



Improving modelling culture: Obstacles and opportunities

Helge Rørdam Olesen

Chairman of the Harmonisation initiative

Department of Environmental Science,
Aarhus University, Denmark

Harmonisation?

- › **It was never the idea to achieve complete harmonisation in the sense that one model is appointed as 'the one and only'.**
- › **However:** Many tools, procedures and datasets should be harmonised.
- › **And:** We should build upon the experiences of each other.



The Harmonisation conferences:

- > **A platform for disseminating information on common tools, procedures and guidelines**

Central theme

- › **We should make the most of our knowledge – ensure that acquired knowledge is not forgotten, but used by the modelling community and included in the decision-making process.**
- › **How can we pool experiences and encourage re-use of our work?**
- ›



The current situation

- › **The situation is not optimal**
- › **Too much work is to some extent wasted**



A major challenge:

- › **How should we deal with the very large amount of information which is produced by the modelling community?**



Two aspects of the challenge

- > **The challenge when you *seek information***
- > **The challenge when you have the role as *information provider***

Perspective of an information seeker

- › **The information should match the problem at hand closely**
- › **The information should by no means be incorrect or misleading**
- › **Ideally**
 - › it should point to possible solutions to your problem
 - › it should make you aware of aspects to consider in choosing a solution
 - › it might include software tools or data
- › **You don't want to miss important information**

Perspective of an information provider

- › You are *potentially* an information provider
- › Maybe you have gained some experiences when you worked with a project.
- › Maybe you have finished a project.
- › You have information which could be of use to the modelling community.



But...

- > **Nobody pays you to add information to the community pool!**

The "Funding obstacle"



The result:

- > **Valuable experiences are not communicated further.**
- > **Much work is to some extent wasted**



Can we overcome or bypass “The funding obstacle”?



Alternatives to funding

- > **We should try to *bypass* the funding obstacle**
- > **How?**



The idea

- > **It should require *only a small amount of extra effort* to contribute to the common pool of information.**
- >
- > **Nowadays the web offers a range of opportunities which make it easy to share information**
- >

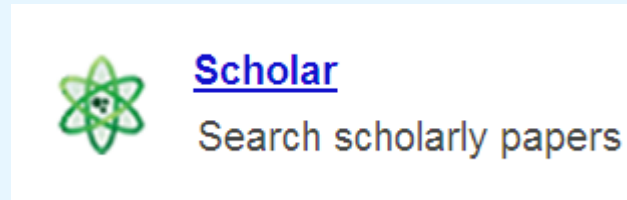


Opportunities

- › **Resources and tools for information sharing
– on a practical level**

A relatively new, central tool

> Google Scholar



- > **”Google Scholar provides a simple way to broadly search for scholarly literature. Google Scholar helps you find relevant work across the world of scholarly research.”**



Comparison with some more traditional search tools...

- > **Web of Science**
- > **Scopus**



COST 732 MODEL EVALUATION CASE STUDIES: APPROACH AND RESULTS

Edited by:

Michael Schatzmann, Helge Olesen and Jörg Franke

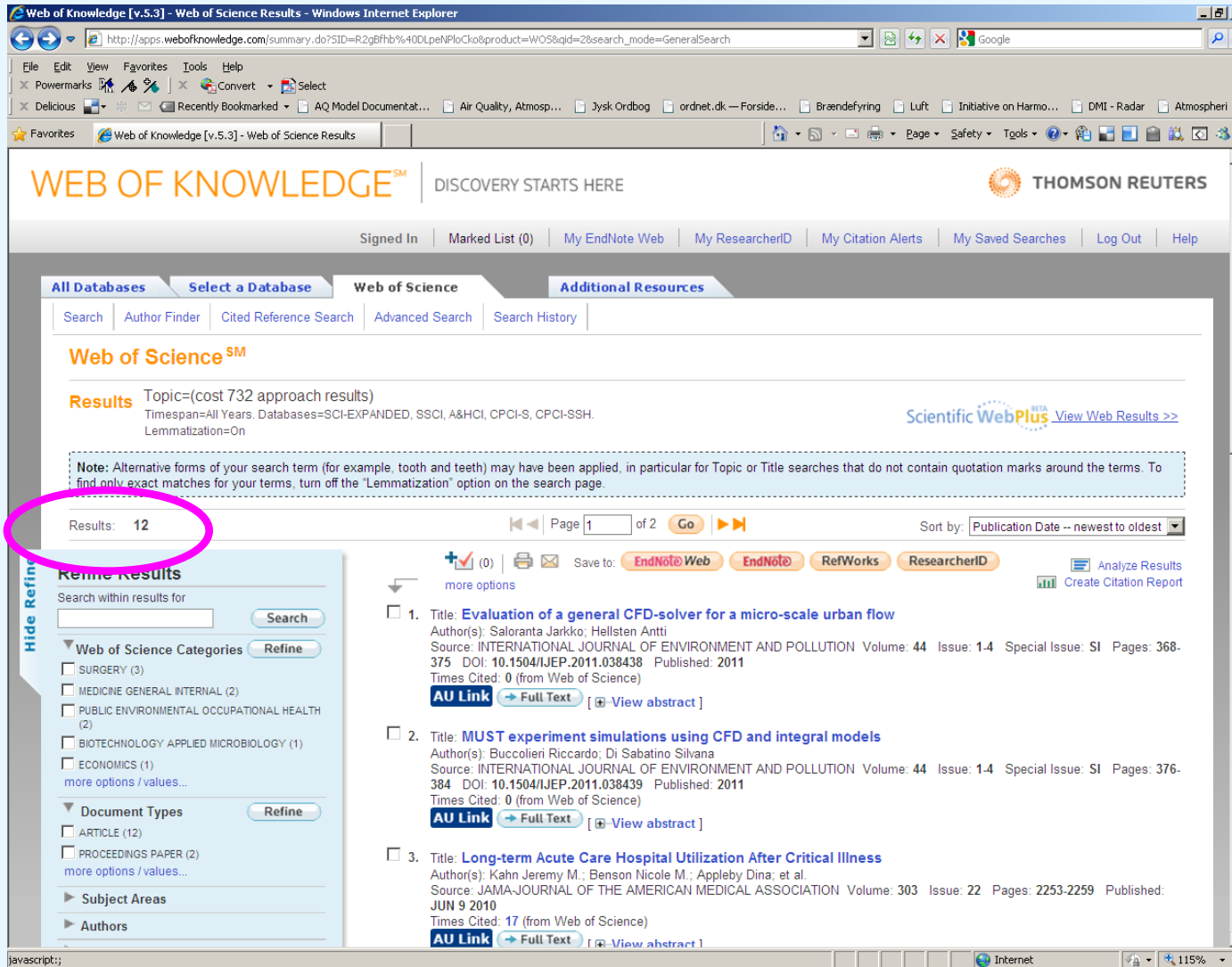
COST Action 732

QUALITY ASSURANCE AND IMPROVEMENT OF
MICROSCALE METEOROLOGICAL MODELS

February 22, 2010

cost 732 approach results

Web of Science



Web of Knowledge [v.5.3] - Web of Science Results - Windows Internet Explorer

http://apps.webofknowledge.com/summary.do?SID=R2gBfb%40DLpeNPl0Ck0&product=WOS&qid=2&search_mode=GeneralSearch

