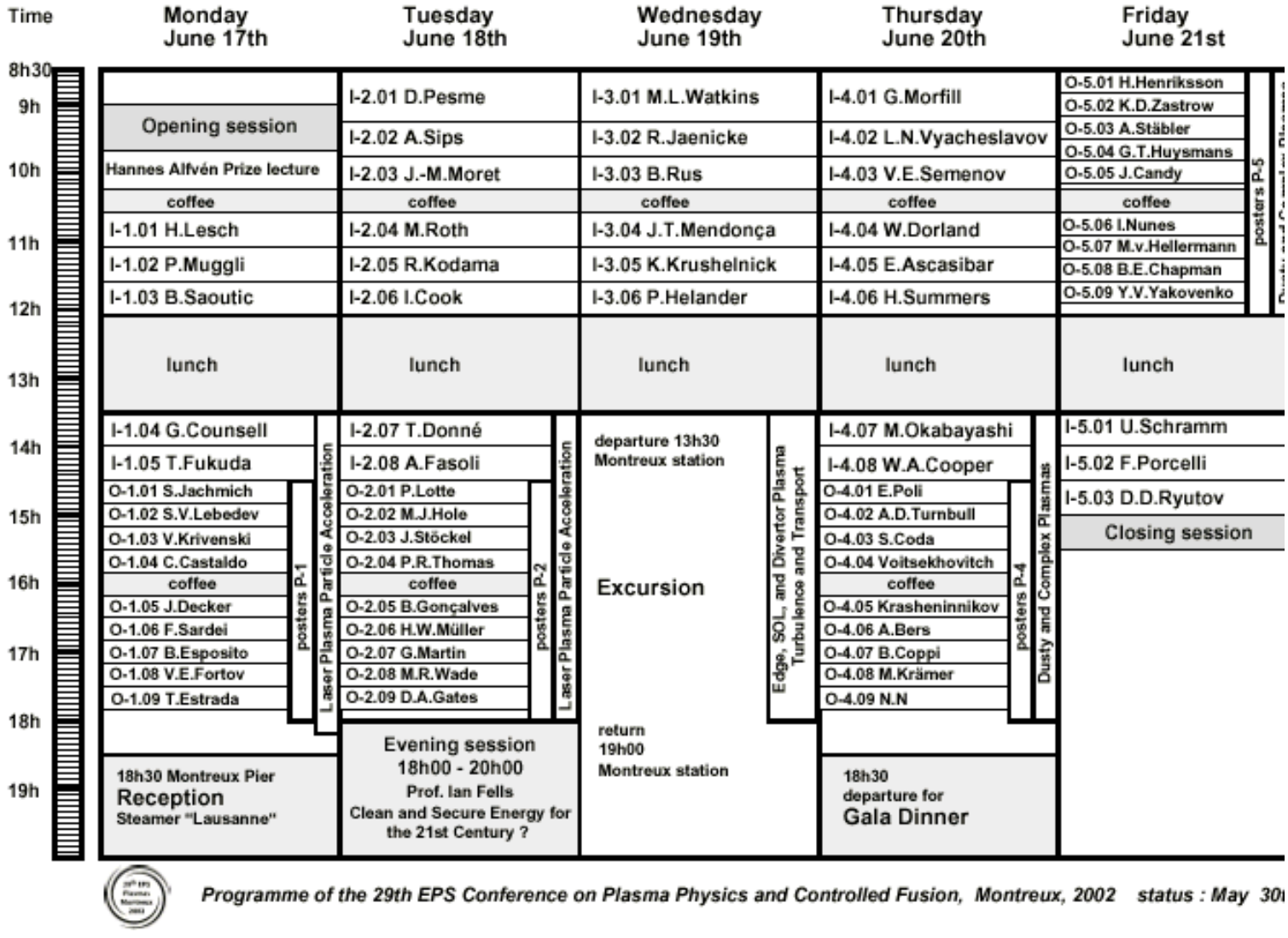
Konference

kredit: [Google, 2020]

- Pozvané přednášky
- Shrnující přednášky
- Klasické přednášky
- Posterové sekce
- ... welcom párty, doprovodný pr., farw. párty, satelitní workshopy

Vykomunikovat třeba až 1000 příspěvků ..

