

Elsevier Publishing Campus | Publishing Connect

Ethics in Science

in particular ethics in publishing

Prof. dr. Henrik Rudolph
Editor-in-Chief Applied Surface Science

Workshop Brazil Oct. 2018

Defining ethics (in scientific publishing)



ethics *plural in form but singular or plural in construction* : the discipline dealing with what is good and bad and with moral duty and obligation

• **2a** : a set of moral principles : a theory or system of moral values the present-day materialistic *ethic*

• an old-fashioned work *ethic*

• —often used in plural but singular or plural in construction an elaborate *ethics*

• Christian *ethics*

• **b ethics** *plural in form but singular or plural in construction* : the principles of conduct governing an individual or a group professional *ethics*

c : a guiding philosophy

• **d** : a consciousness of moral importance forge a conservation *ethic*

• **3 ethics** *plural* : a set of moral issues or aspects (such as rightness) debated the *ethics* of human cloning

Ethics and morality... the good citizen

The Eastern Philosophy

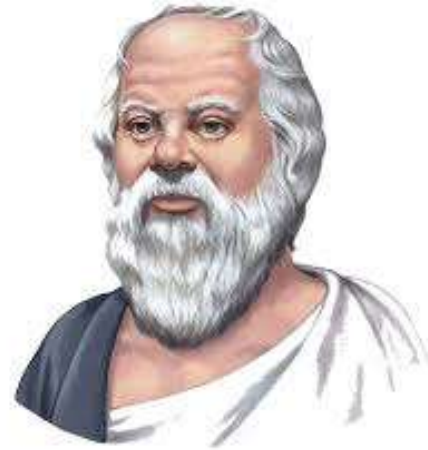


Confucius 551-479 BC

The explicit rules of (good) behaviour
The “silver” rule:

*"What you do not wish for yourself,
do not do to others."*

The Western Philosophy



Socrates ca. 470-399 BC

The search for moral virtues
Socrates's paradoxical wisdom:

*"To know you are not wise, makes
you wiser, than men who think they
are wise"*

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Ethics and morality... is that a religion?

The Eastern (Buddhism)



“If we fail to look after others when they need help, who will look after us?”

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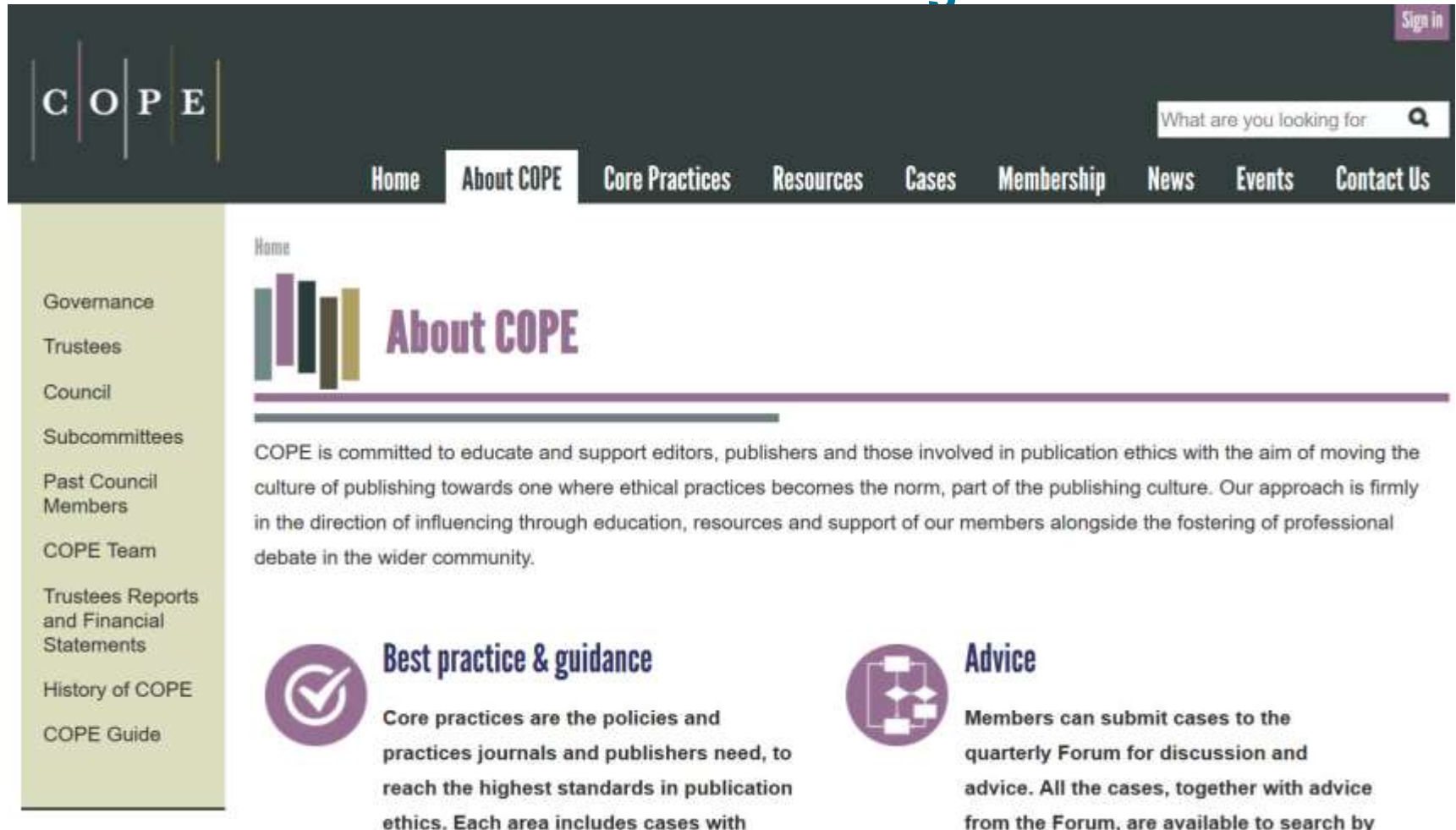
The Western (Christianity)



