

IAPR Newsletter



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Welcome to the Special ICDAR Issue
by Heydi Méndez-Vázquez, IAPR Newsletter EiC

In previous issues, we have been talking about collaboration. Scientific conferences are great networking opportunities: We encounter other researchers, keep up with scientific research, hold exploratory talks, and begin collaborations. The International Conference on Document Analysis and Recognition (ICDAR) is one of the main IAPR- sponsored conferences that have the potential to generate significant scientific and societal impacts. It is the premier international event for scientists and practitioners involved in any aspect of document analysis and recognition, including but not limited to: document image processing; text and symbol recognition; historical document analysis; handwriting recognition; signature verification; document summarization, translation, and classification; and indexing and retrieval of documents.

The ICDAR series enjoys a long tradition of success. The first edition was held in Saint Malo, France, in 1991, and the 17th edition took place in August of 2023, in San José, California, USA. A detailed report on [ICDAR 2023](#) can be found in this special ICDAR issue, along with additional reports from two post-conference workshops and a list of the other six workshops (with links) plus a special [ICDAR "Then and Now"](#) that might tell us something about the nature of scientific progress.

ICDAR 2023 presented high-quality research works with innovative ideas. To acknowledge and promote the spirit of research and participation, three different [IAPR/ICDAR Awards](#) were granted. As noted above, representing the winners and as a young researcher, we have invited Simon Corbillé to share some insight about his work with the IAPR community in our [Next Generation](#) feature.

We hope you enjoy reading this issue and that it inspires you to share your experiences and insights for making the newsletter even more interesting, collaborative and beneficial to the IAPR community. Please click [here](#) to send your feedback and ideas.

~ Heydi Méndez-Vázquez, IAPR Newsletter EiC

The views expressed in this newsletter represent the personal views of the authors and not necessarily those of their host institutions or of the IAPR.

Calls For Papers



For the most up-to-date information on IAPR-supported conferences, workshops and summer/winter schools, visit www.iapr.org/conferences

Conferences,
Dates, &
Locations

2024

Calls and Deadlines

in order from earliest paper deadline
(other deadlines vary in order)

[GRAPHADON 2024](#)

June 24–28, 2024
Rouen, France

1st IAPR/CNRS
Summer School on
Graphs for Data Analysis

Open Until
June 10, 2024 (or until full)

[S+SSPR 2024](#)

Sept. 9 - 11, 2024
Venice, Italy

Joint IAPR International Workshops
on Statistical Techniques in Pattern Recognition
and Structural and Syntactic Pattern Recognition

Papers: June 23, 2024

[DeLTA 2024](#)

July 10-11, 2024
Dijon, France

5th International Conference
on Deep Learning Theory
and Applications

Papers: Closed
Late-Breaking Papers: Apr. 30, 2024
Abst. Track & Doctoral Cons: May 8, 2024
Tutorials, Demo, or Panel Prop: May 27, 2024

[IJOB 2024](#)

September 15–18, 2024
Buffalo, NY, USA

IEEE/IAPR International
Joint Conference on Biometrics

Papers: April 30, 2024
(11:59 pm Pacific)

[DICTA 2024](#)

November 27-29, 2024
Perth, Western Australia

International Conference
on Digital Image Computing:
Techniques and Applications

Papers: July 1, 2024
Special Session Proposals: May 1, 2024
Workshop Proposals: May 1, 2024
Tutorial Proposals: July 15, 2024

[ICPR 2024](#)

December 1-5, 2024
Kolkata, India

27th International Conference
on Pattern Recognition

Papers: Closed
Competition Proposals: Closed
Workshop Proposals: Closed
Tutorial Proposals: June 15, 2024

[CCIW 2024](#)

September 25-27, 2024
Milan, Italy

Computational
Color Imaging Workshop 2024

Papers: May 15, 2024
(extended)

[CVIP 2024](#)

December 19-21, 2024
Chennai, India

9th International Conference
on Computer Vision
and Image Processing

Papers: Apr. 30, 2024
(extended)

[ANNPR 2024](#)

October 10-12, 2024
Montreal, Canada

11th TC3 Workshop
on Artificial Neural Networks
in Pattern Recognition

Papers: May 14, 2024

[CIARP 2024](#)

November 26-29, 2024
Talca, Chile

27th Iberoamerican Congress
on Pattern Recognition

Papers: June 1, 2024
Workshop Proposals: May 31, 2024



Check the ICPR 2024 [website](#) regularly for registration information, important dates, and links to Competition websites



CALLS FROM IAPR COMMITTEES

From the IAPR Education Committee:

[Call for Applications for IAPR Research Scholarships](#)

IAPR Research Scholarships seek to make possible mobility across institutions and international boundaries for Early Career Researchers working in fields within the scope of the IAPR's interests. The scholarship covers round trip travel & basic living expenses for a visit of less than 12 months. Applications may be submitted at any time before the visit starts.

Requirements: The candidate must be a full-time researcher with between one and eight years experience. The candidate must also be a member of an IAPR member society.

Click [here](#) to learn more or contact: IAPR Secretariat, c/o Linda O’Gorman, secretariat@iapr.org

From the IAPR

Industrial Liaison Committee:

[Call for Students Seeking Internship Opportunities](#) [and for](#) [Companies with Internships Available](#) [to contribute to the](#) [Internship Listings on the](#) [IAPR Internship Brokerage Page](#)

The IAPR-ILC wishes to promote opportunities for students to undertake internships at companies working in Pattern Recognition, AI, Computer Vision, Data Mining, Machine Learning, etc. We do this through a web-based internship listing service. Companies can list their internship opportunities; and students can browse the listings and contact the company.

For Students

If you are seeking an internship, please click on the underlined call title above (or [here](#)) to find an updated list of 38 companies –from Adobe to Zhongan Technology– offering internships, locations (some remote), requirements, etc.

NOTE: As of April 28, 2024, 45 opportunities are listed, 31 of them with continuous or flexible application cycles.

For Companies

with Internships Available

Click on call title (link) above for examples.

Please email your listings as follows:

To: webmaster@iapr.org

Subject: IAPR internships, listing

1. Details:
2. Host:
3. Location:
4. Post Type:
5. Specialty:
6. Funded:
7. Length:
8. Degree & Visa Requirements:
9. Internship start date:
10. Application closing date:
11. Details:
12. Contact:

From the IAPR

Executive Committee (ExCo):

[Call for Proposals for](#) [Summer/Winter Schools](#)

Summer/winter schools are training activities that expose students and junior students to the latest trends and techniques in a particular pattern recognition field.

To be eligible for a grant, the organizers must work through at least one of the IAPR's Technical Committees as they develop and present the proposal.

How to Submit: Proposals for IAPR-supported summer schools should be submitted by email, **at least four months in advance of the start of the school.**

Send proposals to IAPR Secretariat Linda O’Gorman (secretariat@iapr.org). A PDF attachment containing all the required information is appreciated.

For detailed guidelines, see the Proposal Requirements described in the [ExCo Initiative on Summer Schools](#).

The ICPR 2024 Organizing Committee invites members of the IAPR community to submit proposals for tutorials on core techniques, application areas, and emerging research topics of interest for ICPR attendees.

About ICPR 2024 Tutorials

An effective and informative tutorial should provide a broad introduction to the chosen research area as well as in-depth coverage on selected advanced topics. Each proposal will be assessed based on its scientific merit, proposed structure, overall relevance, and how it complements the main conference. *Proposals that focus exclusively on the presenters' own work or commercial presentations are not acceptable.*

Costs and Terms

Tutorials are free for all participants with full ICPR2024 registration. Separate (paid) registration for tutorial(s) alone will be available. Anyone interested in attending a tutorial should register for it, whether or not they have registered for ICPR 2024. Participation in tutorials is limited to the room capacity. Admittance for unregistered attendees will be first come, first served. ICPR 2024 reserves the right to cancel a tutorial if the responsibilities are not fulfilled by the proponent, or if too few attendees register for the event, or for any unforeseen reason.

ICPR 2024 will be responsible for

- Providing a meeting venue with necessary technical equipment and catering services (lunch and/or coffee breaks)
- Providing staff to help with the on-site/on-line organization
- Advertising the event on the ICPR web site
- Scheduling the event together with the organizers and including it in the conference program

Tutorial organizers are responsible for

- Compiling and distributing notes to the participants
- Leading the tutorial event at ICPR2024

A tutorial proposal must include:

- Title of tutorial
- Names, titles, affiliations, emails, and brief bio sketches of the people delivering the tutorial
- Name and email of the lead person for communication and responsibility
- Preference for half- or full-day event (the latter requires a brief justification)
- Tutorial description with list of topics to be covered, along with a brief outline and important details; any innovative pedagogy employed; any hands-on participation, etc.
- Expected target audience, in terms of both composition and estimated number of attendees
- List of citations and/or URLs to relevant publications and/or products of the tutorial presenters and other relevant work
- A description of how this proposal relates to tutorials/short courses appearing at ICPR (and also other major related conferences) within the last two editions
- A description of and/or links to any planned materials or resources to be distributed to attendees

Important Dates

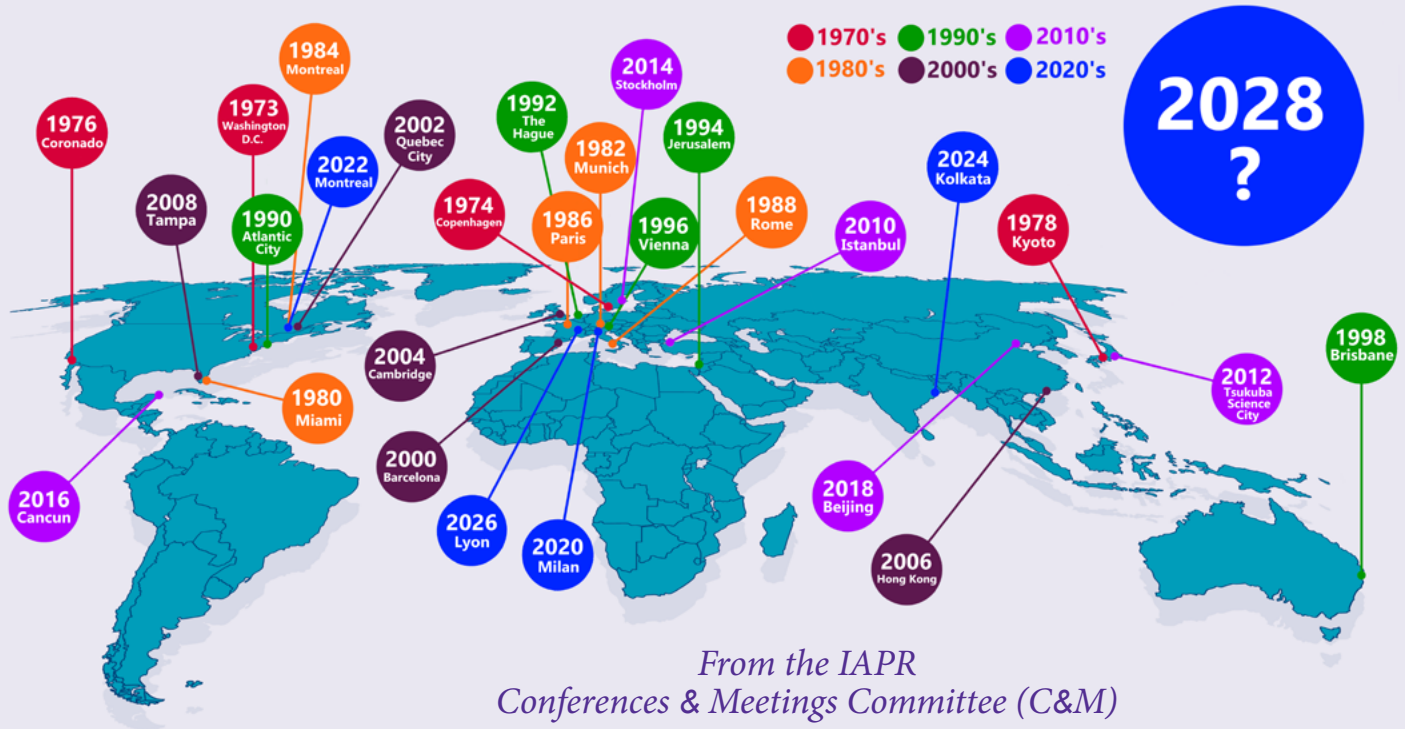
June 15, 2024 (anywhere on Earth)	Tutorial Proposals Due
July 15, 2024	Acceptance Notification
Dec. 1, 2024	Tutorial Date (tentative)
Dec. 1-5, 2024	ICPR Conference Dates

Submissions and Inquiries ~ Tutorials

To propose a tutorial, a PDF file containing the information listed above must be submitted by email using this link: icpr2024tutorials@gmail.com. Questions should be addressed to the ICPR 2024 Tutorial Co-Chairs (listed below), using this link: icpr2024tutorials@gmail.com.

TUTORIAL COMMITTEE CHAIRS

B. B. Chaudhuri (India), Michael Jenkin (Canada), and Guoying Zhao (Finland)



From the IAPR
Conferences & Meetings Committee (C&M)

CALL FOR BIDS TO HOST ICPR 2028

Deadline: Aug 5, 2024

ICPR^{THE} INTERNATIONAL CONFERENCE ON PATTERN RECOGNITION

THE major scientific event organized under the aegis of the International Association for Pattern Recognition brings together a truly international community of experts to discuss their work and experiences, form new collaborations, and promote research and development in Pattern Recognition.

The conference is hosted and coordinated by an institution with the support of an endorsing [IAPR member organization](#) (i.e., a national pattern recognition society).

Institutions interested in hosting ICPR 2028 must proceed according to the rules outlined [here](#), in the latest version of the proposal guidelines. A bid submission implies full agreement with the IAPR constitution and with the guidelines and procedures for hosting the conference.