WEB OF KNOWLEDGESM | DISCOVERY STARTS HERE | THOMSON REUTERS

Signed In | Marked List (0) | My EndNote Web | My ResearcherID | My Citation Alerts | My Saved Searches | Log Out | Help

All Databases | Select a Database | Web of Science | Additional Resources

Search | Author Finder | Cited Reference Search | Advanced Search | Search History

Web of ScienceSM

Results Topic=(cost 732 approach results)
Timespan=All Years. Databases=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH.
Lemmatization=On

Note: Alternative forms of your search term (for example, tooth and teeth) may have been applied, in particular for Topic or Title searches that do not contain quotation marks around the terms. To find only exact matches for your terms, turn off the "Lemmatization" option on the search page.

Results: 12 | Page 1 of 2 | Go | Sort by: Publication Date -- newest to oldest

Refine Results

Search within results for

Web of Science Categories

- SURGERY (3)
- MEDICINE GENERAL INTERNAL (2)
- PUBLIC ENVIRONMENTAL OCCUPATIONAL HEALTH (2)
- BIOTECHNOLOGY APPLIED MICROBIOLOGY (1)
- ECONOMICS (1)

Document Types

- ARTICLE (12)
- PROCEEDINGS PAPER (2)

Subject Areas

Authors

1. Title: **Evaluation of a general CFD-solver for a micro-scale urban flow**
Author(s): Saloranta Jarkko; Hellsten Antti
Source: INTERNATIONAL JOURNAL OF ENVIRONMENT AND POLLUTION Volume: 44 Issue: 1.4 Special Issue: SI Pages: 368-375 DOI: 10.1504/IJEP.2011.038438 Published: 2011
Times Cited: 0 (from Web of Science)
[AU Link](#) [Full Text](#) [View abstract](#)

2. Title: **MUST experiment simulations using CFD and integral models**
Author(s): Buccolieri Riccardo; Di Sabatino Silvana
Source: INTERNATIONAL JOURNAL OF ENVIRONMENT AND POLLUTION Volume: 44 Issue: 1.4 Special Issue: SI Pages: 376-384 DOI: 10.1504/IJEP.2011.038439 Published: 2011
Times Cited: 0 (from Web of Science)
[AU Link](#) [Full Text](#) [View abstract](#)

3. Title: **Long-term Acute Care Hospital Utilization After Critical Illness**
Author(s): Kahn Jeremy M.; Benson Nicole M.; Appleby Dina; et al.
Source: JAMA-JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION Volume: 303 Issue: 22 Pages: 2253-2259 Published: JUN 9 2010
Times Cited: 17 (from Web of Science)
[AU Link](#) [Full Text](#) [View abstract](#)

12

★ Favorites | Web of Knowledge [v.5.3] - Web of Science Full Record

All Databases | Select a Database | Web of Science | Additional Resources

Search | Author Finder | Cited Reference Search | Advanced Search | Search History

Web of ScienceSM

<< Back to results list | Record 2 of 12 | >>

Full Text | AU Link | + ✓ (0) | Print | Email | Save to: EndNote Web | EndNote | RefWorks | ResearcherID | more options

MUST experiment simulations using CFD and integral models

Author(s): Buccolieri, R (Buccolieri, Riccardo)^{1,2}; Di Sabatino, S (Di Sabatino, Silvana)²

Source: INTERNATIONAL JOURNAL OF ENVIRONMENT AND POLLUTION **Volume:** 44 **Issue:** 1-4 **Special Issue:** SI **Pages:** 376-384
DOI: 10.1504/IJEP.2011.038439 **Published:** 2011

Times Cited: 0 (from Web of Science)

Cited References: 16 [view related records] | Citation Map

Abstract: This paper looks at the application of Computational Fluid Dynamics (CFD) and integral approaches to the study of effects of obstacles on pollutant dispersion from a point source placed within an idealised urban area (MUST). This study is part of a modelling exercise within the COST Action 732. Numerical results are compared with wind tunnel data. We use the CFD code FLUENT and the dispersion model ADMS-Urban. The CFD model predicts concentrations more accurately than the integral model. However, both models results satisfy accepted statistical criteria, showing that those criteria should not be the only way of evaluating a model.

Document Type: Article

Language: English

Author Keywords: CFD and integral models; model evaluation; building packing density; idealised urban area

KeyWords Plus: STREET CANYONS; POLLUTANT DISPERSION; AIR-QUALITY; URBAN

Reprint Address: Buccolieri, R (reprint author), Univ Ca Foscari Venezia, Dipartimento Informat, Via Torino 155, I-30172 Venice, Italy

Addresses:

1. Univ Ca Foscari Venezia, Dipartimento Informat, I-30172 Venice, Italy
2. Univ Salento, Dipartimento Sci Mat, I-73100 Lecce, Italy

E-mail Address: riccardo.buccolieri@unive.it, silvana.disabatino@unisalento.it

Web of Science

- › **12 results - just two relevant results.**
- › **Does *not* reveal the existence of the COST 732 report**
- › ***Web of Science* is a commercial service**
- › **Requires journal subscription to inspect the full text**

Scopus

18

Scopus - Document search results

Hub | ScienceDirect | Scopus | SciTopics | Applications

Register | Login | Go to SciVal Suite

Brought to you by Aarhus Universitets Biblioteker / Aarhus University Libraries

Search | Sources | Analytics | My alerts | My list | My settings

Quick Search Search

Scopus: 18 More... Web Patents

Your query: TITLE-ABS-KEY(cost 732 approach results)

Document results: 18 | Show all abstracts

Page: 1 of 1

Search within results Search

Refine results

Limit to Exclude

Year

- 2011 (4) >
- 2010 (5) >
- 2009 (1) >
- 2008 (1) >
- 2007 (1) >

View more | View fewer

Author Name

- Di Sabatino, S. (2) >
- Parchman, T.L. (1) >
- Palmer, G.R. (1) >
- Oyslender, M. (1) >
- Olivas, A.C. (1) >

View more | View fewer

With selected:

- All
- Download PDF
- Export
- Print
- Email
- Create bibliography
- Add to My List

Page View citation overview View citations View references

Sort by Date (Newest)