“We have the duty to do good”

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COPE – Committee on Publishing Ethics



The screenshot shows the COPE website homepage. At the top, there is a dark navigation bar with the COPE logo on the left, a search bar in the center, and a 'Sign in' button on the right. Below the navigation bar is a horizontal menu with links: Home, About COPE, Core Practices, Resources, Cases, Membership, News, Events, and Contact Us. The 'About COPE' link is highlighted. On the left side of the page, there is a vertical sidebar with a list of links: Governance, Trustees, Council, Subcommittees, Past Council Members, COPE Team, Trustees Reports and Financial Statements, History of COPE, and COPE Guide. The main content area features a 'Home' heading, a graphic of four vertical bars in purple, black, and gold, and the title 'About COPE'. Below this, a paragraph states: 'COPE is committed to educate and support editors, publishers and those involved in publication ethics with the aim of moving the culture of publishing towards one where ethical practices becomes the norm, part of the publishing culture. Our approach is firmly in the direction of influencing through education, resources and support of our members alongside the fostering of professional debate in the wider community.' At the bottom of the main content area, there are two columns. The left column is titled 'Best practice & guidance' and features a purple circular icon with a white checkmark. The text below the icon reads: 'Core practices are the policies and practices journals and publishers need, to reach the highest standards in publication ethics. Each area includes cases with'. The right column is titled 'Advice' and features a purple circular icon with a white flowchart. The text below the icon reads: 'Members can submit cases to the quarterly Forum for discussion and advice. All the cases, together with advice from the Forum, are available to search by'.

COPE

Sign in

What are you looking for?

Home About COPE Core Practices Resources Cases Membership News Events Contact Us

Home

About COPE

COPE is committed to educate and support editors, publishers and those involved in publication ethics with the aim of moving the culture of publishing towards one where ethical practices becomes the norm, part of the publishing culture. Our approach is firmly in the direction of influencing through education, resources and support of our members alongside the fostering of professional debate in the wider community.