Please read the guidelines carefully.

DEADLINES AND DECISIONS

Bids must be submitted to the Chair of the IAPR Conferences and Meetings Committee (C&M) by Aug 5, 2024.

The selection of the conference venue will be made by the IAPR Governing Board during its meeting at ICPR 2024 in Kolkata, India.

SEND BIDS BY AUG 5, 2024 TO

C&M Chair Anna Esposito (anna.esposito@unicampania.it)



FROM THE EXCO...

IAPR MEMBERSHIP COMMITTEE HELPS FORM AND INCORPORATE NEW MEMBER ASSOCIATIONS



by Sergio A. Velastin, Chair of Membership Committee

News from the IAPR Executive Committee

The 27th International Conference on Pattern Recognition (ICPR 2024) will be held in Kolkata, India, December 1-5, 2024. The paper submission deadline is over. Stay tuned to the website. The workshops and their deadlines will be announced soon.

ICPR 2024 is also looking for sponsors and industrial involvement. The conference is a great opportunity to establish ties between industry and academia *and* to attract talented young scientists. Find details on the sponsorship program by clicking [here](#).

ICPR has changed the submission management system this year and will be using CMT for the first time. This requires building a new database of reviewers, and to ensure a quality review process, **more reviewers are needed.** *If you have sufficient research experience in pattern recognition or a related field, especially if you have submitted a paper, and you are willing to serve for ICPR 2024 as a reviewer, please fill in the form linked [here](#).*

The Call for bids to host ICPR 2028 is open. Details are [in this issue](#) or click [here](#) to go directly to submission guidelines on the IAPR website. The deadline for bids is August 5, 2024.

IAPR Conferences. Many Conferences and Workshops under the umbrella of the IAPR will be held next year around the world. Visit the *Upcoming Conferences* section at [IAPR.org](#). Organizers can learn more about the sponsorship/endorsement application and rules [here](#).

50th Anniversary(ies) of the IAPR. Learn more [here](#). If you have ideas about activities to celebrate the anniversary, or memories or photos to share, please let us know by emailing 50th@iapr.org.

It is with great sadness that we learned of the passing of Professor Luigi P. Cordella, FIAPR, one of the Pattern Recognition pioneers in Italy, President of the IAPR member society from Italy, and its IAPR Governing Board representative from 2000-2004. An *In Memoriam* is planned for our July issue.

The IAPR is a scientific association of national associations in the broad field of Pattern Recognition. IAPR gives individuals and organizations who belong to national associations access to an international network of peers and opportunities for active involvement, for example as part of specialized IAPR Technical Committees. They can also benefit from reduced fees to events endorsed, sponsored or organized by IAPR, such as conferences, symposia, Summer/Winter schools, etc. IAPR also offers a range of awards, internships and research scholarships to members of affiliated associations. Individuals who have become internationally recognized in the field can also be nominated to become Fellows of the IAPR (click here for more information on [IAPR Fellowships](#)). So, the IAPR exists to support and enhance activities in the field of Pattern Recognition and it does that through the effort of individuals who are locally organized through the affiliated organizations.

The IAPR Membership Committee is specifically tasked with the mission of supporting affiliated associations, encouraging the formation of newer associations and helping them in the processes of gaining critical mass to later apply for affiliation (once they have a minimum number of 25 active members and have built some track record, for example locally organized meetings, conferences, a web site, etc.). We can assist existing and new associations by sharing good practice from well-established associations, such as how to encourage students and younger researchers to be part of their local associations. We are aware that in some countries it might be difficult to sustain a level of membership and activity from year to year, and we are looking to support multi-country regional associations, especially from parts of the world that are not well represented in the IAPR, such as Africa, Central America, Middle East, and so on (click [here](#) for a list of existing associations). As all committees of the IAPR, the Membership Committee comprises volunteer scientists who gladly give part of their time to help. We will be happy to assist you with ideas and information to both simplify the process of constituting an association and facilitate your incorporation later to the IAPR. Once you are affiliated, you will be able to apply for IAPR endorsement of your events, and your members will have access to the opportunities available through the IAPR.

If you are excited about forming a new association that in time can affiliate to the IAPR, please contact the chair of the Membership Committee Prof. Sergio A Velastin (sergio.velastin@ieee.org).

~Sergio A. Velastin



A TRIBUTE TO EDWIN HANCOCK

a memorial written by

Richard C. Wilson (University of York) and Josef Kittler (University of Surrey)

as intended for publication in the journal, *Pattern Recognition*, Vol. 150, June 2024, 110297



Photo credit: <https://sites.google.com/view/tc2-dlg>

Edwin Hancock, who died from cancer at the age of 67, was one of the leading figures in Computer Vision and Pattern Recognition of the last thirty years. He continued working, both on scientific papers and as Editor-in-Chief of the journal *Pattern Recognition*, right up to his death. His career was extraordinary both in its scientific contributions and breadth. He worked on an incredibly diverse range of topics from image edge detection through to quantum computing. He was one of the most productive scientists of his time, with a deep commitment to scholarship and the academic community.

Hancock began his scientific career in the very different field of particle physics, following on from a degree in Physics from the University of Durham in 1977. He obtained his PhD from the same university in 1981 on the collisions of protons and kaons. He then joined the Rutherford Appleton Laboratory as a researcher in collaboration with Stanford. This involved regular visits to SLAC to work on the particle collider. In a move that proved key to his later career, he decided that experimental physics was not for him, and moved into the emerging field of computer vision and pattern recognition. He worked as a Scientific Officer at Rutherford Appleton from 1985, finally taking up a lecturing post at the University of Surrey in 1989.

This marked the beginning of a remarkable scientific career. He made significant early contributions in the field of consistent labelling of images. He joined the University of York as a lecturer in 1991, becoming a full professor in 1998. At York, he founded the Computer Vision and Pattern Recognition group and embarked on a wide-ranging program of research. He made significant contributions to shape-from-X, face recognition and quantum methods for pattern recognition. He will probably be most remembered for his work on structural pattern recognition with graphs, where he was instrumental in defining and shaping the field in the late 1990s and early 2000s.

To understand the scale of Professor Hancock's contributions, some statistics are necessary. In his career, he authored around 1000 academic works, mainly original contributions to conferences and academic journals. At the height of his career, he was among the top five most productive computer scientists in the world. Perhaps the most significant contribution is through his students. He qualified around 50 PhD students as a supervisor, many of whom continue in academia, with some now in senior positions at institutions around the world.

He also strongly believed in the importance of the scientific community and its power to advance knowledge. He chaired the British Machine Vision Conference twice and was track chair for ICPR in 2016. He served on the panel of the UK Research

Excellence Framework twice and led the evaluation commission for the Czech Academy of Science in 2016 and 2021. He served on the editorial board of many journals and became Editor-in-Chief of *Pattern Recognition* in 2017, a post he held at the time of his death. He was an active member of the International Association for Pattern Recognition, where he served on the governing board for many years and was 2nd Vice President from 2016-2018.

Edwin received many honours during his career which are too numerous to list here. Among them, he was awarded fellowships of the IET (2008), IEEE (2015), Institute of Physics (2007), BCS (2008), a BMVA distinguished fellowship (2016), and was elected Fellow of the Royal Academy of Engineering in 2021. He was awarded a Doctor

of Science (DSc) degree from the University of Durham in 2008 and a D.Univ (Honoris Causa) from the University of Alicante in 2015. He received the Pierre Devijver Award from the IAPR in 2018 for contributions to statistical pattern recognition.

Edwin Hancock was dedicated to the advancement of science throughout the whole of his life. He had a talent for working with other researchers, improving the quality of their work with his own contributions. He had an intuitive knack for spotting good ideas and problems to work on. He could often see that there was something important in an idea before anyone else. Those who worked with him will know his warmth of spirit and his generosity with ideas and his own time.

Although his academic and professional life were exemplary, and hard to follow, Edwin was a very rounded man, with interests in history, architecture, art, and gastronomy. He loved to travel, with Italy and Spain being his favorite destinations. The Mediterranean food inspired him to hone his own cooking skills to a sophisticated degree, as witnessed by his friends and colleagues. With fondness for art, he accumulated an impressive collection of art works that he proudly showed to his guests. With his eclectic knowledge he enriched the discussion of any topic by fascinating information. His passing is a great loss to both his friends and the scientific community.

*Richard C Wilson
and Josef Kittler*

International Conference on Pattern Recognition, 2018



Photo from Lu Bai

BEIJING, CHINA

THE LEGACY OF EDWIN HANCOCK: A TC 15 TRIBUTE

by Vincenzo Carletti

It is with profound sadness that the International Association for Pattern Recognition Technical Committee #15 (IAPR TC15) on Graph-based Representations in Pattern Recognition reflects on the passing of Professor Edwin Hancock on 19 January 2024. His departure leaves a void in our hearts and our scientific community.

Earning his PhD in high energy nuclear physics in 1981 from Durham University, Professor Hancock moved his research interest to computer science. Starting in 1985, he delved into graph-based methods within computer vision, pattern recognition, and complex networks, marking a significant pivot in his research focus towards these interdisciplinary areas.

Professor Hancock's pioneering work in graph-based pattern recognition and computer vision was not only groundbreaking but also served as a beacon for future research in the field. His extensive oeuvre, including numerous publications, keynote speeches, and innovative research projects, has significantly advanced our understanding and application of graph theory in pattern recognition.

Building upon Professor Hancock's remarkable legacy, it's noteworthy to highlight his significant academic and professional achievements. Professor Hancock was an Emeritus Professor at York, where he founded and led the Computer Vision and Pattern Recognition Group since 1997. His research spanned a wide range of interests, including computer vision, pattern recognition, machine learning, and complex networks. He was recognized with numerous awards, such as the Pattern Recognition Society medal in

1991, and held prestigious positions, including Editor-in-Chief of the journal *Pattern Recognition*.

His contributions to the field were vast, with about 200 journal papers and 650 refereed conference publications, underscoring his role as a leading figure in graph-based pattern recognition.

Throughout his career, Professor Hancock's research received numerous recognitions. In 1991, he was honored with the Seventeenth Annual Pattern Recognition Award for "Discrete Relaxation."

He also earned an honorable mention in 1999 for the contribution titled *Matching Delaunay Graphs*. The British Machine Vision Association named him a Distinguished Fellow in 2016, and in 2018, he received the prestigious Pierre Devijver Award from the IAPR, where he was elected Fellow in 2016 and served as second vice-president from 2016 to 2018.

His contributions to pattern recognition and computer vision led to his election as a Fellow of the Royal Academy of Engineering in 2021.

As a cherished member and an inspirational figure within TC15, Professor Hancock was instrumental in fostering a spirit of collaboration and innovation among peers and mentees alike. He contributed to TC15 with his remarkable experience, being one of the founders and a long-time member of the steering committee of TC15, since 1996.

In 2003 Professor Hancock organized the 4th IAPR-TC15 Workshop on Graph-based Representations in Pattern Recognition in York.



Photo: GbR (from Vincenzo Carletti)

Professor Hancock was a leading figure in the domain of Graph-based Representations, making substantial contributions to Graph Matching, Graph Embedding, and Graph Edit Distance. His work is foundational across various research areas within our community, serving as essential pillars that continue to support and inspire ongoing investigations and applications.

Today, as we mourn his loss, we also celebrate the indelible legacy Professor Hancock leaves behind: a legacy of intellectual curiosity, dedication to excellence, and a deep-seated commitment to advancing the field of pattern recognition. His memory will continue to inspire us, guiding our endeavors and reminding us of the profound impact one individual can have on a community and a discipline.

In honor of Professor Hancock's remarkable contributions, we are moved to continue his work with even greater determination, aspiring to reach the heights he envisioned for our field. His spirit will forever remain a part of TC15, inspiring future generations of researchers to pursue innovation with passion and purpose.

We extend our deepest sympathies to his family, friends, and colleagues during this difficult time. Professor Hancock's legacy is not just in the knowledge he created but in the community he nurtured. He will be deeply missed and never forgotten.

~ Vincenzo Carletti



Photo: GbR (from Vincenzo Carletti)

10TH INTERNATIONAL CONFERENCE ON PATTERN RECOGNITION

Atlantic City, NJ, USA - June 18-21, 1990

Opening this conference, Ed Cohen, Executive Director of the New Jersey Commission on Science and Technology, presented some statistics about the state. These were impressive but omitted to mention the only name that I can associate with New Jersey - that of Bruce Springstein. As the conference proceeded I became aware of a second New Jersey notoriety omitted from the list- Donald Trump. This name was not just to be seen written across almost every casino or hotel in Atlantic City. Daily reports across the front page of the New York Times detailed the failing health of his financial empire.

Finally, a question to the organisers. Was the prohibition banquet inspired by a nostalgic yearning for the days when gambling was illegal in New Jersey?

Edwin Hancock

SERC Rutherford Appleton Laboratory, UK

In remembrance of his wit and humility, we include here some writing by Edwin Hancock: Opening and closing paragraphs from his report on the 10th ICPR in the IAPR Newsletter, June 1990 (left and above), and a few lines from his acceptance speech upon receiving the honor of Distinguished Fellow from The British Machine Vision Association (below).

(2016) "Thirty years ago to the day, I was on a train travelling to Bristol to present my very first vision paper at the Second Alvey Vision Conference.

About a year earlier I had switched fields from high energy physics to work with Josef Kittler. At the time it seemed a bit of a step in the dark, and perhaps even a step down from what seemed the more glamorous world of particle physics. [...] Expectations were not high. But I was nervous - this was to be my first conference presentation. In particle physics only the bosses got to give talks.