Program konference



Time	Monday June 17th	Tuesday June 18th	Wednesday June 19th	Thursday June 20th	Friday June 21st
8h30					
9h	Opening session	I-2.01 D.Pesme	I-3.01 M.L.Watkins	I-4.01 G.Morfill	O-5.01 H.Henriksson
		I-2.02 A.Sips	I-3.02 R.Jaenicke	I-4.02 L.N.Vyacheslavov	O-5.02 K.D.Zastrow
10h	Hannes Alfvén Prize lecture	I-2.03 J.-M.Moret	I-3.03 B.Rus	I-4.03 V.E.Semenov	O-5.03 A.Stäbler
	coffee	coffee	coffee	coffee	O-5.04 G.T.Huysmans
11h	I-1.01 H.Lesch	I-2.04 M.Roth	I-3.04 J.T.Mendonça	I-4.04 W.Dorland	O-5.05 J.Candy
	I-1.02 P.Muggli	I-2.05 R.Kodama	I-3.05 K.Krushelnick	I-4.05 E.Ascasibar	coffee
12h	I-1.03 B.Saoutic	I-2.06 I.Cook	I-3.06 P.Helander	I-4.06 H.Summers	O-5.06 I.Nunes
					O-5.07 M.v.Hellermann
13h	lunch	lunch	lunch	lunch	O-5.08 B.E.Chapman
					O-5.09 Y.V.Yakovenko
14h	I-1.04 G.Counsell	I-2.07 T.Donné	departure 13h30 Montreux station	I-4.07 M.Okabayashi	lunch
	I-1.05 T.Fukuda	I-2.08 A.Fasoli		I-4.08 W.A.Cooper	I-5.01 U.Schramm
15h	O-1.01 S.Jachmich	O-2.01 P.Lotte		O-4.01 E.Poli	I-5.02 F.Porcelli
	O-1.02 S.V.Lebedev	O-2.02 M.J.Hole		O-4.02 A.D.Turnbull	I-5.03 D.D.Ryutov
16h	O-1.03 V.Krivenski	O-2.03 J.Stöckel	Excursion	O-4.03 S.Coda	Closing session
	O-1.04 C.Castaldo	O-2.04 P.R.Thomas		O-4.04 Voitsekhovitch	
17h	coffee	coffee		coffee	
	O-1.05 J.Decker	O-2.05 B.Gonçalves		O-4.05 Krasheninnikov	
18h	O-1.06 F.Sardei	O-2.06 H.W.Müller	return 19h00 Montreux station	O-4.06 A.Bers	
	O-1.07 B.Esposito	O-2.07 G.Martin		O-4.07 B.Coppi	
19h	O-1.08 V.E.Fortov	O-2.08 M.R.Wade		O-4.08 M.Krämer	
	O-1.09 T.Estrada	O-2.09 D.A.Gates		O-4.09 N.N	
	18h30 Montreux Pier Reception Steamer "Lausanne"	Evening session 18h00 - 20h00 Prof. Ian Fells Clean and Secure Energy for the 21st Century ?		18h30 departure for Gala Dinner	

posters P-1 | Laser Plasma Particle Acceleration | posters P-2 | Laser Plasma Particle Acceleration | Edge, SOL, and Divertor Plasma Turbulence and Transport | posters P-4 | Dusty and Complex Plasmas | posters P-5