	Document title	Author(s)	Date	Source title	Citations
<input type="checkbox"/> 1	A study on value estimation, collection and utilization of rainwater resources in cities of northern China - A case study of Xi'an city	Jia, R., Xie, J., Song, S., Liu, D.	2011	ISWREP 2011 - Proceedings of 2011 International Symposium on Water Resource and Environmental Protection 1, art. no. 5893041, pp. 450-455	0
	AU Link Show abstract Related documents				
<input type="checkbox"/> 2	Active surveillance vs. treatment for low-risk prostate cancer: A cost comparison	Eldefrawy, A., Katkooi, D., Abramowitz, M., Soloway, M.S., Manoharan, M.	2011	Urologic Oncology: Seminars and Original Investigations Article in Press	0
	AU Link Show abstract				
<input type="checkbox"/> 3	Evaluation of a general CFD-solver for a micro-scale urban flow	Saloranta, J., Hellsten, A.	2011	International Journal of Environment and Pollution 44 (1-4), pp. 368-375	0
	AU Link Show abstract Related documents				
<input type="checkbox"/> 4	MUST experiment simulations using CFD and integral models	Buccolieri, R., Di Sabatino, S.	2011	International Journal of Environment and Pollution 44 (1-4), pp. 376-384	1

Scopus

- › **Same problems as *Web of Science*:**
- › **18 results, 3 relevant**
- › **Does *not* reveal the existence of the COST 732 report**
- › **Scopus is a commercial service**
- › **It indexes journal papers *and* some conference proceedings**



The image shows a screenshot of the Google Scholar search results page. At the top, there is a navigation bar with links for '+You', 'Web', 'Images', 'Maps', 'Translate', 'Scholar', 'Gmail', and 'More'. On the right side of the navigation bar, there are links for 'Sign in' and a settings gear icon. The main content area features the Google Scholar logo, a search bar containing the text 'cost 732 approach results', and a 'Search' button. To the right of the search bar is a link for 'Advanced Scholar Search'. Below the search bar, there are radio buttons for 'Articles' (selected), 'include patents' (checked), and 'Legal opinions and journals'. The search results are displayed as 'Stand on the shoulders of giants'. At the bottom of the page, there are links for 'Go to Google Home', 'About Google', 'About Google Scholar', and 'Go to Google Scholar'. The copyright notice '©2011 Google' is located at the very bottom.

+You Web Images Maps Translate **Scholar** Gmail More ▾ Sign in ⚙

Google

scholar

cost 732 approach results Search [Advanced Scholar Search](#)

Articles (include patents) Legal opinions and journals

Stand on the shoulders of giants

[Go to Google Home](#) - [About Google](#) - [About Google Scholar](#) - [Go to Google Scholar](#)

©2011 Google



Google Scholar

[CITATION] **COST 732 Model Evaluation Case Studies:**
M Schatzmann, HR Olesen... - 2010

[Cited by 7](#) - [Related articles](#)



Results 1 - 10 of about **163,000** (0.08 sec)

163,000

[Stock price distributions with stochastic volatility: an analytic approach](#)

[PDF] from [jstor.org](#)

EM Stein... - Review of financial Studies, 1991 - Soc Financial Studies
Stock **Price** Distributions with Stochastic Volatility: An Analytic **Approach** Elias M. Stein Princeton University Jeremy C Stein ... of volatility general- ization of Equation (1). We discuss this briefly in Section 4. **732** ... 15) applic... only to the case where $0 = 0$. The stock **price** distribution S ...
[Cited by 944](#) - [Related articles](#) - [Options Aarhus University](#) - [All 16 versions](#)

[CITATION] **COST 732 Model Evaluation Case Studies: Approach and Results. COST Action 732**

M Schatzmann, HR Olesen... - 2010
[Cited by 7](#) - [Related articles](#)

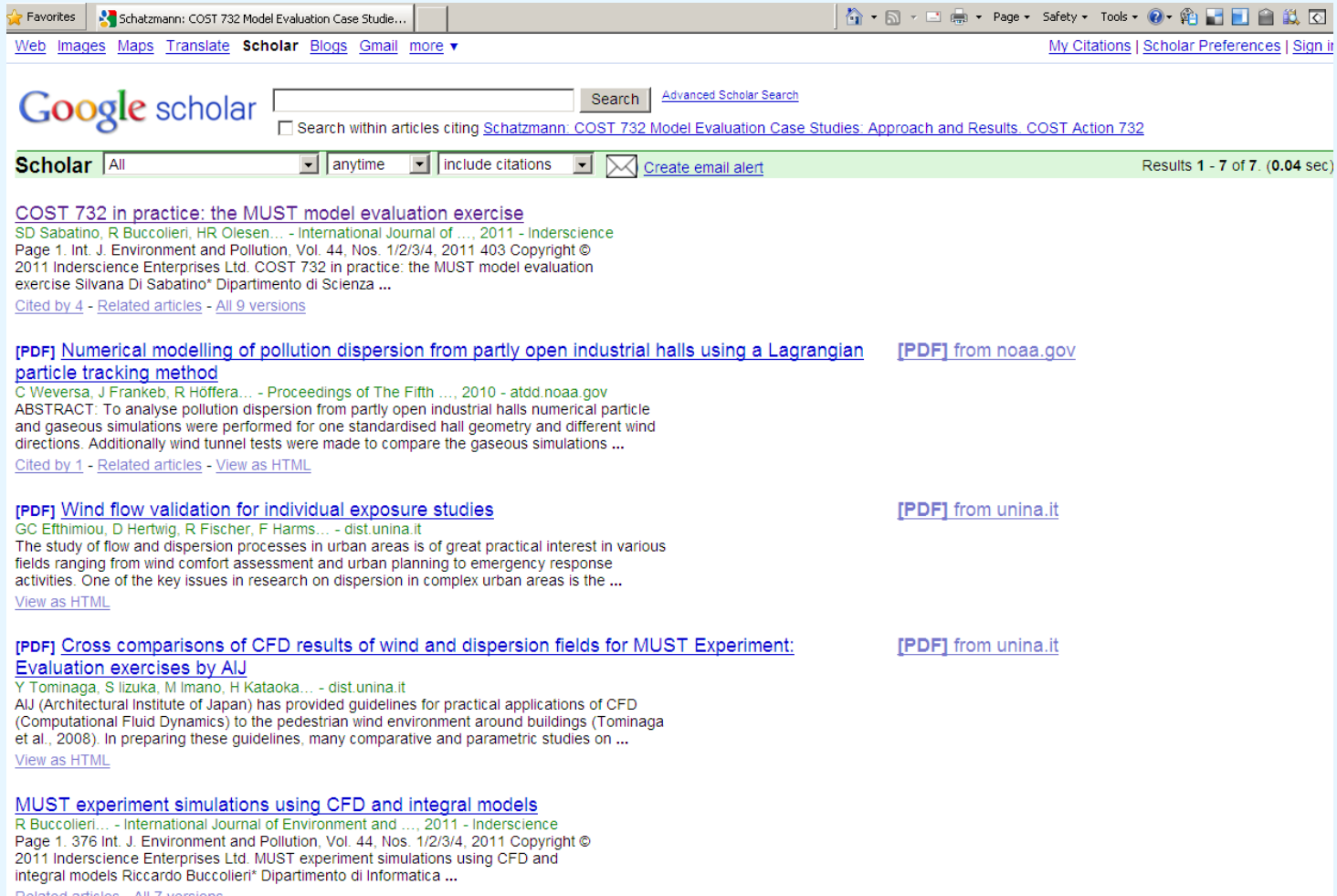
[High accuracy and cost-effectiveness of a biopsy-avoiding endoscopic approach in diagnosing coeliac disease](#)