We, on the other hand, manned night shifts running the apparatus, spent long hours in darkened rooms visually scanning bubble chamber film, crawled inside powerful magnets (which were too delicate to power off) and wrestled with a pneumatic monster called the Hough-Powell (or huffpuff) device which temperamentally scanned for particle tracks on film. [...] After all, the conference was not so bad. They politely received my rushed and garbled talk, too full of equations on handwritten overheads. Old habits die hard. They were a convivial and irreverent lot who drank just as heavily as particle physicists and managed to look bright eyed and bushy tailed the next day. Many were also refugees from exciting but crowded areas of physics. I came across graphs and shape-from-shading for the first time. As they say, *be careful what you allow into your head, it will find its way out one day.*"

~ Edwin Hancock, BVMA Distinguished Fellow

It is with great sadness that I learnt of Edwin's passing away.

Others will no doubt portray his contributions to the UK computer vision research community better than I can do.

But I like to share here a few personal memories.

Edwin was one of the very first BMVA persons that I met at conferences and events after moving to Edinburgh in 1988 from Italy, to complete my PhD in Bob Fisher's laboratory.

I remember my impact with Edwin's oral presentations. In those days, slides were acetate sheets written by hand. You could tell a conference presenter on a train or airplane from the coloured pens peeking out of his pocket or bag. I recall my consternation at the parade of thick equations bursting from Edwin's presentations. ♦ I thought I had much to learn from him technically; I am not sure how much I managed in the end.

I subsequently met Edwin in many BMVA meetings, for instance as BMVC Program Chair (I have served four times in this role). I recall an Area Chairs

meeting (then about 15 people in all!) in which he kept addressing Tim Ellis, then President of the BMVA, as "el Presidente".

Edwin was the nominator for my IAPR Fellowship. I was fortunate to enjoy his and Roy Davies's great support. They encouraged me to persist after the IAPR turned me down at the first attempt. I recall Edwin's email after the first application was rejected: "I am very surprised. To me, you were a cert". We got there the second time. And I learnt the word "cert".

I saw Edwin for the last time at IAPR 2016 in Cancún, when I received my IAPR Fellowship certificate. I recall thinking that he looked older than I remembered. We had a nice conversation over a drink.

We shall have no more, and it feels rather unreal.

~ Prof Emanuele Trucco, PhD, FRSA, FIAPR,
FBMVA, FAAIA
NRP Chair of Computational Vision
VAMPIRE Project Director (Dundee)

♦ *LE's Note:* This recollection is underscored in Edwin's BVMA Fellow acceptance speech (bottom of [page 10](#)).

We were reached at the start of the year by the sad news that Professor Emeritus Edwin Hancock passed away. Ed was one of the colleagues who has served in most of the roles of IAPR on standing committees, technical committees, the governing board, and the executive committee. I met him at numerous conferences over the years since I was a PhD student in the 1990ies, the first encounter being SSPR 1996 in Leipzig. We shared the love for ice cream. When I arrived in Capri to attend IWVF 2001, Ed was the first person I spotted when stepping off the Funicolare. Of course, we took this opportunity for a delicious

gelato together. Another special occasion with Ed was when I as Past President was hosting the interim ExCo meeting in Uppsala in 2017. During three productive days, we worked hard and relaxed fully. The attached photo was taken by my husband Joakim before dinner at our home one of the evenings. Sincere condolences to Edwin's family, friends, and close colleagues.

~ Ingela Nyström



Photo: Joakim Nyström, Uppsala, Sweden on August 27, 2017.

Professor Edwin Richard

Hancock, 1957-2024, to whose name is appended Fellowship of many august societies including the IAPR, was lately of the University of York UK.

With eulogies, it is a challenge to write in connection with a character as rich as Edwin's. I knew Edwin for many years, first meeting him at one of the early ICIPs in the eighties in Singapore where we together enjoyed one of Robyn Owens' early papers on local energy. We shared a few aspects of our careers and I remember well some spirited discussions as to potential candidates for Fellowship of the IAPR when we served together on the IAPR Governing Board. I joined him when he took up editorship of *IET Computer Vision*, though not when he advanced to Editorship of *Pattern Recognition*.

His view of research was grounded in science, not fashion. His main field was anything except the topics he disliked (though that dislike never affected his judgement as Editor). He is one of the few to list High Energy Physics

as an interest, and he even managed to couple that theory with computer vision. He was particularly well known for his work on graph matching, and as an artist he enjoyed a richer palette than many. I particularly admired his ambition: he was interested in achieving at the top level, as his long record of papers in *TPAMI* testifies. He led an excellent team at a top Department, consistent with his ambition and abilities.

To write of the man himself is more of a challenge. His appearance suggested a committed academic. I wondered how frequently his spectacles had met a road roller; his attire might have piqued a potential suitor, though he was a confirmed bachelor. He seemed to be distinctly averse to wearing socks, and I realise now that is one of the questions I had always intended to ask him. He was a great friend and unstinting in his support.

Edwin achieved a great deal. He gave much of his time and skill not only to research but also to developing the research infrastructure on which we depend

so much. Steinbeck wrote that "a journey is a person in itself; no two are alike" – some journey, some man. I shall miss greatly his company, his counsel and his contributions. Requiescat In Pace, Edwin Richard Hancock.

~ Professor Mark Nixon,
FIAPR BMVA
Distinguished Fellow 2015
School of Electronics and
Computer Science
University of Southampton,
SO17 1BJ, UK

<http://users.ecs.soton.ac.uk/msn/>



I'm sorry to say I didn't know Edwin that well on a personal level. Certainly not as well as others in the centre. But he has been a constant throughout my career. When I entered computer vision as a fresh-faced PhD student, he was already a well-established senior member of the British machine vision community. Over the years I had the pleasure of interacting with him in various BMVA, BMVC and IAPR capacities —all communities which owe him a debt of gratitude for his long-standing service. Edwin was also very supportive of my own career developments and helped and supported me on many occasions for which I will always be grateful. It's always sad to see a pillar of our community go, but he will be remembered for his science and contributions to the field.

~ Prof. Richard Bowden, CVSSP,
University of Surrey, UK

With a profound sense of loss, I remember Professor Edwin Hancock, a towering figure in computer vision and pattern recognition. Edwin's contributions were monumental in their scientific breadth and depth and in the warmth and wisdom he shared with his colleagues and students. I deeply admired his ability to tackle fundamental problems with elegance and his relentless pursuit of knowledge that pushed the boundaries of our understanding. Edwin's legacy will continue to inspire future scientists and researchers. My thoughts are with his family, friends, and the many lives he touched. I will miss his company and our conversations at meetings, particularly at ICPR and S+SSPR.

~ Sudeep Sarkar
University of South Florida, Tampa

I had the pleasure to meet Edwin Hancock about 20 years ago at a conference. I was impressed by his knowledge of pattern recognition, his kindness, and the sharpness of his mind. In 2018 he offered me the position of the Associate-Editor-in Chief of *Pattern Recognition* journal. I appreciated this show of trust in me very much. We met several times at the Editorial Board meetings of *Pattern Recognition* journal at ICPR conferences. I met him the last time in person at the ICPR conference in Beijing in 2018. We remained good friends until his unexpected and sudden passing in Jan. 2024.

Dr. Hancock was completely dedicated to his job as Editor-in-Chief of *Pattern Recognition* journal. Under his leadership the journal blossomed and became one of the prime journals in the pattern recognition field. Several times I asked him for advice on editorial matters and he always responded promptly and with excellent suggestions.

Edwin was a popular figure in the pattern recognition community. I remember him at various conferences surrounded by people and students. We will miss him.

~ Adam Krzyzak
Concordia University
Montreal, Canada

I'm sad to hear that Edwin passed away. I came to know him about 30 years ago through ICPR and other conferences and also through serving the *Journal of Pattern Recognition*, under the leadership of Prof. Robert Ledley.

Though initially trained as a high energy nuclear physicist, Edwin had a strong inclination in computer science, and later conducted most of his research in pattern recognition. So it is not surprising to see that he published numerous papers in *Pattern Recognition* and in *IEEE PAMI*. Actually, Edwin made many contributions in the field of pattern recognition and received the prestigious IAPR Pierre Deviver Award. He also received Fellowship in IAPR, IEEE, and the British Royal Society of Engineering. He served IAPR as the Second Vice President from 2016 to 2018. Edwin also mentioned to me that he successfully nominated two winners of the most prestigious King-Sun Fu Prize.

In view of Edwin's significant contributions to the field of pattern recognition, I nominated him to be my successor at the *Journal of Pattern Recognition* before I stepped down as its Editor-in-Chief, after completing decades of service to this journal. Since taking up this position, Prof. Hancock consolidated the Editorial Board of the *PR* journal and appointed many new Associate EICs and Associate Editors, and the journal grew steadily over the years, reaching a high Impact Factor of 8.518.

This is a great loss to our pattern recognition community, and I wish to express my deepest sympathy to Edwin's relatives, friends, colleagues, students, and all the *PR*-lovers.

~ Ching Y. Suen, FIAPR, FRSC, FIEEE, FAAIA
Emeritus Editor-in-Chief of *Pattern Recognition*
Concordia Hon Chair in AI & PR & Co-Director of
CENPAMI, Concordia University



I first met Edwin Hancock in 1997, in Venice, at the first edition of the series of workshops on Energy Minimization Methods in Computer Vision and Pattern Recognition (EMMCVPR), which he started together with Marcello Pelillo. The second edition was organized by Edwin (again with Marcello) at his home university in York, in 1999. These two workshops were highly inspiring events that had a great impact on my research career. EMMCVPR stands as a testament to Edwin's remarkable ability to foster collaboration across diverse research domains, bridging gaps and forging lasting connections. Edwin was not only a brilliant researcher but also a gentle soul who approached every challenge with a smile and every success with humility. Being his colleague and friend was an honor—a sentiment I know many share. His absence leaves a void not easily filled.

~ Mario Figueiredo
Distinguished Prof of ECE and
Feedzai Prof of Machine Learning
Instituto Superior Técnico Portugal

Photo: Mario Figueiredo
Frame: Adobe Stock 417215004 by didem



Photo: Diego Sánchez/Victor Alvarez

IAPR Executive Committee, ICPR 2016

**EDWIN R. HANCOCK
YEARS OF LEADERSHIP
SERVICE TO THE IAPR COMMUNITY**

- 1998-2002 Chair, TC4 Computer Vision and Image Understanding
- 2004-2016 Governing Board (UK)
- 2004-2016 Constitution and Bylaws Committee
- 2008-2016 Chair, Constitution and Bylaws Committee
- 2008-2014 Chair, TC2 Structural and Syntactical Pattern Recognition
- 2016-2018 2nd Vice President of IAPR
- 2018-2022 Chair, Equality, Diversity and Inclusion Committee

From 2003 to 2023, Edwin Hancock was co-editor of ten Springer books of conference proceedings.

These include:

-  GbRPR 2003
- S+SSPR 2010/12
- SIMBAD 2013
- CAIP 2013 (2 vol)
- CIARP 2014
- EMMCVPR 2017
- ICIAP 2023 (2 vol)



“...even if you set out on a journey and unexpectedly find yourself back where you started, the unexpected is always more interesting than the expected and the place to which you return can be very different to when you first left.”

~ Edwin R. Hancock, January 2019
 “Getting to Know... Edwin Hancock, IAPR Fellow”
 IAPR Newsletter 41(1). Complete article [here](#).

REMEMBERING MY FRIEND AND MENTOR

Prof. Edwin Hancock was my supervisor when I pursued my PhD at University of York, UK, from October 2010 to January 2015. After I graduated from York, Edwin still continuously supported my academic career and gave me a lot of help. He was not only a rigorous supervisor, but also a great mentor to my academic career and life. I really cannot imagine my current academic achievements without his greatest guidance. He even sent E-mails to me and discussed academic papers just one week before his death, but never mentioned any of his health problems. I feel very sad that most of us didn't know anything about his disease, and even cannot do anything to support him.



Prof. Edwin Hancock's passing is a great loss to both his friends and the scientific community. We may all have a lot of words to him, but do not know where to start. We will miss him forever, and never forget his friendship and remarkable scientific achievements. On that day, I lost my respected supervisor, my great mentor, and my nice friend, but I trust that inheritance is the best way to remember. Rest in peace, Edwin!

~ Lu BAI
Professor
School of Artificial Intelligence
Beijing Normal University
Beijing, China

From the *IAPR Newsletter*
January 2016:

The "Eduardo Caianiello" Award [for] the best paper authored or co-authored by at least one young researcher was attributed to Lu Bai, co-author of a paper titled "An Edge-based Matching Kernel through Discrete-time Quantum Walks" by **Lu Bai, Zhihong Zhang, Peng Ren, Luca Rossi, and Edwin Hancock.**



Known all over the world,
Edwin R. Hancock
will be missed
all over the world.

Additional tributes
are linked below.