Best practice & guidance

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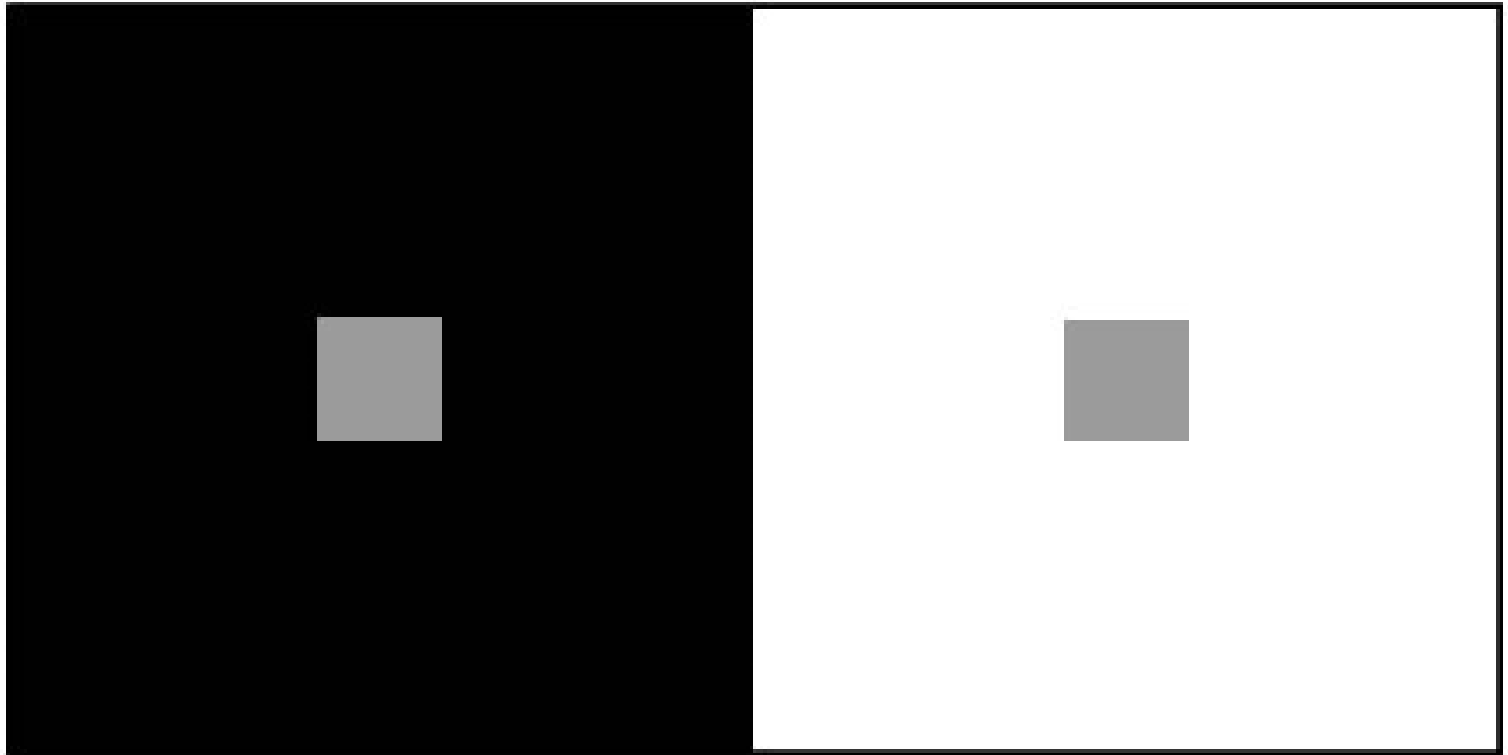
www.publicationethics.org

Ethics is like riding a bike....



The (traffic) laws might be different, but it is all a matter of keeping the balance

It is not all black and white



And it can be a matter of reference, but we try to do it on an absolute “scale”!

The “ground rules” of scientific publishing

<https://www.publishingcampus.elsevier.com/pages/63/ethics/Publishing-ethics.html>

(Good) science

Science ethics

Authorship

Ownership of material

Conflict of interest

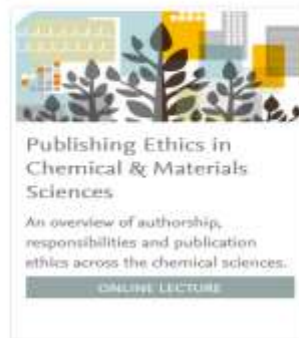
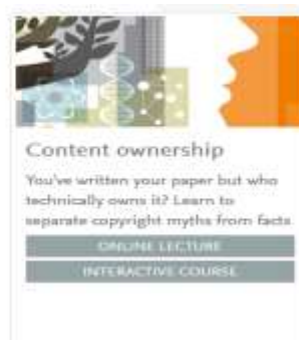
Publishing ethics

Salami publishing

Duplicate submissions

Fair peer reviewing

Research fraud



Stakeholders in the publishing circle

They all have a responsibility in the process

- 1) Funding “agency”
- 2) Academic institution
- 3) Author and co-authors
- 4) Publisher
- 5) Editor
- 6) Reviewers
- 7) Libraries
- 8) Readers



Publisher....?