G Cammarota, P Cesaro, A Martino... - Alimentary ..., 2006 - Wiley Online Library
... Gastrointest Endosc 2004; 60: **732**-8 ... MA, Homan RK, Martz MD, Theobald KE, Provenzale D.
A **cost** analysis of outpatient care for patients with Barrett's esophagus in a managed care setting. ...
Diagnostic **approach** to a patient with suspected celiac disease: a **cost** analysis. ...
[Cited by 24](#) - [Related articles](#) - [Options Aarhus University](#) - [All 4 versions](#)

[A cost comparison analysis of partial versus whole-breast irradiation after breast-conserving surgery for early-stage breast cancer](#)

WW Suh, LJ Pierce, FA Vicini... - International Journal of ..., 2005 - Elsevier
... Total societal costs were then calculated for each treatment **approach**. **Results:** Not all efforts to reduce overall treatment time result in total **cost** savings. The least expensive partial breast-based RT approaches were the external beam techniques (APBI-3D-CRT, APBI-IMRT). ...
[Cited by 38](#) - [Related articles](#) - [All 5 versions](#)

'Cited by 7'



Screenshot of a Google Scholar search results page. The search query is "Schatzmann: COST 732 Model Evaluation Case Studies: Approach and Results. COST Action 732". The results show four entries, each with a title, authors, publication details, and a citation count. The first entry is "COST 732 in practice: the MUST model evaluation exercise" by SD Sabatino, R Buccolieri, and HR Olesen, published in the International Journal of Environment and Pollution in 2011, cited by 4. The second entry is "[PDF] Numerical modelling of pollution dispersion from partly open industrial halls using a Lagrangian particle tracking method" by C Wevers, J Franke, and R Höffler, published in the Proceedings of The Fifth International Conference on Urban Air Pollution in 2010, cited by 1. The third entry is "[PDF] Wind flow validation for individual exposure studies" by GC Efthimiou, D Hertwig, R Fischer, and F Harms, published in the International Journal of Environment and Pollution in 2011, cited by 1. The fourth entry is "[PDF] Cross comparisons of CFD results of wind and dispersion fields for MUST Experiment: Evaluation exercises by AIJ" by Y Tominaga, S Iizuka, M Imano, and H Kataoka, published in the International Journal of Environment and Pollution in 2011, cited by 1. The fifth entry is "MUST experiment simulations using CFD and integral models" by R Buccolieri, published in the International Journal of Environment and Pollution in 2011, cited by 1.

Google scholar search results for "Schatzmann: COST 732 Model Evaluation Case Studies: Approach and Results. COST Action 732".

Search criteria: All, anytime, include citations, Create email alert. Results 1 - 7 of 7. (0.04 sec)

COST 732 in practice: the MUST model evaluation exercise
 SD Sabatino, R Buccolieri, HR Olesen... - International Journal of ... 2011 - Inderscience
 Page 1. Int. J. Environment and Pollution, Vol. 44, Nos. 1/2/3/4, 2011 403 Copyright ©
 2011 Inderscience Enterprises Ltd. COST 732 in practice: the MUST model evaluation
 exercise Silvana Di Sabatino* Dipartimento di Scienza ...
 Cited by 4 - Related articles - All 9 versions

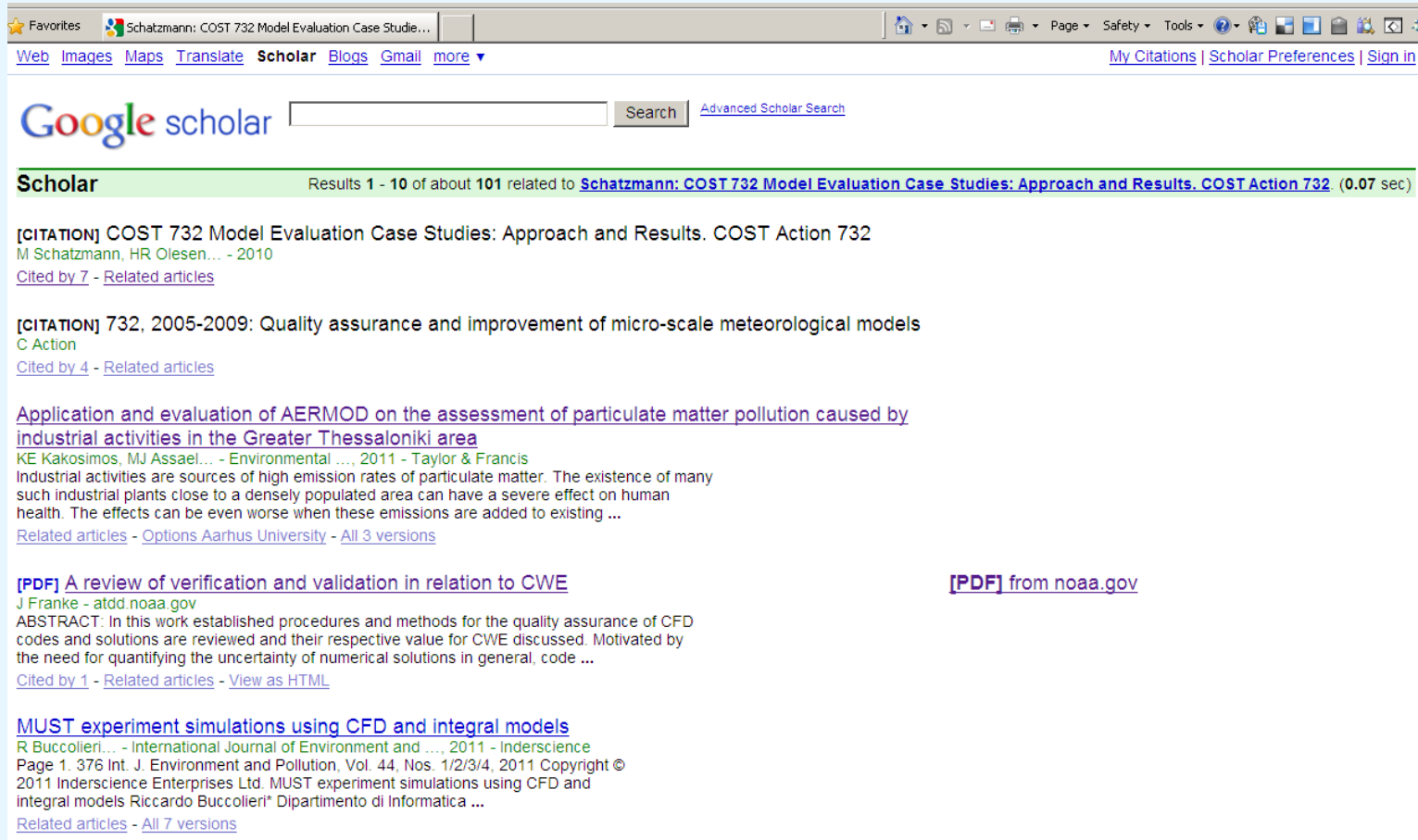
[PDF] Numerical modelling of pollution dispersion from partly open industrial halls using a Lagrangian particle tracking method [PDF] from noaa.gov
 C Wevers, J Franke, R Höffler... - Proceedings of The Fifth ... 2010 - atdd noaa.gov
 ABSTRACT: To analyse pollution dispersion from partly open industrial halls numerical particle
 and gaseous simulations were performed for one standardised hall geometry and different wind
 directions. Additionally wind tunnel tests were made to compare the gaseous simulations ...
 Cited by 1 - Related articles - View as HTML