[The Guardian](#)
[Springer](#)
[Diario de Alicante](#)
[Gazette and Herald](#)

Photos: Lu BAI

Frames and shelf: Adobe Stock 130571228 by MrP

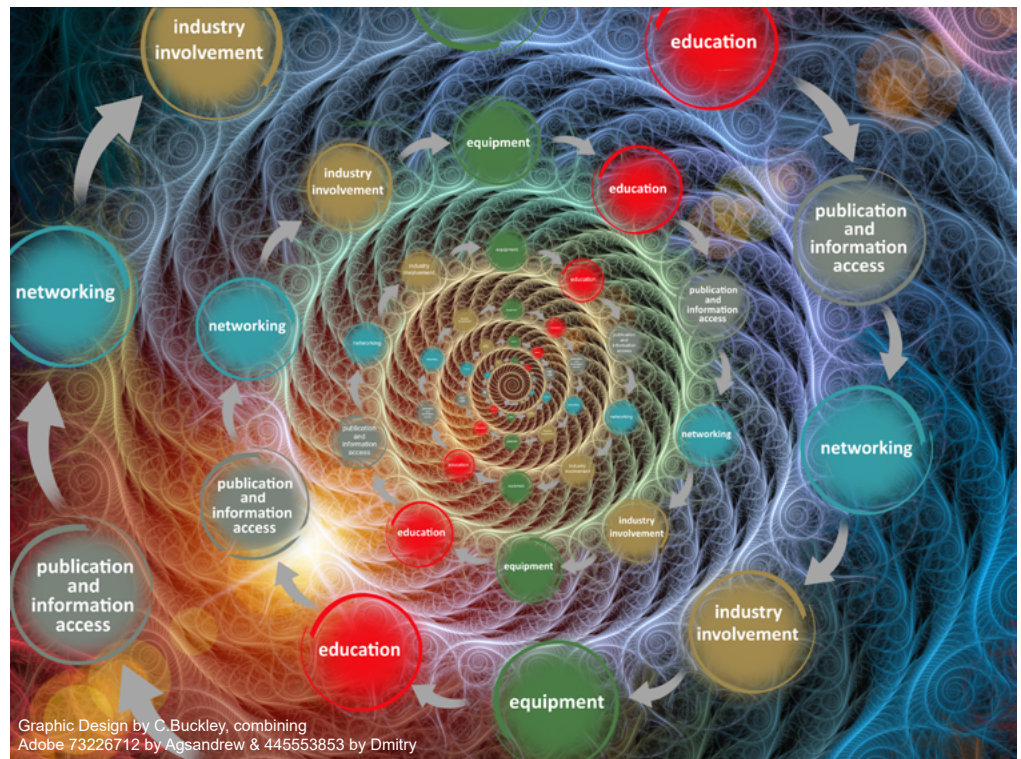


Note from your EIC, LE, and EDI Committee Chair: This feature of the IAPR Newsletter is devoted to advertising activities and news from the IAPR standing committee on Equality, Diversity and Inclusion (EDI). The statement of IAPR Policy on EDI can be found [here](#). Our goal in this regular feature is to call attention to EDI initiatives that may be of interest to our readers. **Maria De Marsico, Chair of EDI**, invites all readers to share information about any related initiatives in their countries or national organizations. Information can be sent to demarsico@di.uniroma1.it. Please use the subject line: "Relevant Information for IAPR EDI Committee."

Dear Readers
of the IAPR Newsletter,

The gender gap in research achievements, especially in STEM (Science, Technology, Engineering and Mathematics) fields, long ago became a hot topic. Experts continue to debate how to counteract the current gender imbalance in both academic and industrial scenarios, from award nomination and selection to leadership positions. However, when tackling Equality, Diversity and Inclusion problems, we often forget the complex interplay of various types of opportunity imbalance. For example, social and economic underdevelopment not only magnifies gender imbalance in affected countries [1] but seems to be in turn affected by the gender gap itself [2].

In so many ways, it is possible to observe self-propagating, exclusionary cycles: More resources produce better research that produces better academic and industrial achievements that produce more resources; high-quality research requires access to up-to-date information resources, sufficient financing, and international networks just to demonstrate the ability to do high-quality



Graphic Design by C.Buckley, combining Adobe 73226712 by Agsandrew & 44553853 by Dmitry

The fractal nature of exclusionary cycles of scientific progress.

research. To further complicate matters, knowledge itself has become a commercial product, so that researchers need economic resources just to access the latest scientific results. Building a research knowledge network requires personal contacts, which are facilitated by international venues, but participating in international venues requires further economic resources.

Given the number of factors involved, it may be helpful to consider a quite optimistic perspective discussed by Vose and Cervellini over 40 years ago [3]. A very large gap between the desire to do research and research achievement was clearly recognized, but the authors' belief at the time was that it could be easily overcome considering some basic requirements: 1) a slow but constant increase of the educated population; 2) clear research priorities and

well-motivated funding requests to convince politics; 3) concentration of specialized facilities and equipment at a few sites, where it may be most efficiently utilized and maintained; 4) continuous contact with the mainstream of ideas and developments via on-site visits and collaborations (presently also possible via the international diffusion of the scientific literature); 5) solution of the bureaucratic and economic difficulties of importing sophisticated scientific equipment and spare parts. It seems a reasonable and, after all, feasible recipe. However, after forty years, things have not changed so much, and the debate has seen periods of intense discussion and periods in which problems deemed more urgent took over.

Perhaps the broad, multifactor approach was too ambitious? But another quite dated paper published in 2003 titled *Information for Research in Developing Countries—Information Technology, a Friend or Foe?* [4] focuses on the above-mentioned single factor: “contact with the mainstream of ideas and developments.” The paper presents an interesting analysis of the disadvantage of developing countries in accessing scientific literature. Starting from the time of printed journals and continuing with the advent of the Internet and electronic sources of information, this has led to the exclusion of most developing-country researchers from taking part as equal partners in publishing, refereeing, and in international collaboration. Of course, the same technologies can help to bridge the information gap between rich and poor countries and support more equal research productivity worldwide. But despite the described initiatives, after twenty years, problems persist. “A small but important part of the world’s inequities manifests itself in the field of scientific publishing, where

the bulk of what is published in widely read peer-reviewed scientific journals is authored by writers associated with institutions in industrialized countries” [5]. As of 2008, the only countries that seriously compete with the rich western countries in this field are China and India [5].

A possible solution is represented by Open Access (OA) publication, but its role is controversial. A [2022 post](#) on the official PLoS Blog, with the title *Open Access Is Essential for Low-Income Countries*, reports the outcomes of an investigation using data from the World Bank’s country classification by income and author affiliation data from the Web of Science to examine the relationship between income level and 1) open access publishing and 2) references made to open access literature. The results show that countries in sub-Saharan Africa publish and cite OA literature at a higher rate than the rest of the world. At the same time, the proportion of OA publications and of OA use in the Middle East and Asia is the lowest. Most publishers provide publication fee waivers for low-income countries but not (or only partially) for middle-income countries, so this is only a partial explanation. A survey of researchers from the developing world to ascertain experiences and attitudes toward OA publishing [6] reveals a very positive attitude to OA research and OA journals, but when selecting a journal in which to publish, OA was seen as a much less important criterion than factors relating to international reputation.

In summary, building scientific capacity in developing countries is an open challenge that can be, in part, addressed by improving worldwide access to scientific information. It is worth referring to the byline/summary of another quite dated paper, to compare its analysis with the present situation and observe that ongoing changes

are still not sufficient: “Simply transferring knowledge and instrumentation is not enough to help developing countries build their own research base. Such efforts must be tied to national and local needs to create trust and services for society in the long term” [7]. The big picture is complicated, but as researchers in pattern recognition, we specialize in complicated problems. We must find ways to break open exclusionary cycles and use our considerable knowledge and resources to improve access to the same in developing countries.

~ Maria De Marsico

[1] Jayachandran, S. (2015). The Roots of Gender Inequality in Developing Countries. *Annual Review of Economics*, 7(1), 63-88.

[2] Klasen, S. (2018). The Impact of Gender Inequality on Economic Performance in Developing Countries. *Annual Review of Resource Economics*, 10, 279-298.

[3] Vose, P. B., & Cervellini, A. (1983). Problems of Scientific Research in Developing Countries. *IAEA Bull*, 25(2), 37-40.

[4] Arunachalam, S. (2003). Information for Research in Developing Countries—Information Technology, a Friend or Foe? *The International Information & Library Review*, 35(2-4), 133-147.

[5] Salager-Meyer, F. (2008). Scientific Publishing in Developing Countries: Challenges for the Future. *Journal of English for Academic Purposes*, 7(2), 121-132.

[6] Nobes, A. and Harris, S. (2023), Open Access in Low- and Middle-Income Countries: Attitudes and Experiences of Researchers, *Emerald Open Research*, 1(3). <https://doi.org/10.1108/EOR-03-2023-0006>

[7] Harris, E. (2004). Building Scientific Capacity in Developing Countries. *EMBO reports* (2004)5: 7 - 11 <https://doi.org/10.1038/sj.embor.7400058>

UPCOMING SPECIAL ISSUE

PATTERN RECOGNITION LETTERS

VSI:SISCAD

Synthetic Images to Support Computer-Aided Diagnosis Systems (VSI:SISCAD)

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Important Dates

Submission Portal Opens
July 1, 2024
Submission Deadline is
July 20, 2024

The main goal of this special issue is to bring together diverse, new, and impactful research on synthetic data generation for biomedical imaging with a powerful impact on Computer-Aided Diagnosis systems for real-world clinical applications.

Click [here](#) for more information.

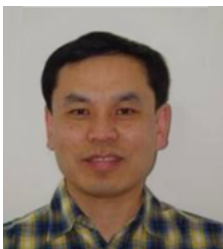
UPCOMING SPECIAL ISSUE

PATTERN RECOGNITION LETTERS

VSI:PRMIA

Pattern Recognition in Multimodal Information Analysis: Observation, Extraction, Classification, and Interpretation (VSI:PRMIA)

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*University of
Udine, Italy*

Important Dates

Submission
Portal Opens
Sept 1, 2024

Submission
Deadline is
Sept 20, 2024

In the information age, we grapple with a flood of diverse data types like text, images, audio, and video. The challenge lies in efficiently handling massive multimodal data to enhance machines' understanding of the world through pattern recognition. This special issue outlines recent advances in the pattern recognition field, intending to bring together the work of scholars in this multidisciplinary subject.

Click
[here](#)
to learn
more.

PATTERN RECOGNITION LETTERS ~ CALL FOR SPECIAL ISSUES

We invite researchers in Pattern Recognition and related fields to submit proposals for new Special Issues. Special Issues are a unique occasion to collect high-quality papers that pertain to topics not strictly related to the journal, and therefore to expand the scientific offer for our readers.

SELECTION CRITERIA

1. The VSI must be **well-focused** on a current, relevant topic of interest for the international scientific community, particularly for researchers in Pattern Recognition. Too-wide topics such as “Deep Networks for Image Understanding” or “Advances in Pattern Recognition for Image Understanding” will not be considered.
2. The candidate GEs’ scientific production must testify **sufficient experience in the proposed topics** in order to better evaluate the overall quality of both papers and reviews.
3. If more GEs participate in the proposal, a **wide geographic distribution** will be preferred to assure a wider submission population; these proposals will be preferred.
4. GEs must underline in their CVs their **engagement with PRL**, as either authors or reviewers; proposals from such GEs will be preferred.
5. Rotation of GEs is preferred, in groups and/or individually.

Proposals are submitted about one year in advance with respect to the requested submission slot (i.e., the period in which submissions will be uploaded). We divide each year into four quarters, starting in January, April, July, and October. We collect proposals during the first month of the quarter of the year before (e.g., July 2024 for Special Issues in July through Sept, 2025). Decisions are made in the second month of the quarter of the year before (e.g., Aug 2024), and prospective GEs are notified in the third month of the quarter of the year before (e.g., Sept 2024). In this way, our decision can be made by comparing all proposals for the same quarter.

For candidate GEs’ convenience, a proposal template with all requested information is available [here](#).

More details can be found in the documents available [here](#):

After filling the appropriate template, proposals can be submitted via [Computer Science Journal Special Issues and Conference Proceedings Proposals](#)

For further inquiries, please contact the EiC for Special Issues, Prof. Maria De Marsico at demarsico@di.uniroma1.it

ICDAR - THEN AND NOW



Ten years ago (2013), Professor Rejean Plamondon delivers Keynote: *The Quest for Lognormality in a Curved Gaussian Space-Time: An On-line Handwriting Generation Journey.*

Recently (2023), Professor Seiichi Uchida delivers Keynote: *What are Letters?*

IAPR THE NEXT GENERATION

SPECIAL ICDAR ISSUE



We put the spotlight on an award-winning young researcher and asked:

- ≡ How did you get involved in pattern recognition research?
- ≡ Tell us more about the work you presented at ICDAR?

Enterprise image credit: tab62 - stock.adobe.com

Editor's note:

Simon is a young researcher who received one of the IAPR Best Poster Awards given at ICDAR 2023. We asked him to explain his work for a general audience.

~ Heydi Méndez-Vázquez, EiC

Simon Corbillé completed his master's degree in computer science at PolyTech, Tours (France) in 2017. Afterward, he worked as a research engineer in the IRISA laboratory in Rennes (France) on the development of geometry learning software from 2017 to 2019 with the IntuiDoc team. Following that, he received his PhD in the field of children's handwriting analysis under the supervision of Eric Anquetil and Elisa Fromont (2023) in the same laboratory. He is currently a Postdoc at Luleå University of Technology (Sweden), researching handwriting recognition topics with the machine learning team.

Simon Corbillé

How did you get involved in pattern recognition research?

While earning my master's degree, I completed several courses on computer vision, including an introduction to pattern recognition. When I worked as an engineer in the IRISA laboratory, I discovered different use cases for pattern recognition, like the recognition of geometric objects and handwriting recognition. My interest in pattern recognition became apparent from that moment on.

The subject of my PhD dealt with pattern recognition research and more precisely, handwriting recognition and character segmentation. My work combined methods using expert knowledge with deep learning methods. I am currently working on a similar topic as a postdoc.



Tell us more about the work you presented at ICDAR

The paradox of Sayre is a famous problem in the handwriting recognition domain. This dilemma claims that a handwritten word cannot be recognized without being segmented in letters and at the same time cannot be segmented in letters without the word being recognized. To tackle the handwriting recognition task, the systems use an analytic or a holistic approach. The analytic approach segments the handwriting and tries to recognize letters, while the holistic approach tries to recognize the whole word without explicit segmentation. State-of-the-art methods use holistic approaches based on a deep learning model. They are designed for recognition only and are efficient in solving this task. However, in a context of learning spelling, the character segmentation provided by these approaches is not precise enough to provide useful spatial feedback on a spelling mistake to a student.