Obviously it would not be in the interest of a publisher to be “unethical”

- There are so-called “*predatory journals*”. They often look like other legitimate journals, but they are scam online *publications* that swindle researchers to publish for payment
- There are also “*predatory conferences*” often with associated conference proceedings

Typical signs of predatory journals/conferences: broad and ambitious subjects. No Web-of-Science or Scopus listing of journals. No proper peer review and no established editorial board.

BOTTOM LINE: WASTE OF MONEY AND TIME

Publisher....!

Naming and shaming (but is that ethical?)



International Journal of Current Research
In Science, Engineering & Technology

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Authors and co-authors

Authorship:

- Omitting authors
- Adding (contributor?)
- Deleting
- Changing author affiliation
- Changing order of authors
- Corresponding authors
- Acknowledging contributors



Authors and co-authors

Research:

- Unethical research methods
- Research standards violations
- Research data manipulation
- Omitting “negative” results
- Hidden research (or instrument) errors
- Research results misappropriation
- (Undisclosed) conflicts of interest



Authors and co-authors

Submission (process):

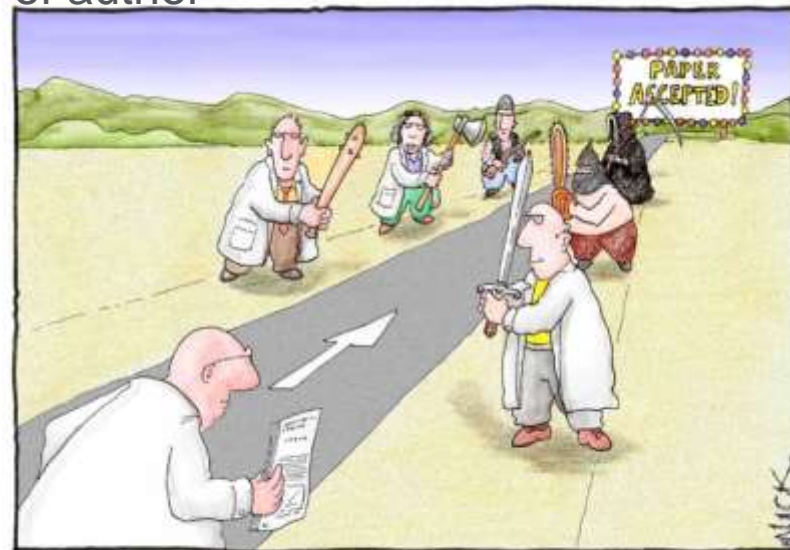
- Multiple simultaneous submissions
- Resubmission of already accepted paper
- Reusing parts of already accepted papers
- Submitting under a false identity
- Suggesting false (or non-existing) reviewers
- Chasing the reviewers
- (Undisclosed) conflicts of interest



Reviewers (and editors!)

Editorial (review) process

- Conflicts of interest (collaborator, friend, foe ..)
- Not an expert in the field
- Deliberately giving a poor review grade
- Reviewer contacting the authors during review
- Using the information you have received for own purposes
- Bias towards ethnic or other background of author
- Promoting own (unrelated work)
- Unnecessarily delaying the work



Most scientists regarded the new streamlined peer-review process as "quite an improvement."

How to detect plagiarism (tools for editors and reviewers)

For Editors

- Plagiarism detection tool at time of submission (iThenticate)
- Tool based on Scopus database to identify potential reviewers



For Reviewers

- Free access to *All content published by Elsevier*
- Free access to *The world's largest abstract and citation database*
- Reference-linking and resolution in PDF of the manuscript



Academic misconduct and ethics complaints

Contact the journal (via the home page) or directly to EiC

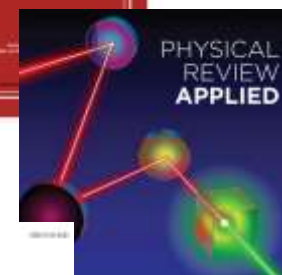
EiC or special ethics group will research the complaint

Outcome of investigation can be:

- 1) Complaint is directed at the right journal (multiple journal academic misconduct)
- 2) Complaint is not justified (or not provable)
- 3) Complaint is malicious
- 4) Complaint is (partly) justified

In case of a justified claim – this leads to:

- 1) A corrigendum if the issue is remediable
- 2) Retraction if the publication is so erroneous that it can't be solved with a corrigendum



Retraction – the ultimate “punishment”



doi:10.1016/j.sigpro.2005.07.019 Cite or Link Using DOI
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RETRACTED: Matching pursuit-based approach for ultrasonic flaw

N. Ruiz-Reyes , P. Vera-Candeas , J. Curpián-Alonso , J.C. Cuevas-Martínez and F. Ló...

Available online 24 August 2005.