[PDF] Wind flow validation for individual exposure studies [PDF] from unina.it
 GC Efthimiou, D Hertwig, R Fischer, F Harms... - dist.unina.it
 The study of flow and dispersion processes in urban areas is of great practical interest in various
 fields ranging from wind comfort assessment and urban planning to emergency response
 activities. One of the key issues in research on dispersion in complex urban areas is the ...
 View as HTML

[PDF] Cross comparisons of CFD results of wind and dispersion fields for MUST Experiment: Evaluation exercises by AIJ [PDF] from unina.it
 Y Tominaga, S Iizuka, M Imano, H Kataoka... - dist.unina.it
 AIJ (Architectural Institute of Japan) has provided guidelines for practical applications of CFD
 (Computational Fluid Dynamics) to the pedestrian wind environment around buildings (Tominaga
 et al., 2008). In preparing these guidelines, many comparative and parametric studies on ...
 View as HTML

MUST experiment simulations using CFD and integral models
 R Buccolieri... - International Journal of Environment and ... 2011 - Inderscience
 Page 1. 376 Int. J. Environment and Pollution, Vol. 44, Nos. 1/2/3/4, 2011 Copyright ©
 2011 Inderscience Enterprises Ltd. MUST experiment simulations using CFD and
 integral models Riccardo Buccolieri* Dipartimento di Informatica ...
 Related articles - All 7 versions

Google Scholar: 101 "related articles"



The screenshot shows a web browser window with the Google Scholar search results for the query "Schatzmann: COST 732 Model Evaluation Case Studies: Approach and Results, COST Action 732". The browser's address bar shows the search URL. The Google Scholar interface includes a search bar with the query, a "Search" button, and a link to "Advanced Scholar Search". Below the search bar, a green banner indicates "Scholar Results 1 - 10 of about 101 related to Schatzmann: COST 732 Model Evaluation Case Studies: Approach and Results, COST Action 732 (0.07 sec)".

The search results list several related articles:

- [CITATION] COST 732 Model Evaluation Case Studies: Approach and Results. COST Action 732**
M Schatzmann, HR Olesen... - 2010
[Cited by 7](#) - [Related articles](#)
- [CITATION] 732, 2005-2009: Quality assurance and improvement of micro-scale meteorological models**
C Action
[Cited by 4](#) - [Related articles](#)
- [Application and evaluation of AERMOD on the assessment of particulate matter pollution caused by industrial activities in the Greater Thessaloniki area](#)**
KE Kakosimos, MJ Assael... - Environmental ..., 2011 - Taylor & Francis
Industrial activities are sources of high emission rates of particulate matter. The existence of many such industrial plants close to a densely populated area can have a severe effect on human health. The effects can be even worse when these emissions are added to existing ...
[Related articles](#) - [Options Aarhus University](#) - [All 3 versions](#)
- [\[PDF\] A review of verification and validation in relation to CWE](#)** **[\[PDF\] from noaa.gov](#)**
J Franke - atdd.noaa.gov
ABSTRACT: In this work established procedures and methods for the quality assurance of CFD codes and solutions are reviewed and their respective value for CWE discussed. Motivated by the need for quantifying the uncertainty of numerical solutions in general, code ...
[Cited by 1](#) - [Related articles](#) - [View as HTML](#)
- [MUST experiment simulations using CFD and integral models](#)**
R Buccolieri... - International Journal of Environment and ..., 2011 - Inderscience
Page 1. 376 Int. J. Environment and Pollution, Vol. 44, Nos. 1/2/3/4, 2011 Copyright © 2011 Inderscience Enterprises Ltd. MUST experiment simulations using CFD and integral models Riccardo Buccolieri* Dipartimento di Informatica ...
[Related articles](#) - [All 7 versions](#)

Google Scholar

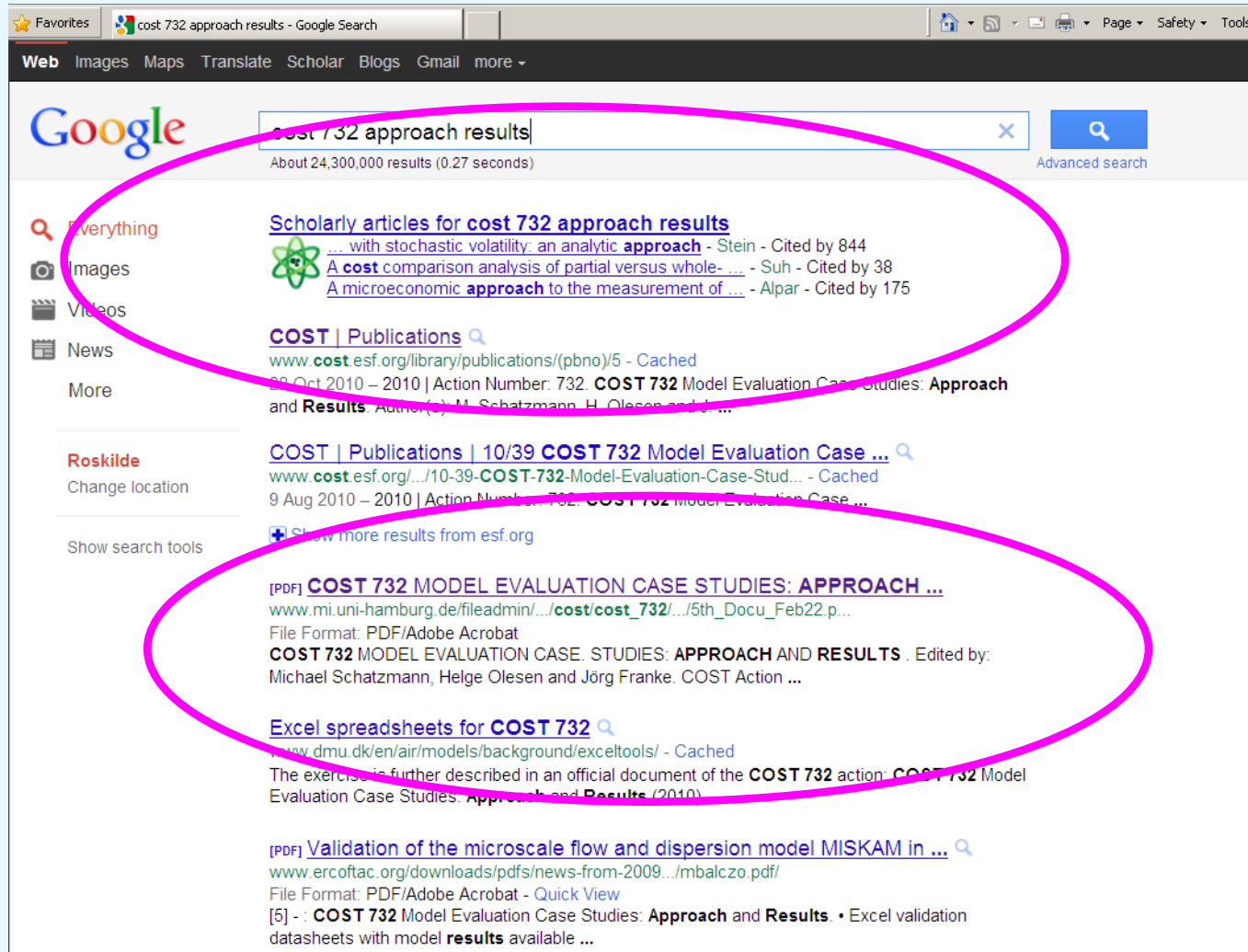
- › **Confirms that publication exists**
- › **Leads to 7 papers citing the COST 732 report**
- › **Newer results than the commercial services, because it searches the entire web,**
- › **Leads to 101 "Related articles" – most of which *are* relevant**
- › **But it does not lead directly to the full report.**
- › **A free service**
- › **Searches full text, not just abstracts**