We aim at designing a support system for learning cursive handwriting at school and more particularly in a dictation context. Tackling both the challenges of recognition and character segmentation of children's handwriting may allow a system to provide a fine-grained analysis on the handwritten words and to deliver immediate spelling feedback. The children are in a learning process and therefore, their handwriting is imperfect and contains spelling errors. Line *a* of Figure 1 illustrates several examples of young children's handwriting. We can see that a distortion of the letter "e" can be interpreted as a letter "l" and vice versa for the word "elle" in the third position of this line. Line *b* shows several examples of phonetic errors. In the first example, where the instruction is "mes," the child writes "mai," which sounds very similar in

French. These homophonic errors can be anticipated in automatic systems using a language model that would consider the contextual information. However, other types of errors in a context of learning spelling illustrated in line c such as dyslexia and isolated vocabulary words cannot. The first example of line c shows a common mistake in French where the child confuses the letters “b” and “d,” which are phonetically close.

To our knowledge, there is no single model to solve this task. On one hand, we have models dedicated to handwriting recognition, which are efficient in recognition but give approximate character segmentation. On the other hand, we have models dedicated to segmentation (here in the sense of object detection), which are efficient in segmentation but give an approximate recognition result.

We presented Seq2Seg (Sequence To Segmentation), an original combination strategy which employs a model dedicated to recognition as an oracle to filter out the segmentation predictions of an object detector and then refines the segmentation using an expert segmentation lattice. The main architecture is illustrated in Figure 2.

We chose to use a Seq2Seq (Sequence to Sequence) architecture from the state-of-the-art for our recognition model. Seq2Seq use an encoder-decoder paradigm enhanced by an attention mechanism. The encoder extracts spatial features with convolutional layers and temporal features using recurrent layers. Then, for each character prediction, the attention mechanism focuses the decoder on specific parts of the features. We chose to use a two-stage R-CNN object detector where candidate regions are generated by a region-proposal network and processed to perform the detection task. Seq2Seg produces the best of both worlds: the accurate recognition of a Seq2Seq and the precise segmentation provided by an R-CNN object detector. Seq2Seg is efficient enough to provide immediate feedback to children learning how to

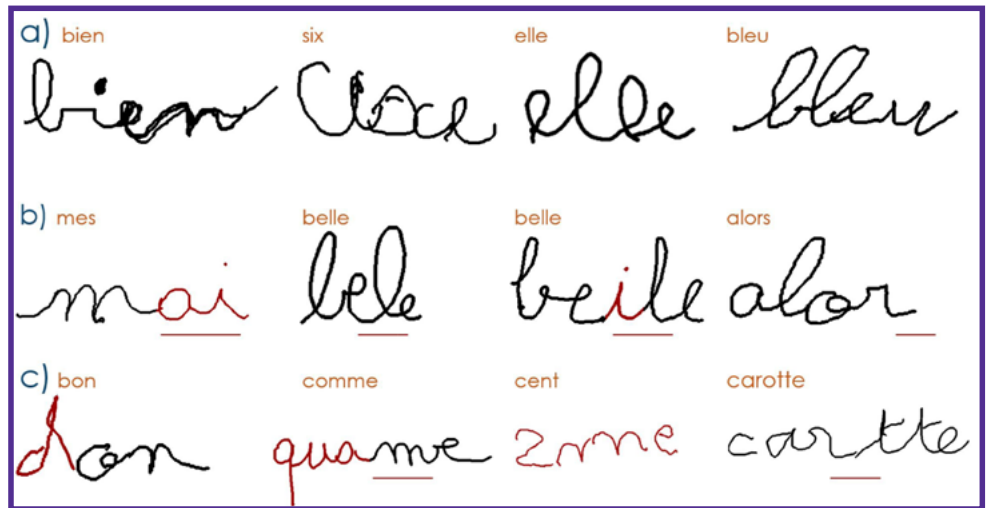


Figure 1. Examples of children's cursive handwriting. The oral French instruction given to the children is provided in orange and examples of feedback are drawn in red. Line a shows some imperfect handwriting, line b, phonetic errors, and line c shows other types of errors in a context of learning spelling.

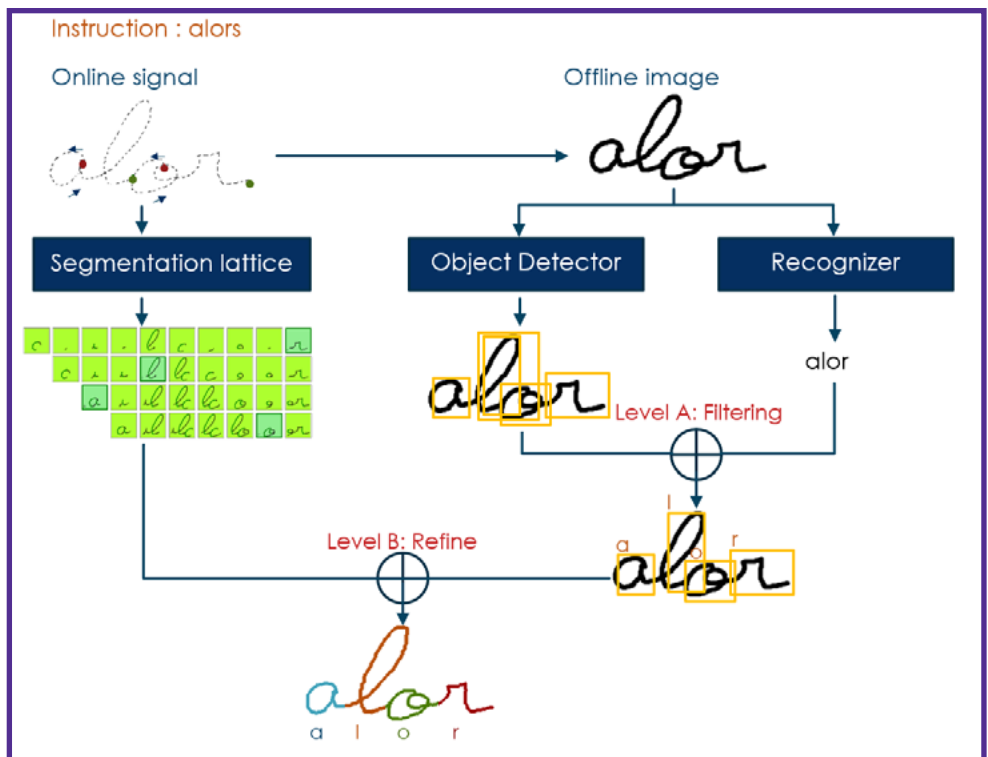


Figure 2. Architecture of Seq2Seg.

write and it outperforms the state-of-the-art results on this task without the use of a language model. This last point also makes Seq2Seg much more flexible in other learning contexts.

Our future work will focus on evaluating and improving the quality of feedback in school contexts. We plan to better leverage the uncertainty of the decisions (both for the Seq2Seq and the object detector), for example by allowing the system to reject hypotheses, to prevent providing erroneous feedback to the children. The last step will be to test the robustness of this method in the classroom as well as to measure its impact on the process of learning to write. Additional studies could be considered in partnership with speech therapists to qualify the types of errors (phonetic, etc.) with the aim of detecting specific written language disorders.

~ Simon Corbillé

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- TC6 Computational Forensics
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- TC12 Multimedia and Visual Information Systems



IAPR TC 1
**STATISTICAL
PATTERN RECOGNITION
TECHNIQUES**

iapr.org/tc1

Chair: Ambra Demontis (University of Cagliari, Italy)
Vice Chair: Konstantinos Sechidis (Novartis, Switzerland)



CALL FOR NOMINATIONS: DEADLINE: MAY 15, 2024 2024 PIERRE DEVIJVER AWARD

On request of the IAPR, the Technical Committee on Statistical Pattern Recognition (TC1) established a special award to commemorate Pierre Devijver, one of the founders of statistical pattern recognition, who left us all in 1996.

We solicit nominations for outstanding candidates for the 2024 award to be selected from leading scientists who have contributed significantly to the field of statistical pattern recognition and closely-related fields. The award committee (consisting of the previous Pierre Devijver award winners) will evaluate the nominations to select the awardee. The award is a lecture that the winner will be expected to deliver in person during S+SSPR 2024, the IAPR Joint International Workshops on Statistical Techniques in Pattern Recognition (SPR 2024) and Structural and Syntactic Pattern Recognition (SSPR 2024) (below)

Image credit: A photo of Pierre Devijver, as presented in recognition of his strong influence on the presenter, [Edwin Hancock](#). ([source](#))

CLICK [here](#) OR CLICK AWARD TITLE FOR MORE INFORMATION.

15th Statistical Techniques in Pattern Recognition (SPR)
20th Structural and Syntactic Pattern Recognition (SSPR)
September 9th - 11th, 2024, Venice, Italy

PAPER SUBMISSION DEADLINE: JUNE 23, 2024

[S+SSPR 2024](#) is a joint event organized by IAPR [TC1](#) (Statistical Pattern Recognition Technique) and IAPR [TC2](#) (Structural and Syntactical Pattern Recognition). Authors are invited to submit papers addressing topics in statistical, structural, or syntactic pattern recognition and their applications. For a list of topics of interest and more details click [here](#).



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IAPR TC3
**NEURAL NETWORKS
& COMPUTATIONAL
INTELLIGENCE**

iapr.org/tc3

Chair: Mirco Ravanelli (Concordia University, Canada)
Vice Chair: Cem Subakan (Laval University, Canada)

IAPR [TC3](#) serves as a platform for promoting research in the areas of artificial neural networks, computational intelligence, and machine learning techniques for pattern recognition. The committee is interested in a wide range of topics, including deep learning, adaptive modeling of sequences and structures (such as graphs), probabilistic graphical models, kernel methods, fuzzy systems, evolutionary computing/genetic algorithms, and statistics relevant to these fields.

The TC3 Committee is delighted to announce

THE 11TH TC3 WORKSHOP ON ARTIFICIAL NEURAL NETWORKS IN PATTERN RECOGNITION ANNPR 2024

OCTOBER 10-12, 2024
**CONCORDIA UNIVERSITY
MONTREAL, QUÉBEC, CANADA**

Following the success of previous editions, this will be an opportunity to discuss the latest progress in deep learning, machine learning, and computational intelligence. Click [here](#) for detailed information and submission guidelines.

CALL FOR PAPERS

Prospective authors are invited to submit papers showcasing their innovative work in diverse domains. We welcome submissions covering a wide array of topics, including but not limited to

- Deep Learning*
- Supervised and Self-Supervised Learning*
- Deep Reinforcement Learning*
- Continual Learning*
- Meta-Learning, Auto-ML*
- Interpretability and Explainability*
- Generative Models*
- Applications in Computer Vision, Speech/Audio Processing, Industrial Applications (e.g., quality control and predictive maintenance)*
- Bioinformatics, and Medical Applications.*

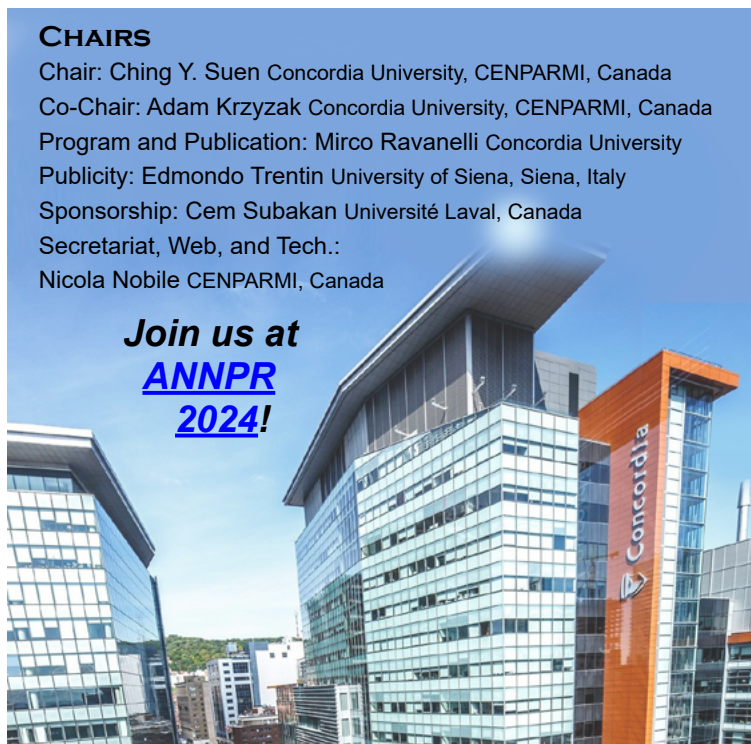
IMPORTANT DATES

Workshop Dates: October 10 - 12, 2024
Paper Submission Deadline: May 14, 2024
Acceptance Notification: June 29, 2024

CHAIRS

Chair: Ching Y. Suen Concordia University, CENPARMI, Canada
Co-Chair: Adam Krzyzak Concordia University, CENPARMI, Canada
Program and Publication: Mirco Ravanelli Concordia University
Publicity: Edmondo Trentin University of Siena, Siena, Italy
Sponsorship: Cem Subakan Université Laval, Canada
Secretariat, Web, and Tech.:
Nicola Nobile CENPARMI, Canada

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- TC6 Computational Forensics
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- TC12 Multimedia and Visual Information Systems



IAPR TC4 BIOMETRICS

iapr.org/tc4

Chair: Julian Fierrez (Universidad Autónoma de Madrid, Spain)
Vice Chair: Shiqi Yu (Southern University of Science and Technology, China)
Secretary: Vitomir Štruc (University of Ljubljana, Slovenia)

With an increasing demand on enhanced security and more reliable personal authentication, biometrics has become a very active research topic in pattern recognition and is set to remain so for many years to come. IAPR [TC4](#) is the leading force in the international biometrics community. Our [website](#) serves as the information hub on biometrics-related conferences and workshops, publications, standardization, databases, evaluations, research groups, and other biometrics news.