This article has been retracted at the request of the Editor-in-Chief and Publisher. Please see
<http://www.elsevier.com/locate/withdrawalpolicy>.

Reason: This article is virtually identical to the previously published article: “New matching pursuit-based algorithm for SNR improvement in ultrasonic NDT”, *Independent Nondestructive Testing and Evaluation International* volume 39 (2005) 453 – 459 authored by N. Ruiz-Reyes, P. Vera-Candeas, J. Curpián-Alonso, R. Mata-Campos and J.C. Cuevas-Martínez.

the echoes issuing from the flaws to be detected. Therefore, it cannot be cancelled by classical time averaging or matched band-pass filtering techniques.

Many signal processing techniques have been utilized for signal-to-noise ratio (SNR) improvement in ultrasonic NDT of highly scattering materials. The most popular one is the split spectrum processing (SSP) [1–3], because it makes possible real-time ultrasonic test for industrial applications, providing quite good results. Alternatively to SSP, wavelet transforms (WT) based denoising/detection methods have been proposed during recent years [4–8], yielding usually to higher improvements of SNR at the expense of an increase in complexity. Adaptive time-frequency analysis by basis pursuit (BP) [9,10] is a recent technique for decomposing a signal into an optimal superposition of elements in an over-complete waveform dictionary. This technique and some other related techniques have been successfully applied to denoising ultrasonic signals contaminated with grain noise in highly scattering materials [11,12], as an alternative to the WT technique, the computational cost of the BP algorithm being the main drawback.

In this paper, we propose a novel matching pursuit-based signal processing method for improving SNR in ultrasonic NDT of highly scattering materials, such as steel and composites. Matching pursuit is used instead of BP to reduce the complexity. Despite its iterative nature, the method is fast enough to be real-time implemented. The performance of the proposed method has been evaluated using both computer simulation and experimental results, even when the input SNR (SNR_{in}) is lower than 0 dB (the level of echoes matching structures is above the level of the echoes).

space. We define the over-complete dictionary as a family $D = \{g_i; i=0, 1, \dots, L\}$ of vectors in H , such as $\|g_i\| = 1$.

The problem of choosing functions $g_i[n]$ that best approximate the analysed signal $s[n]$ is computationally very complex. Matching pursuit is an iterative algorithm that offers sub-optimal solutions for decomposing signals in terms of expansion functions chosen from a dictionary, where l^1 norm is used as the approximation metric because of its mathematical convenience. When a well-designed dictionary is used in matching pursuit, the non-linear nature of the algorithm leads to compact adaptive signal models.

In each step of the iterative procedure, vector $g_i[n]$ which gives the largest inner product with the analysed signal is chosen. The contribution of this vector is then subtracted from the signal and the process is repeated on the residual. At the m th iteration the residue is

$$r^m[n] = \begin{cases} s[n] & m=0, \\ r^{m-1}[n] + \alpha_{i_m} g_{i_m}[n], & m \neq 0, \end{cases} \quad (1)$$

where α_{i_m} is the weight associated to optimum atom $g_{i_m}[n]$ at the m th iteration.

The weight α_i^m associated to each atom $g_i[n] \in D$ at the m th iteration is introduced to compute all the inner products with the residual $r^m[n]$:

$$\alpha_i^m = \frac{\langle r^m[n], g_i[n] \rangle}{\langle g_i[n], g_i[n] \rangle} = \frac{\langle r^m[n], g_i[n] \rangle}{\|g_i[n]\|^2} = \langle r^m[n], g_i[n] \rangle. \quad (2)$$

The optimum atom $g_{i_m}[n]$ (and its weight α_{i_m}) at the m th iteration are obtained as follows:

$$g_{i_m}[n] = \underset{i \in D}{\operatorname{argmax}} \langle r^m[n], g_i[n] \rangle^2 = \underset{i \in D}{\operatorname{argmax}} |\alpha_i^m|^2. \quad (3)$$