Google Scholar and classic Google

- › **Compared to a classic Google search, Google Scholar is more tuned towards a scientific audience – but sometimes the classic Google can be a good complement.**

Google 'classic'



The screenshot shows a Google search results page for the query "cost 732 approach results". The search bar is highlighted with a pink oval. The results are listed below, with two specific results highlighted by pink ovals. The first highlighted result is a link to "Scholarly articles for cost 732 approach results" with a snippet mentioning "with stochastic volatility: an analytic approach" and "A cost comparison analysis of partial versus whole-...". The second highlighted result is a PDF document titled "COST 732 MODEL EVALUATION CASE STUDIES: APPROACH AND RESULTS" edited by Michael Schatzmann, Helge Olesen and Jörg Franke. Other visible results include "COST | Publications" from esf.org and "Excel spreadsheets for COST 732" from dmu.dk.

Google

cost 732 approach results

About 24,300,000 results (0.27 seconds)

Advanced search

Everything

Images

Videos

News

More

Roskilde

Change location

Show search tools

[Scholarly articles for cost 732 approach results](#)
... with stochastic volatility: an analytic **approach** - Stein - Cited by 844
A **cost** comparison analysis of partial versus whole-... - Suh - Cited by 38
A microeconomic **approach** to the measurement of... - Alpar - Cited by 175

[COST | Publications](#)
www.cost.esf.org/library/publications/(pbno)/5 - Cached
20 Oct 2010 - 2010 | Action Number: 732. **COST 732** Model Evaluation Case Studies: **Approach** and **Results**. Author(s): M. Schatzmann, H. Olesen and J. ...

[COST | Publications | 10/39 COST 732 Model Evaluation Case ...](#)
www.cost.esf.org/.../10-39-COST-732-Model-Evaluation-Case-Stud... - Cached
9 Aug 2010 - 2010 | Action Number: 732. **COST 732** Model Evaluation Case ...

[Show more results from esf.org](#)

[PDF] [COST 732 MODEL EVALUATION CASE STUDIES: APPROACH ...](#)
www.mi.uni-hamburg.de/fileadmin/.../cost/cost_732/.../5th_Docu_Feb22.p...
File Format: PDF/Adobe Acrobat
COST 732 MODEL EVALUATION CASE. STUDIES: **APPROACH AND RESULTS**. Edited by:
Michael Schatzmann, Helge Olesen and Jörg Franke. COST Action ...

[Excel spreadsheets for COST 732](#)
www.dmu.dk/en/air/models/background/exceltools/ - Cached
The exercise is further described in an official document of the **COST 732** action: **COST 732** Model Evaluation Case Studies: **Approach and Results** (2010).

[PDF] [Validation of the microscale flow and dispersion model MISKAM in ...](#)
www.ercotac.org/downloads/pdfs/news-from-2009.../mbalczp.pdf/
File Format: PDF/Adobe Acrobat - Quick View
[5] - : **COST 732** Model Evaluation Case Studies: **Approach and Results**. • Excel validation
datasheets with model **results** available ...

Are your works included by Google Scholar?

- › You can test it by searching for some
- › In case they are not properly included:
 - › If your institute has professionals taking care of publications tell them about Google's "Inclusion guidelines for webmasters"



Google scholar

[About Google Scholar](#)

[Google Scholar Help](#)

[Advanced Search Tips](#)

[Support for Libraries](#)

Inclusion Guidelines for Webmasters

This document describes the technical details of indexing of websites with scholarly articles in Google Scholar. Its intended audience is webmasters who would like their papers included in Google Scholar search results. See [this page](#) for a less technical overview of the indexing process.

- › If you are on your own, have a look at these guidelines yourself.