The 8th Winter School on Biometrics (WSB2024) was a training course to promote research in biometrics and related fields and was successfully held from January 21 to 25, 2024, in Shenzhen, China. It was jointly organized by the Department of Computer Science, Hong Kong Baptist University, the Institute of Automation, Chinese Academy of Sciences and the Department of Computer Science and Engineering,

Southern University of Science and Technology. It was supported by the IAPR TC4 and IEEE Biometrics Council. There were 73 participants, including 60 paid participants and 13 volunteer students. Four were from outside China (3 from India, and 1 from Vietnam). Fourteen lectures were given by researchers in the field of biometrics. The hands-on session was organized by OpenCV China Team.

A detailed report with more photos is included in the [Meeting Reports](#) section of this newsletter.



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IAPR TC4
BIOMETRICS

iapr.org/tc4

TC4 NEWS, CONTINUED

21st International Summer School
for Advanced Studies on Biometrics for Secure Authentication
BIOMETRICS: Trustful, Fair and Privacy-Friendly



The [21st International Summer School for Advanced Studies on Biometrics for Secure Authentication](#) will be held in Alghero, Italy, from June 3 to 7, 2024. The theme for the 21st edition is trustful, fair, and privacy-friendly biometric systems. This school follows the successful track of the International Summer Schools on Biometrics held since 2003. Topics of study are shown (right).

The application deadline has passed. If you are interested, please watch the *IAPR Newsletter* or visit the [TC4 website](#) for information on future Summer and Winter Biometrics Schools.

- The impact of AI and advanced learning techniques in Biometrics*
- How to make "Deep Biometric" systems explainable*
- How to exploit new biometric technologies in forensic and emerging applications*
- How to develop fair, trustful and privacy-friendly biometric systems*
- Where is biometric research going next?*

IEEE INTERNATIONAL JOINT CONFERENCE ON BIOMETRICS (IJCB 2024)



15-18 September 2024, Buffalo, New York, USA

The International Joint Conference on Biometrics (IJCB) is the premier international forum for research in biometrics and related technologies. It combines two major biometrics conferences, the IEEE Biometrics Theory, Applications, and Systems (BTAS) conference and the IAPR International Conference on Biometrics (ICB), and is made possible

through a special agreement between the IAPR TC4 and the IEEE Biometrics Council. IJCB 2024 will be held in Buffalo/Niagara Falls, New York, United States, September 15-18, 2024, as an in-person conference. **The conference calls for [demos and exhibitions](#). The deadline for these is **May 31, 2024**.**

FIVE COMPETITIONS WILL BE HELD IN CONJUNCTION WITH IJCB 2024

- 1) Latent in the Wild Fingerprint Recognition Competition
- 2) LivDet-Face 2024 Competition
- 3) UCCS Watchlist Challenge: 3rd Open-set Face Detection and Identification
- 4) First Competition on Presentation Attack Detection on ID-Card
- 5) The 5th International Competition on Human Identification at a Distance 2024 (HID 2024)

PARTICIPATION IS WELCOME! CLICK [HERE](#) FOR DETAILS.



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IAPR TC6

COMPUTATIONAL FORENSICS

iapr.org/tc6

Chair: Victor Sanchez (University of Warwick, UK)

Vice Chair: Nicolas Sidère (University of La Rochelle, France)

IAPR [TC6](#) aims to further promote research, development, and education in Computational Forensics (CF) and to provide a platform for cooperation and exchange of information among researchers, practitioners, and teachers from the various disciplines of computational and forensic sciences. CF involves modeling, computer simulation, computer-based analysis, and recognition in studying and solving forensic problems.



ADDITIONAL LEADERSHIP OF TC6

Honorary Chair: Chang-Tsun Li (Deakin University, Australia)

Newsletter Editor: Petra Gomez (Université de La Rochelle, France)

Speech Organizer: Irene Amerini (Sapienza Università di Roma, Italy)

Information Officer and Web Master: Bosheng Yan (Deakin University, Australia)

TC6 organizes [hybrid seminars](#) delivered by renowned researchers. The latest seminar was delivered by Dr. Cecilia Pasquini from The Center for Cybersecurity of the Fondazione Bruno Kessler (FBK). Please visit this [webpage](#) for further details.

If you are interested in the activities of IAPR TC6, please visit our [website](#) or email Prof. Victor Sanchez V.F.Sanchez-Silva@warwick.ac.uk

The committee is finalizing a special issue in *Pattern Recognition Letters* on Advances in Disinformation Detection and Media Forensics. This special issue collects the most recent and advanced methods to detect fake or manipulated multimedia content in complex disinformation scenarios. Specifically, robust solutions to different operating and acquisition conditions, as well as machine learning solutions that allow learning even in the presence of only a few training examples or that generalize well across disinformation attacks unavailable at the training time.

A GENTLE REMINDER FROM THE IAPR EDUCATION COMMITTEE:

IAPR Research Scholarships help Early Career Researchers engage in international and inter-institutional research.

Scholarships cover round trip travel & basic living expenses for research visits under 12 months.

Applications may be submitted at any time before the visit starts.

Candidate must be a full-time researcher with between one and eight years experience and must be a member of an IAPR member society.



Click [here](#) to learn more or contact the IAPR Secretariat Linda O'Gorman at secretariat@iapr.org

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IAPR TC 10 GRAPHICS RECOGNITION

iapr.org/tc10

Chair: Jean-Christophe Burie (University of La Rochelle, France)
Vice Chair: Miki Ueno (Osaka Institute of Technology, Japan)

[IAPR TC10](#) on Graphics Recognition promotes interaction among researchers working in document image analysis in general, and graphics recognition in particular. Graphics Recognition is an exciting field of pattern recognition, whose main relevant topics of interest include, but are not limited to: Analysis and interpretation of graphics and graphical elements in all forms of graphical documentation and heterogeneous documents; Raster-to-vector techniques; Forensics in graphic documents; 3-D models from multiple 2-D views (line drawings); Camera-based graphics recognition; Graphics detection and recognition in real scenes. See our [website](#) for a more comprehensive list of relevant topics.

Why research Comics?

Comic books are a widespread cultural expression all over the world, including, but not limited to Japanese Mangas, American Comics, and Franco-Belgian “Bandes Dessinées,” and each type of comic has its own graphic style. Comics are attractive targets for pattern recognition research because the structure of a comics page includes a wide variety of elements (panels, speech balloons, captions, leading characters, text, onomatopoeia, and so on). The design of these

elements strongly depends on the creativity of the authors and their graphic universe, leading to extreme, meaningful variability. For example, the detection and recognition of the characters in a comics page can involve a human being, an animal, or even an imaginary character. In this context, pattern recognition is a tricky problem. Comics analysis has aroused interest among researchers in document analysis, but is still immature compared with other areas of applied image analysis and pattern recognition. Many fascinating research challenges remain. Original approaches proposed in this area, centering on computer vision, pattern recognition, and machine learning, show that comics analysis and understanding can be a rewarding research topic. Moreover, drawings of some comics are very similar to cartoons, so some approaches can

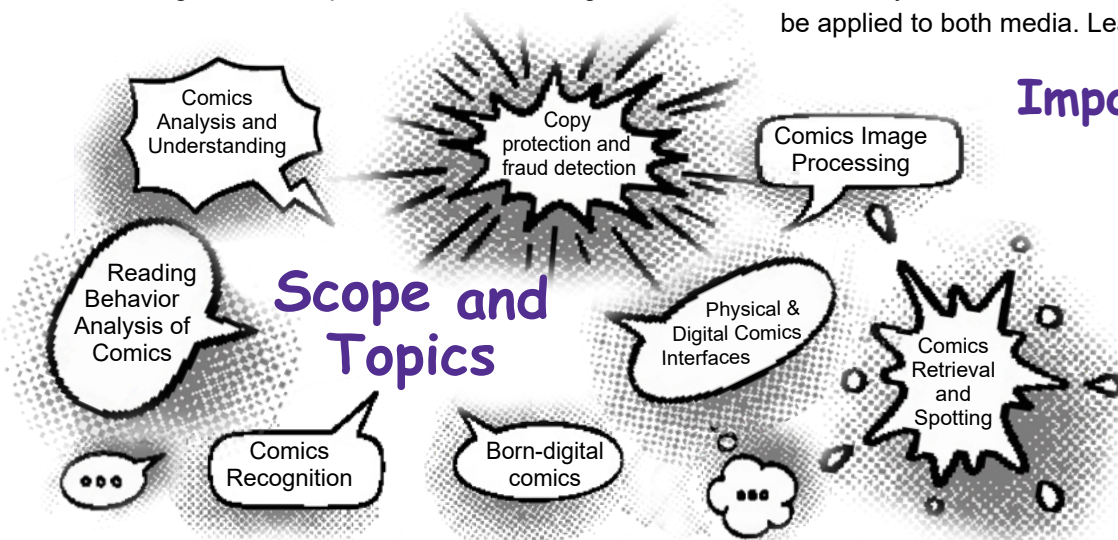
be applied to both media. Learn more at [MANPU 2024](#).

MANPU 2024

The 6th International Workshop on
coMics **A**nalysis, **P**rocessing and **U**nderstanding

August 30, 2024
Grand Hyatt Hotel, Athens, Greece

organized in
conjunction with
ICDAR 2024
INTERNATIONAL CONFERENCE ON DOCUMENT ANALYSIS AND RECOGNITION



Important Dates

Title/Abstract
Submission
EXTENDED
to May 7, 2024

Paper
Submission
EXTENDED
to May 7, 2024

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IAPR TC 12

MULTIMEDIA AND VISUAL INFORMATION SYSTEMS

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[LinkedIn](#)

iapr.org/tc12

Chair: Hugo Jair Escalante (INAOE & CINVESTAV, Mexico)

Vice Chair: Sergio Esclara (University of Barcelona, Spain)

Vice Chair: Henning Müller (HES-SO, Sierre, Switzerland)

Information Officer: Albert Ali Salah (Utrecht University, Utrecht, Netherlands)

[IAPR TC12](#) promotes interaction among researchers working in modeling, design, and development of systems for the analysis, processing, description, and retrieval of multimedia and visual information as well as the applications of these systems in challenging domains.

fg2024.ieee-biometrics.org/

The 18th IEEE International Conference on Automatic Face and Gesture Recognition

27-31 May 2024 SDKM, ITU Campus, Istanbul, Turkey

The 18th IEEE International Conference on Automatic Face and Gesture Recognition ([FG'24](#)) will take place in Istanbul, Turkey, May 27-31, 2024. The conference will feature keynotes by Beatrice de Gelder, Shiguang Shan, Mohamed Daoudi, as well as an "Ask me anything" session with Takeo Kanade. The conference will feature 120 paper presentations, 6 workshops, 3 competitions, 2 tutorials, demos, and a doctoral consortium.

[Early registration deadline: April 30, 2024.](#)

DIMEMEX 2024 Challenge aims to promote research and development of multimodal computational models for the detection of abusive content in Mexican Spanish, particularly hate, offensive, and vulgar memes.

DIMEMEX comprises two subtasks:



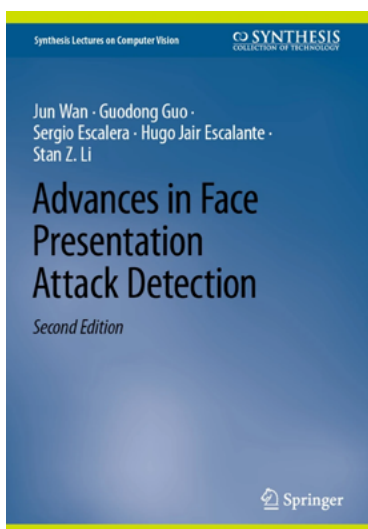
1) A three-way classification: hate speech, inappropriate content, and neither.

2) A finer-grained classification distinguishing instances containing hate speech into different categories such as classism, sexism, racism, and others.

DIMEMEX-2024

Detection of Inappropriate Memes from Mexico

DEADLINE FOR SUBMISSIONS: MAY 21, 2024 – PLEASE CHECK [website](#) FOR UPDATES



The Springer Book *Advances in Face Presentation Attack Detection, 2nd Edition* (2023) by Stan Z. Li, Hugo Jair Escalante, Jun Wan, Guodong Guo, and Sergio Escalera, is out. This book revises and expands upon the prior edition. Part of the Synthesis Lectures on Computer Vision (SLCV), the book identifies challenges when designing and implementing methods of face spoofing attack detection, explains why face anti-spoofing is essential for preventing security breaches in face recognition systems, and provides current methods of face anti-spoofing and highlights directions for future research in the field. [Click on the cover \(left\) for details.](#)

Several image classification and retrieval challenges are currently open for submissions in [ImageCLEF](#). Do not hesitate to register and participate in very interesting challenges on medical image processing (such as medical image captioning, generating medical images), retrieval for argumentation (including image generation for arguments), content-recommendation for cultural heritage, and translating pictograms from a natural language.

MEETING REPORTS

SPECIAL ICDAR SECTION



SAN JOSE, CALIFORNIA, USA 2023

The 17th International Conference on Document Analysis and Recognition



General Chairs

David Doermann (*University at Buffalo, The State University of New York, USA*)

Srirangaraj Setlur (*University at Buffalo, The State University of New York, USA*)

Executive Co-Chairs

Venu Govindaraju (*University at Buffalo, The State University of New York, USA*)

Tong Sun (*Adobe Research, USA*)

Program Committee Chairs

Gernot A. Fink (*Technische Universität Dortmund, Germany*)

Rajiv Jain (*Adobe Research, USA*)

Koichi Kise (*Osaka Metropolitan University, Japan*)

Richard Zanibbi (*Rochester Institute of Technology, USA*)

We are delighted to report that the 17th IAPR International Conference on Document Analysis and Recognition ([ICDAR 2023](#)) was held in San Jose, in the heart of Silicon Valley in the United States. The conference was held at the San Jose Marriott, August 21–23, 2023, and the post-conference tracks at the Adobe World Headquarters in San Jose on August 24–26.