The computation of correlations $\langle r^m[n], g_i[n] \rangle$ for all vectors $g_i[n]$ at each iteration implies a high computational effort, which can be substantially reduced using an updating procedure derived from Eq. (1). The correlation updating procedure [13] is performed as follows:

$$\langle r^{m+1}[n], g_i[n] \rangle = \langle r^m[n], g_i[n] \rangle - \alpha_{i_m} \langle g_{i_m}[n], g_i[n] \rangle. \quad (4)$$

2. Matching pursuit

Matching pursuit was introduced by Mallat and Zhang [13]. Let us suppose an approximation of the ultrasonic backscattered signals $s[n]$ as a linear expansion in terms of functions $g_i[n]$ chosen from an over-complete dictionary. Let H be a Hilbert

The article of which the authors committed plagiarism: it won't be removed from ScienceDirect. Everybody who downloads it will see the reason of retraction...

Resources for the (young) scientist

<https://researcheracademy.elsevier.com/>

The screenshot shows the Researcher Academy website. At the top, the Elsevier logo is on the left, and navigation links for 'Learn', 'Career path', and 'Blog' are on the right, along with icons for user profile, notifications, and search. The main header features the text 'Unlock your research potential' and a sub-header describing free e-learning modules. A 'Start learning >' button is positioned on the right. Below this is a horizontal timeline with five stages: 'RESEARCH PREPARATION', 'WRITING FOR RESEARCH', 'PUBLICATION PROCESS', 'NAVIGATING PEER REVIEW', and 'COMMUNICATING YOUR RESEARCH'. Each stage is represented by a blue circle with a right-pointing arrow. The 'Latest' section at the bottom displays three featured modules: 'WRITING SKILLS' (How to turn your thesis into an article, 1 h), 'ENSURING VISIBILITY' (Conference skills for researchers, 30 m), and 'FUNDAMENTALS OF PUBLISHING' (10 reasons to get – and use – an ORCID ID, 15 m).

Researcher Academy

Learn Career path Blog

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RESEARCH PREPARATION WRITING FOR RESEARCH PUBLICATION PROCESS NAVIGATING PEER REVIEW COMMUNICATING YOUR RESEARCH

Latest

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1 h

ENSURING VISIBILITY
Conference skills for researchers
30 m

FUNDAMENTALS OF PUBLISHING
10 reasons to get – and use – an ORCID ID
15 m

Advertisement.....



The poster for the 3rd International Conference on Applied Surface Science (ICASS) features a dark red background with a large white 'ICASS' logo at the top left. To the right, the dates '17-20 June 2019' and the location 'Pisa Congress Palace, Pisa, Italy' are displayed in white. Below the logo, the full name of the conference is written in white. The main text block contains an announcement, a description of the conference's focus, and a call to action to submit abstracts. On the right side, there is a logo for 'ORGANISED BY ELSEVIER' featuring a tree. At the bottom left, a list of conference topics is provided. A large yellow circular graphic in the center-right contains the abstract submission deadline. The bottom right corner features a photograph of the Pisa Congress Palace and the Leaning Tower of Pisa, with the online submission link below it.

ICASS

17-20 June 2019
Pisa Congress Palace, Pisa, Italy

3RD INTERNATIONAL CONFERENCE ON APPLIED SURFACE SCIENCE

We are delighted to announce the **3rd International Conference on Applied Surface Science (ICASS)**, which will be held at the Pisa Congress Palace, Pisa, Italy on 17-20 June 2019.

ICASS will report on and discuss current research on the role and use of surfaces in chemical and physical processes, related to catalysis, electrochemistry, energy, new functional materials, nanotechnology and characterization techniques/methods. Do not miss this opportunity to hear and discuss about recent scientific developments in applied surface science and submit your abstract soon.

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CONFERENCE TOPICS

- Surface science of catalysis, electrocatalysis and photocatalysis
- Surface engineering and functionalization
- Functional surfaces and coatings
- Surface science applied to energy conversion and storage
- Surface nanotechnology and devices
- Biointerfaces
- Electrochemistry at surfaces and interfaces
- Advances in surface characterization tools
- Environmentally-friendly materials
- Semiconductors – surface and interface
- 2D layered materials and assembling

SUBMIT YOUR ABSTRACT BY
18 January
2019

SUBMIT YOUR ABSTRACT ONLINE:
elsevier.com/icass-conference