Google Scholar

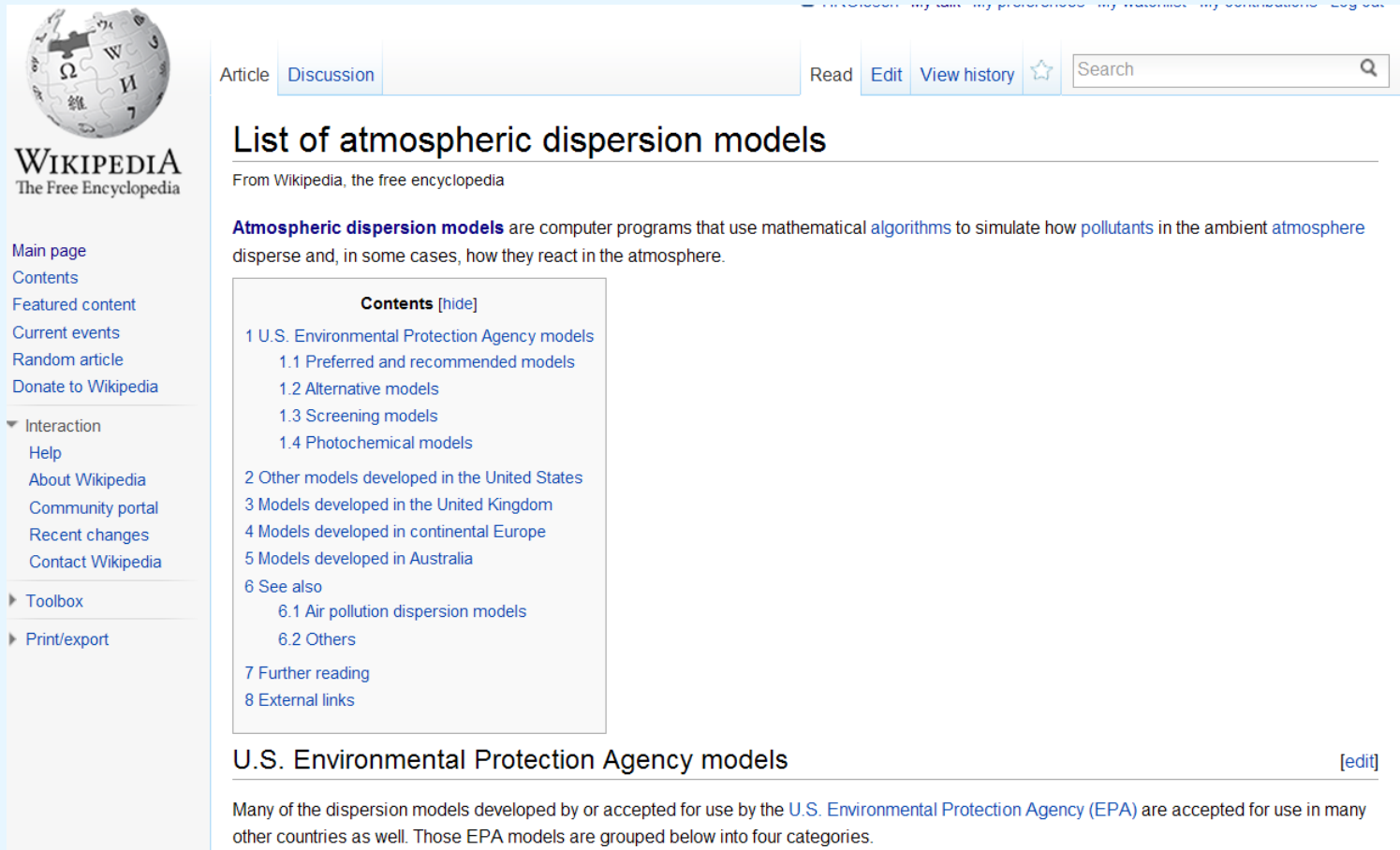
- › **Does an impressive job of organising information**
- › **A recommendable tool**
- › **Help Google Scholar to become even better**
 - › **Put your work on the web and make sure it is included by Google Scholar**
 - › **Be generous in providing links when referring to non-journal papers. This helps Google Scholar to identify 'related articles' and organise information.**



Other 'opportunities' for the modelling community

Wikipedia

Restricted to 'encyclopaedic' articles



The screenshot shows a Wikipedia article page. At the top left is the Wikipedia logo and navigation links. The article title is 'List of atmospheric dispersion models'. Below the title is a summary: 'From Wikipedia, the free encyclopedia'. The main text starts with 'Atmospheric dispersion models are computer programs that use mathematical algorithms to simulate how pollutants in the ambient atmosphere disperse and, in some cases, how they react in the atmosphere.' A 'Contents' box lists sections: 1 U.S. Environmental Protection Agency models (with sub-sections 1.1-1.4), 2 Other models developed in the United States, 3 Models developed in the United Kingdom, 4 Models developed in continental Europe, 5 Models developed in Australia, 6 See also (with sub-sections 6.1-6.2), 7 Further reading, and 8 External links. The first section is expanded to show the sub-sections. At the bottom, the first section title 'U.S. Environmental Protection Agency models' is shown with an '[edit]' link. The main text below it states: 'Many of the dispersion models developed by or accepted for use by the U.S. Environmental Protection Agency (EPA) are accepted for use in many other countries as well. Those EPA models are grouped below into four categories.'

Article [Discussion](#) [Read](#) [Edit](#) [View history](#) [☆](#)

List of atmospheric dispersion models

From Wikipedia, the free encyclopedia

Atmospheric dispersion models are computer programs that use mathematical [algorithms](#) to simulate how [pollutants](#) in the ambient [atmosphere](#) disperse and, in some cases, how they react in the atmosphere.

Contents [\[hide\]](#)

- 1 U.S. Environmental Protection Agency models
 - 1.1 Preferred and recommended models
 - 1.2 Alternative models
 - 1.3 Screening models
 - 1.4 Photochemical models
- 2 Other models developed in the United States
- 3 Models developed in the United Kingdom
- 4 Models developed in continental Europe
- 5 Models developed in Australia
- 6 See also
 - 6.1 Air pollution dispersion models
 - 6.2 Others
- 7 Further reading
- 8 External links

U.S. Environmental Protection Agency models [\[edit\]](#)

Many of the dispersion models developed by or accepted for use by the [U.S. Environmental Protection Agency \(EPA\)](#) are accepted for use in many other countries as well. Those EPA models are grouped below into four categories.



WIKIPEDIA
The Free Encyclopedia

[Main page](#)
[Contents](#)
[Featured content](#)
[Current events](#)
[Random article](#)
[Donate to Wikipedia](#)

▼ [Interaction](#)
[Help](#)
[About Wikipedia](#)
[Community portal](#)
[Recent changes](#)
[Contact Wikipedia](#)

► [Toolbox](#)
► [Print/export](#)

Article [Discussion](#)

[Read](#)

[Edit](#)

[View history](#)



Operational Street Pollution Model

From Wikipedia, the free encyclopedia

The **Operational Street Pollution Model (OSPM)** is an [atmospheric dispersion model](#) for simulating the dispersion of air pollutants in so-called street canyons. It was developed by the [National Environmental Research Institute of Denmark](#), Department of Atmospheric Environment. For about 20 years, OSPM has been used in many countries for studying traffic pollution, performing analyses of field campaign measurements, studying efficiency of pollution abatement strategies, carrying out exposure assessments and as reference in comparisons to other models. OSPM is generally considered as state-of-the-art in practical street pollution modelling.

Contents [\[hide\]](#)

- [1 Description](#)
- [2 See also](#)
- [3 Further reading](#)
- [4 References](#)

Description

[\[edit\]](#)

In OSPM concentrations of traffic-emitted pollution is calculated using a combination of a plume model for the direct contribution and a box model for the recirculating part of the pollutants in the street.

The NO₂ concentrations are calculated taking into account NO-NO₂-O₃ chemistry and the residence time of pollutants in the street. The model is designed to work with input and output in the form of one-hour averages.

The main principles in the model are depicted in *Figure 1* for the case of a wind direction nearly perpendicular to the street canyon. A receptor point in leeward position is affected by the direct plume showing considerably higher concentrations than a receptor in windward position being exposed to the less concentrated recirculating air.