SAN JOSE, CALIFORNIA, USA 2023

With the worst of the pandemic behind us, we hoped that ICDAR 2023 would be an entirely in-person event. However, challenges such as obtaining visas necessitated the partial use of hybrid technologies. The oral papers presented remotely were synchronous to ensure that conference attendees interacted live with the presenters. The limited hybridization still resulted in an enjoyable conference with fruitful interactions.



[ICDAR 2023](#) was the 17th edition of a longstanding conference series sponsored by the International Association of Pattern Recognition (IAPR) and the first in the new Annual format. ICDAR 2023 featured a three-day main conference, including several competitions to challenge the field, a post-conference slate of workshops and tutorials, and a doctoral consortium.

The Program Committee Chairs featured three distinguished researchers from academia, Gernot A. Fink (Europe), Koichi Kise (Asia), and Richard Zanibbi (Americas), and one

from industry, Rajiv Jain (Adobe Research, USA), who did a phenomenal job in overseeing a comprehensive reviewing process and who worked tirelessly to put together a very thoughtful and exciting technical program for the main conference.

The 2023 edition of ICDAR received 316 conference paper submissions with authors from 42 different countries. In order to create a high-quality scientific program, we recruited 211 regular and 38 senior program committee (PC) members. Regular PC members provided a total of 913 reviews for the

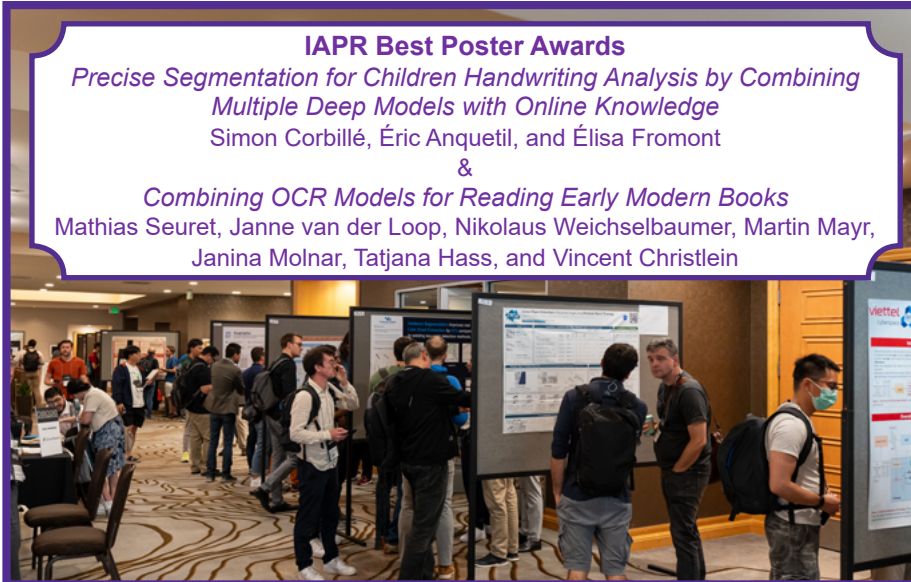


submitted papers (an average of 2.89 per paper). Senior PC members, who oversaw the review phase for typically 8 submissions, took care of consolidating reviews and suggested paper decisions in their meta-reviews. Based on the information provided in both the reviews and the prepared meta-reviews, the PC Chairs then selected 155 submissions (49.1%) for inclusion in the scientific program of ICDAR 2023. From the accepted papers, 55 were selected for oral presentation, and 100 for poster presentation.





In addition to the papers submitted directly to ICDAR 2023, we continued the tradition of teaming up with the *International Journal of Document Analysis and Recognition (IJ DAR)* and organized a special journal track. The journal track submissions underwent the same rigorous review process as regular *IJDAR* submissions. The ICDAR PC Chairs served as Guest Editors and oversaw the review process. From the 33 manuscripts submitted to the journal track, 13 were accepted and were published in a Special Issue of *IJDAR* entitled *Advanced Topics of Document Analysis and Recognition*. In addition, all papers accepted in the journal track were included as oral presentations in the conference program.



A very prominent topic represented in the submissions from the journal track, as well as in the direct submissions to ICDAR 2023, was handwriting recognition. Therefore, we organized a Special Track on Frontiers in Handwriting Recognition. This also served to keep alive the tradition of the International Conference on Frontiers in Handwriting Recognition (ICFHR), which the TC-11 community had decided to no longer organize as an independent conference during ICFHR 2022, held in Hyderabad, India.



The handwriting track included oral sessions covering handwriting recognition for historical documents and synthesis of handwritten documents, as well as a subsection of one of the poster sessions. Additional presentation tracks at ICDAR 2023 featured Graphics Recognition, Natural Language Processing for Documents (D-NLP), Applications (including for medical, legal, and business documents), additional Document Analysis and Recognition topics (DAR), and a session highlighting featured competitions that were run for ICDAR 2023 (Competitions). Two poster presentation sessions were held at ICDAR 2023.

Because ICDAR 2023 was held with in-person attendance, all papers were presented by their authors at the conference, the only exceptions being for authors who could not attend the conference for unavoidable reasons. Such oral presentations were then provided by synchronous video presentations. Posters of authors who could not attend were presented by recorded teaser videos, in addition to the physical posters.

The highlights of the conference included keynote talks by distinguished speakers Marti Hearst, Professor and Interim Dean of the UC Berkeley School of Information; Vlad Morariu, Senior Research Scientist at Adobe Research, and Seiichi Uchida, Distinguished Professor and Senior Vice President, Kyushu University, Japan.

Nineteen competitions were organized as part of the conference, spanning a wide cross-section of areas of interest for document analysis and recognition, and they received enthusiastic participation.

The doctoral consortium was held in conjunction with the main poster sessions of the conference, in a separate section with the mentors in attendance.



Each participant presented a poster, and the doctoral consortium posters were featured on both days of poster sessions to maximize interaction of doctoral consortium students with the attendees.

The post-conference featured eight excellent workshops and four value-filled tutorials. We want to thank for their support our many financial sponsors and the conference attendees and authors for helping make this conference a success. We know those who attended had an enjoyable conference, a wonderful stay in San Jose, and fruitful academic exchanges with colleagues.

Report Submitted by

Srirangaraj Setlur
General Co-Chair, ICDAR 2023



30 August -
4 September 2024

Grand Hyatt Hotel Athens Greece

ICDAR Athens Greece
2024
International Conference on Document Analysis and Recognition



15th IAPR International Workshop on Graphics Recognition

General Chair

Jean-Christophe Burie
La Rochelle Université, France

Program Chairs

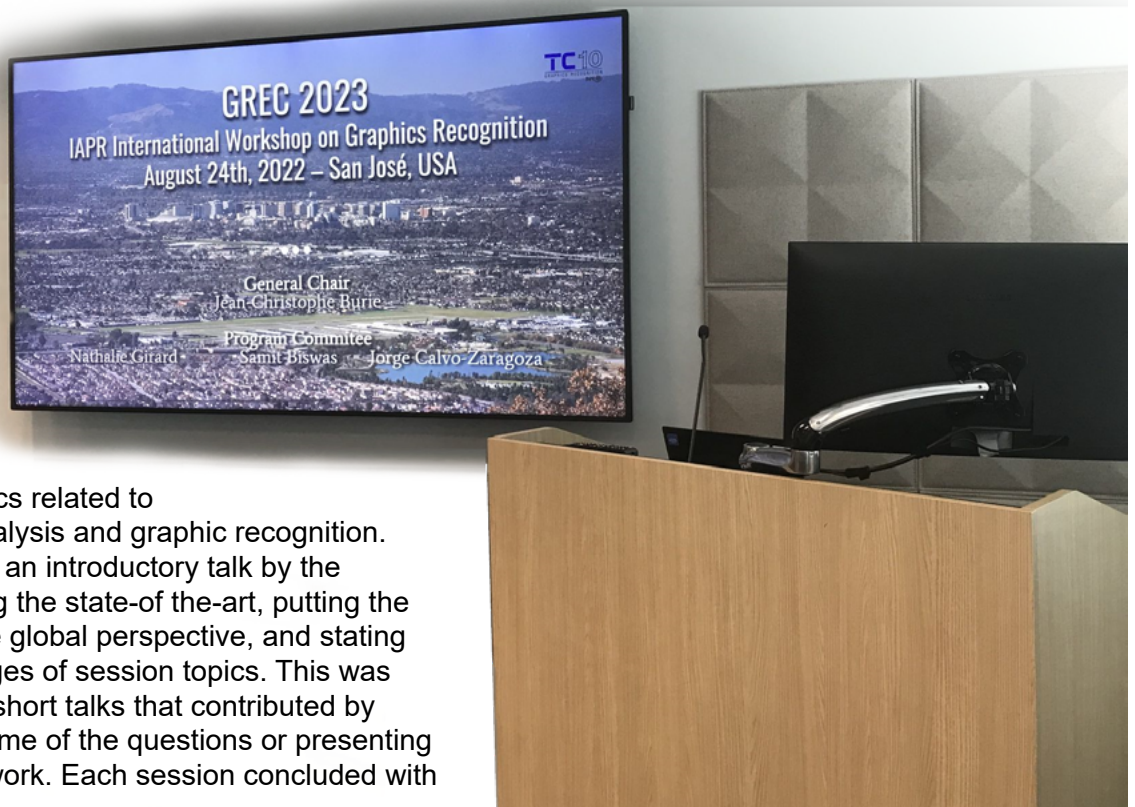
Nathalie Girard *IRISA, University of Rennes, France*
Jorge Calvo-Zaragoza *University of Alicante, Spain*
Samit Biswas *Indian Institute of Engineering Science and Technology, Shibpur, India*

The GREC workshops provide an excellent opportunity for researchers and practitioners at all levels of experience to meet colleagues and to share new ideas and knowledge about graphics recognition methods. The workshops enjoy strong participation from researchers in both industry and academia.

Graphics Recognition is a subfield of document image analysis that deals with graphical entities in engineering drawings, comics, musical scores, sketches, maps, architectural plans, mathematical notation, tables, diagrams, etc.

The aim of this workshop is to maintain a very high level of interaction and creative discussions between participants, with the focus on a *workshop spirit*, and not being tempted by a *mini-conference model*.

The [GREC 2023](#) workshop comprised several sessions dedicated to specific topics related to graphics in document analysis and graphic recognition. Each session began with an introductory talk by the session chairs, describing the state-of-the-art, putting the presented talks in a more global perspective, and stating the current open challenges of session topics. This was followed by a number of short talks that contributed by proposing solutions to some of the questions or presenting results of the speaker's work. Each session concluded with a panel discussion.



Previous GREC workshops were held at Penn State University (USA, 1995), Nancy (France, 1997), Jaipur (India, 1999), Kingston (Canada, 2001), Barcelona (Spain, 2003), Hong Kong (China, 2005), Curitiba (Brazil, 2007), La Rochelle (France, 2009), Seoul (South Korea, 2011), Lehigh University (Bethlehem, USA, 2013), Nancy (France, 2015), Kyoto (Japan, 2017), Sydney (Australia, 2019), and Lausanne (Switzerland, 2021).

For this 15th edition of GREC, the authors had the opportunity to submit short or long papers depending on the maturity of their research. Each submission was reviewed by two expert reviewers. We selected 11 papers from 6 different countries, 9 long papers and 2 short papers. We would like to take this opportunity to thank the program committee members for their meticulous reviewing efforts.

For this edition, a great keynote titled *Math Formula Recognition and Search in MathDeck* was given by Prof. Richard Zanibbi from the Rochester Institute of Technology, USA. He shared with the participants his work on math formula detection and recognition. He also presented [MathDeck](#), a prototype for searching PDF documents using both math formulas and text.

Three sessions titled “Symbol Recognition,” “Comics Analysis,” and “Graphics” were proposed to the participants. We also organized a general discussion where we tried to answer the question, “What is the future of pure research in graphics recognition?” Participants shared their opinions on this question.

The workshop was organized as an on-site event. However, due to

visa issues, some presentations were made remotely using the equipment of the rooms provided by ADOBE where the ICDAR workshops were held.

We welcomed around 50 people on site and about 10 participants attended the event online.

GREC 2023 was once again a successful event where researchers working on Graphic Recognition shared their work in this area of research.

Full access to the program and a list of presented papers is available from the [GREC 2023](#) website. Accepted papers are published in the [ICDAR proceedings](#).

Report Submitted by

Jean-Christophe Burie,
GREC 2023 General Chair





San José, California, 1875

Photo: <https://blog.sbb.berlin/hip2023> Frame: Adobe Stock 222292190 by Guy



HIP'23

The 7th International
Workshop on
Historical Document
Imaging and Processing

HIP Series Chair – Apostolos Antonacopoulos *University of Salford, UK*

General Chair
Clemens Neudecker
Berlin State Library, Berlin, Germany

Program Chairs
Maud Ehrmann *EPFL, Lausanne, Switzerland*
Christian Clausner *University of Salford, UK*

We are happy to report that the 7th edition of the International Workshop on Historical Document Imaging and Processing ([HIP'23](#)) was held alongside the ICDAR2023 conference on August 25-26, 2023, in San José, California, USA. Details, including the program, can be viewed on the [website](#).

The HIP'23 workshop was successful in attracting a total of 33 submissions (incl. 1 withdrawal) from a total of 127 authors representing 19 different countries. Eighteen submissions were finally accepted (acceptance rate: 56%) for oral presentation following a single-blind peer review process by 47 Program Committee Members

from 20 countries. The resulting HIP'23 program was split into four sessions: HTR and Multi-Modal Methods, Classics, Segmentation & Layout Analysis, and Language Technologies & Classification. As usual, the HIP'23 [proceedings](#) were published in the ACM Digital Library before the workshop. HIP received endorsement from the IAPR and

HIP'23 participants at the excursion to the Computer History Museum in Mountain View, CA



support from [FamilySearch](#) and the [EPFL](#).