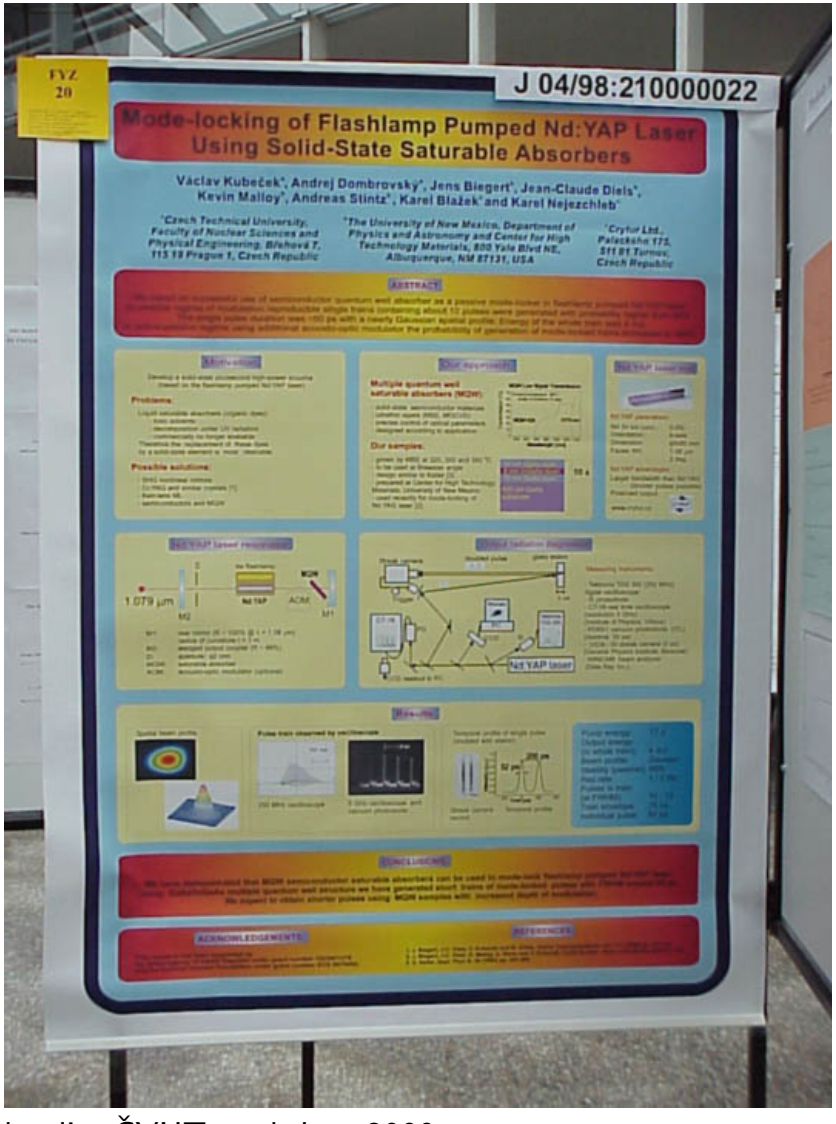
Programme of the 29th EPS Conference on Plasma Physics and Controlled Fusion, Montreux, 2002 status : May 30

kredit: [EPS PPCF conference, 2002]

Posterová sekce

kredit: ČVUT workshop 2000 [CTU, 2011]

Poster



kredit: ČVUT workshop 2000

- Nástěnka v určený čas.
- Být v daný čas přítomen

Produkce

LOC:

- Sehnat magnety.
- First announcement + Call for papers.
- Second announcement.
- Book of abstracts.
- Konference.
- Proceedings.

AUTOR:

- Celoroční práce.
- Přihlášení sebe a příspěvku na konferenci.
- Sepsání jednostránkového abstraktu.
- 4-stránkový proceeding.
- Sestavení prezentace či posteru.
- Odprezentování.

Kýžený závěr

```
@article{tibon:94,
title="An assesment of theoretical models based on observations in the JET tokamak",
author="F. Tibone and J.W. Connor and T.E. Stringer and H.R. Wilson",
journal="Plasma Phys. and Control. Fusion",
year="1994",
volume="36",
number="",
publisher="Institute of Physics publishing",
address="",
pages="473-512",
}
```

.

kredit: [V. Svoboda, 2020]

Role chairperson

.

kredit: [SOFT, 2016]

Závěr

Komunikovat všemi směry ..


Clarivate (2020).
Web of science.
[Online; accessed September 23, 2020].


CTU (2011).
Semináře workshop Čvut.
[Online; accessed September 23, 2020].


EPS PPCF conference (2002).
Plasma physics and controlled fusion conference montreux.
[Online; accessed September 23, 2020].


Google (2020).
Images.
[Online; accessed September 23, 2020].


Hawking, S. W. and Hertog, T. (2006).
Populating the landscape: A top-down approach.

Phys. Rev. D, 73:123527.


SOFT (2016).
29th symposium on fusion technology.
[Online; accessed September 23, 2020].


The Nobel Foundation (2020).
The nobel prize.
[Online; accessed September 23, 2020].


V. Svoboda (2020).
Miscellaneous.


Ústřední knihovna ČVUT (2020).
Web of science.
[Online; accessed September 23, 2020].