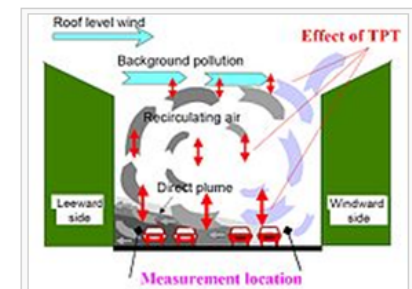


Figure 1: Principal flow pattern inside a

Specialised wiki on Atmospheric Dispersion Modelling

A Wiki provides something that we normally miss in the community of atmospheric dispersion professionals:

An easy possibility to provide feedback and pool our experiences with procedures, data sets and models related to our work.

Home page of the Atmospheric Dispersion Wiki

Atmospheric Dispersion Modelling

Pet topics | Experimental data sets | Model evaluation | Dispersion models

Random Page | Wiki Activity

Home [Edit](#) 70 PAGES ON THIS WIKI [Add a Page](#) [0](#) Talk [Like](#) 3

[Contents \[show\]](#)

Wiki on *Atmospheric Dispersion Modeling*

This [wiki](#) addresses the international community of atmospheric dispersion modelers - primarily researchers, but also users of models. Its purpose is to **pool experiences gained by dispersion modelers during their work**.

Subjects - entry to the substance of the site [Edit](#)

- [Dispersion models](#) Links to sites with models; comments on various types of models.
- [Model evaluation](#) Tool boxes; results of model evaluation exercises.
- [Experimental data sets](#) Links to sites with data sets; comments on data sets.
- [Pet topics](#) This is where you can contribute articles on your pet topics. Many experienced researchers have valuable experiences that should be communicated to others.
- [International networks on atmospheric pollution](#) Information and links to activities such as the "Harmonisation initiative", FAIRMODE, ACCENT, CLEAR, COST 732, etc.)
- [National Agencies, Organization and Institutes](#) Here is where to find or contribute articles describing any national agencies, organizations and institutes that deal with atmospheric dispersion.
- [User communities](#) and national societies dealing with dispersion modeling. Links and issues of particular interest.
- [Supplementary Information](#) Here is where to contribute or to look for miscellaneous dispersion modeling technical articles which do not fit into any of the above categories.

What is unique about this site? [Edit](#)

There are many web sites dedicated to atmospheric dispersion models. However, this site has the following unique qualities:

- In contrast to traditional web sites, it is possible for anyone to contribute easily to its contents. Therefore, the site has the potential to become more comprehensive than a site maintained by a single web master. Contributions can be actual information content, or links to material elsewhere on the Web.
- **Warnings against pitfalls and common mistakes are of high interest.** Researchers are encouraged to report on pitfalls they encounter, and which they would like to warn others against.



Contributions

Contributions can be actual information content, or they can consist of links to material elsewhere on the web..



Problem about the Atmospheric Dispersion Modelling wiki

- > **Very few contributors**
- > **Victim of the 'funding obstacle'?**

Future for the Atmospheric Dispersion Modelling wiki

- › **Continues to exist**
- › **New host without annoying adds?**
- › **Please contribute. Note Wiki is well suited to pool experiences on experimental data sets, because anybody can contribute with experiences, now and in future.**
- › **Warnings against pitfalls and common mistakes are of high interest.**

Address of the Wiki on Atmospheric Dispersion Modelling

AtmosphericDispersion.wikia.com

Forgot the address?

Search for

Wiki Atmospheric Dispersion

- or go through www.harmo.org

YouTube

- > **A video repository**
- > **Could be used for atmospheric dispersion experiments, model visualizations, educational videos illustrating physical phenomena like stack downwash etc.**

Atmospheric Dispersion mailing list

- › **A list exists in the framework of Google groups. Established January 2011, approximately hundred subscribers.**
- › **<http://groups.google.com/group/atmospheric-dispersion>**



A cornerstone in our world:

- > **Scientific journals – now also several with open access**



LinkedIn

www.linkedin.com

- › **Has presently two relevant groups**
 - › **Air Quality Dispersion Modeling**
 - › **Air Quality and Emission testing network**



Account Type: Basic

▼ Helge Rørdam Olesen

[Home](#) [Profile](#) [Contacts](#) [Groups](#) [Jobs](#) [Inbox](#) 3 [Companies](#) [News](#) [More](#)

Groups ▼ Search...



Air Quality Dispersion Modeling

[Discussions](#) [Members](#) [Promotions](#) [Jobs](#) [Search](#) [More...](#)

This group is for those interested in air quality dispersion modeling using models such as AERMOD, , ISCST3, CALPUFF, HYSPLIT, SCIPUFF, CAL3QHC, CALINE3/4, CMAX, SLAB, DEGADIS, and INPUFF. Feel free to contribute your experiences using these or any other air quality models.

About this Group

Created: December 19, 2010

Type: Networking Group

Members: 415

Owner: [Tom Grosch](#)

Group Members in Your Network



[Andrew Young](#)



Account Type: Basic

▼ Helge Rørdam Oles

- Home
- Profile
- Contacts
- Groups
- Jobs
- Inbox 3
- Companies
- News
- More

Groups ▾ Search...



Air Quality & Emission Testing Network

- Discussions
- Members
- Promotions
- Jobs
- Search
- More...

The purpose of this group is for facility environmental managers, policymakers, consultants, stakeholders, regulators, and contractors to discuss and exchange ideas about air quality compliance and regulatory trends.

The vision is for a free exchange of information on topics such as;

- How a new regulation with affect the economics of an industry?
- How do I get an air permit for my facility?
- Do I need to perform dispersion modeling?
- What do I need to know about stack testing?
- How do I get a new project approved?
- What effect will my project have on air quality?
- How do I calculate my annual emissions?
- What GHG driven regulations are on the horizon?
- etc.

This group will provide a forum for air quality professionals to ask questions, learn based on members experience, and discuss issues that affect air quality management and compliance. The goal is for a diverse sampling of professionals from industry, government, consulting firms, and stakeholders to adequately address and exchange ideas on these issues.

About this Group

Created: December 7, 2008

Type: Professional Group

Members: 766

Owner: [Jerry Bovee](#)

Similar Groups



Stack Testing Council

Members: 109

[Join](#)



A&WMA Young Professionals

Members: 836

Activity: Discussion 1

LinkedIn and the "funding obstacle"

- › **Despite the 'funding obstacle' LinkedIn groups are very much alive.**
- › **LinkedIn groups on dispersion modelling have not yet caught on in Europe**
- › **LinkedIn presents interesting opportunities – but has also a potential to eat up your time**

The *Harmonisation* initiative...

- > www.harmono.org has a page entitled 'Related activities and tools'.
- > It contains all the links mentioned. The page will be extended with follow-up information

To summarise

- › Use Google Scholar to search for information
- › Make sure your work is indexed by Google Scholar
- › Use Wikipedia where appropriate
- › Use the *Atmospheric Dispersion Modelling Wiki* where appropriate
- › Consider also to use YouTube, the Atmospheric Dispersion mailing list and LinkedIn.
- › And of course: Scientific journals remain a corner stone.

See paper H14-259 or www.harmo.org for details