The traditional HIP excursion was a visit to the very interesting [Computer History Museum](#), where the photo (p.35) was taken, showing many of the HIP participants and additional friends of HIP.

With the continued strong interest in HIP and historical documents, discussions were held between the HIP organizers and the [IAPR TC11](#) leadership as well as with HIP participants about future opportunities. It was decided that HIP will become an official stand-alone TC11 event, decoupled from ICDAR workshop calls, but still co-located with ICDAR. With

ICDAR becoming an annual event, the initial idea is to keep organizing HIP in the odd ICDAR years but perhaps having a low-key event also in the even years (several participants expressed their desire for this).

In another change, as ACM (which published all HIP proceedings so far) moved to mandatory Open Access proceedings, which will result in a significant publication charge for many authors, HIP will publish its future proceedings with Springer. This will also allow free access to the proceedings by members of IAPR societies.

The next steps will see the formation of a HIP steering committee and planning of the

format of the even-year smaller-scale event at ICDAR2024. If you would like to contribute to future editions of HIP in any capacity, please get in touch with the current organizers through hip23@primaresearch.org.

We look forward to future editions of HIP and the continued engagement with its wonderful community!

Report Submitted by

The HIP'23 Organizers:
Clemens Neudecker
Apostolos Antonacopoulos
Christian Clausner
Maud Ehrmann
Kai Labusch
Randy Wilson

OTHER WORKSHOPS

SAN JOSE, CALIFORNIA, USA 2023

[CLICK ON ANY WORKSHOP TITLE TO LEARN MORE](#)

SCALDOC 2023

Workshop on Scaling-up Document Image Understanding

IWCP 2023

Workshop on Computational Paleography (2nd edition)

CBDAR 2023

10th International Workshop on Camera-based Document Analysis and Recognition

ADAPDA 2023

Workshop on Automatically Domain-Adapted and Personalized Document Analysis

VINALDO 2023

Workshop on Machine Vision and NLP for Document Analysis

WML 2023

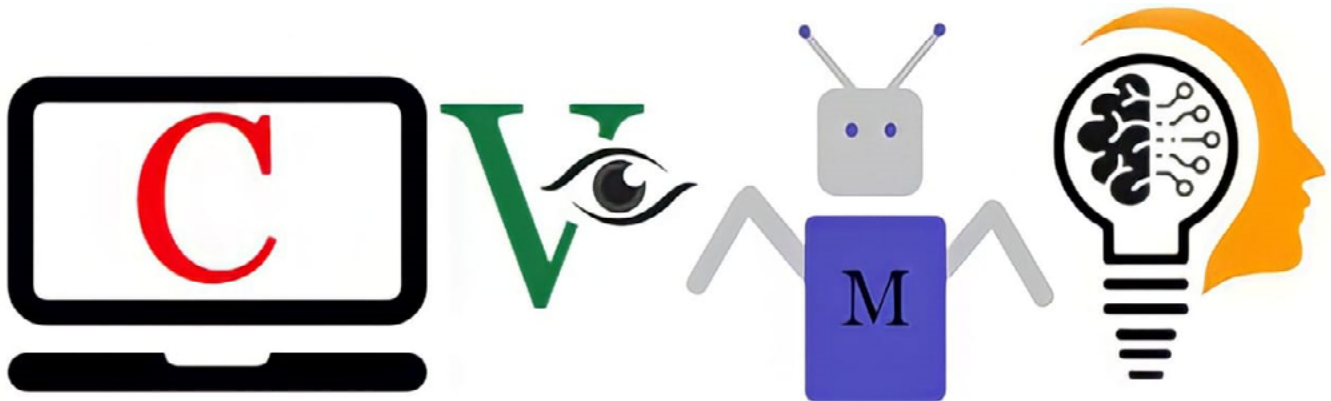
Workshop on Machine Learning (4th edition)



MEETING REPORTS

CONFERENCES, WORKSHOPS, & SUMMER/WINTER SCHOOLS

2ND INTERNATIONAL CONFERENCE ON



COMPUTER VISION AND MACHINE INTELLIGENCE

General Chairs

K. V. Arya *ABV-IITM, India*
Tomohisa Wada, *University of the Ryukyus, Japan*

General Co-Chairs

Shashikala Tapaswii *ABV-IITM, India*
Peter Peer *University of Ljubljana, Slovenia*
Abdenour Hadid *Sorbonne Center for AI, Abu Dhabi, UAE*

Click [here](#) for a complete list of Organizing Committee Members

The International Conference on Computer Vision and Machine Intelligence (CVMI) is one of the major forums for researchers, students, and practitioners working in all fields of Computer vision, Machine Learning, Deep Learning and their applications to image processing and image analysis, to share and discuss the latest studies, results and ideas in these areas. This [CVMI 2023](#) edition gained the technical sponsorship of IEEE and IAPR as well as the financial sponsorships of CSIR and our institutions, namely, Atal Bihari Vajpayee Indian Institute

of Information Technology and Management Gwalior.

There were 162 manuscripts submitted from 7 countries. After a peer review process, 65 papers were accepted. All 65 papers were presented orally. The review process was managed by the Organizing Committee with the help of the Program Committee, including researchers from all over the country.

The Proceedings of CVMI 2023 will include 5-page articles, published by IEEE. A hardcopy book of abstracts including the

abstract from the 65 accepted papers was published and distributed to the participants.

The CVMI 2023 program offered four invited talks and 65 oral presentations. The invited talks were 60 minutes long and were given by distinguished fellow scientists who are active in the areas of Machine Learning, Image Processing, and connected fields:

Prof. Sunil Kumar (Sand Diego Institute, USA) presented their work in the area of *Airborne UAV Networks*. Prof. Lalit Garg (University of Malta) presented



their contributions to *Satellite Imagery and Digital Twins Based Intelligent Healthcare Systems*. Prof. V. Prem Prakash (Dayal Bagh University, Agra) presented their research work in *Artificial Intelligence Equipment*. Prof. T. Wada (Ryukyus University Japan) presented their recent work in *5G Technology and IoT*.

Accepted papers were presented by the authors in 20-minute oral sessions.

Social events included a welcome reception consisting of dance and music in ABV-IIIITM Auditorium followed by a Gala Dinner and bon-fire at MDP Center.



Post Conference valedictory function was held at the conference room and the Best Student Paper Prize was delivered to Mr. Abhinav Ratna for his work titled *Enhancing Text-To-Video Generation*. The second-best student paper prize was awarded to

Gennan Hayashi for his work titled *Intelligent Mobile Channel Estimation and Inter Carrier Interference Cancelation for 5G Services in Indian in Shinkansen "Bullet Train"*

Professor Tomohisa Wada, University of the Ryukyus, Japan



CVMI 2023 was attended by more than 70 international scientists and students. We are working on proceedings of the event that will be published in the IEEE Xplore.

We would like to thank all contributors, the keynote speakers, the Program and Steering Committees of CVMI 2023, the Organizing Committee of CVMI 2023, and all those who made this conference happen.

Report Submitted by

Dr. W. Wilfred Godfrey

ABV-Indian Institute of Information and Management Technology





10th International Conference on Pattern Recognition and Machine Intelligence

December 12 - 15, 2023, Kolkata, India

Honorary Chairs

Sankar Kumar Pal
Indian Statistical Institute, Kolkata, India
Andrzej Skowron
University of Warsaw, Poland

Conference Chairs

Nikhil Ranjan Pal *Indian Statistical Institute, Kolkata, India*
Santanu Chaudhury *Indian Institute of Technology, Jodhpur, India*
Rajat Kumar De *Indian Statistical Institute, Kolkata, India*

Program Chairs

Pradipta Maji
Indian Statistical Institute, Kolkata, India
Tingwen Huang
Texas A&M University at Qatar, Doha

Organizing Chairs

Deba Prasad Mandal
Indian Statistical Institute, Kolkata, India
B. Uma Shankar
Indian Statistical Institute, Kolkata, India

The International Conference on Pattern Recognition and Machine Intelligence (PReMI) is a most prestigious conference in the field of pattern recognition, machine learning, computational intelligence and related application areas. It is held every alternate year, preferably at different places. The 2005, 2007, 2013 and 2017 editions were held at the Indian Statistical Institute, Kolkata, India; the Indian Institute of Technology, Delhi, India, hosted in 2009; the Higher School of Economics, Moscow, Russia, in 2011; the Warsaw University of Technology, Warsaw, Poland, in 2015; and the

Tezpur University, Assam, India, in 2019. The 2021 edition was held in online (virtual) mode.

As with previous editions, [PReMI'23](#) at the Indian Statistical Institute, Kolkata, India was of four days' duration, preceded by a pre-conference tutorial. It was attended by a large number of researchers and leading experts, including 96 externally registered participants from all over the world.

The primary goal of the conference is to provide a platform for presenting state-

of-the-art scientific results, enabling academic and industrial interactions, and promoting collaborative research activities in pattern recognition, machine intelligence and related fields. This premier biennial event is an ideal forum for scientists, engineers, professionals, academicians, and students to share their findings and experiences in the said areas.

PReMI'23 had four keynote talks, five invited lectures, and one IAPR public lecture, all by eminent, distinguished researchers from around the world. The conference included 15 technical



PRE-CONFERENCE TUTORIALS

Dr. Soma Biswas
Indian Institute of Science, Bangalore
Matching Across Domains Using Limited Data

Professor Animesh Mukherjee
Indian Institute of Technology, Kharagpur
AI and Ethics

Dr. Sangheeta Roy
TCS Research Lab
Unveiling the Code of Neuronal Activation Patterns:
Exploring Multiscale Modelling, Overcoming Challenges,
and Unlocking Future Potential

Dr. Anirban Santara
Google Research India
On Learning Useful Skills by Exploring Real Environments

sessions with paper presentations, a doctoral colloquium, a student research workshop, and an industrial session. The program started with an inaugural function and concluded with a valedictory ceremony. The conference also included a welcome dinner, banquet and cultural programs.

Conference highlights included keynotes and invited talks from leading researchers in pattern recognition and machine learning (right) and pre-conference tutorials by eminent, distinguished researchers from India (above).

The conference had a very good response in terms of paper submissions, receiving 311 submissions from across the globe. Each paper was critically reviewed by at least three experts of the technical program/review committee in a rigorous (double-blind) review process. Only 94 top-quality, highly relevant submissions were accepted (30%).

Ninety-one revised papers, along with abstracts of keynotes and invited speeches, are included in the conference proceedings, linked [here](#).

Eighty-six papers were presented physically in fifteen technical sessions on various theoretical and application areas, including new developments in pattern recognition, machine learning, computational intelligence, deep learning, statistical learning, cognitive computing, medical imaging, image and video processing, computer vision, soft computing, information security, signal processing, computational neurology, biometrics, and bioinformatics. Awards, sponsored by Springer, were given in three categories: best paper (three prizes), best doctoral thesis and best poster presentation (two prizes). Post-conference special issues of three international journals, namely, *Data-Centric Engineering* (Cambridge University Press), *IET Image Processing* (Wiley), and *SN Computer Science* (Springer) are planned to be published out of the extended versions of some selected papers.

Several sponsors contributed to the successful organization of PReMI'23: International Association for Pattern Recognition (IAPR); Department of Science and



PREMI'23

KEYNOTES

Professor Trevor Hastie
Stanford University, USA
Statistical Learning with Sparsity

Professor Bernhard Schölkopf
Max Planck Institute for Intelligent Systems, Germany
Symbolic, Statistical and Causal AI

Professor Alison Noble
University of Oxford, UK
Progress in Learning to Simplify Ultrasound

Professor Dacheng Tao
University of Sydney, Australia
More is Different - Beyond Wittgenstein's Philosophy

IAPR PUBLIC LECTURE

Professor Dipankar Banerjee
Aryabhata Research Institute of Observational Sciences, India
India's first Solar Space Observatory: Aditya L1 and Scope of AI

INVITED TALKS

Professor Balaraman Ravindran
Indian Institute of Technology, Madras, India
Reinforcement Learning with Structured Actions and Policies

Professor SP Arun
Indian Institute of Science, Bangalore, India
Improving Machine Vision Using Insights from Neuroscience

Professor Richa Singh
Indian Institute of Technology, Jodhpur, India
Adventures and Impact of AI in Face Recognition and Deepfakes

Dr. Balasubramanian Narasimhan
Stanford University, USA
Convex Optimization: Tools and Applications in
Statistics and Data Science

Professor Gajendra P. S. Raghava
Indraprastha Institute of Information Technology, New Delhi, India
Computer-Aided Healthcare in Era of Artificial Intelligence

Technology (DST) and the Council of Scientific and Industrial Research (CSIR), Government of India; Institute of Data Engineering, Analytics and Science Foundation - Technology Innovation Hub (IDEAS-TIH); Flytxt: Generative AI Sponsor; Springer International Publishing; Indian Bank; Centre for Soft Computing Research (CSCR); International Rough Set Society (IRSS); and Web Intelligence Consortium (WIC).

In conclusion, PReMI'23 was a great success academically and otherwise, with several interesting presentations on state-of-the-art subjects, thereby generating new ideas and avenues of research, and possible collaborations within India and outside.

Report Submitted by

Pradipta Maji and Tingwen Huang (Program Chairs)

ICPRAM 2024

13th International Conference on Pattern Recognition Applications and Methods

Rome, Italy

24 - 26 February, 2024

Conference Chair: Ana Fred *Instituto de Telecomunicações and Instituto Superior Técnico (Univ. of Lisbon) Portugal*

Program Co-Chairs: Modesto Castrillon-Santana *Universidad de Las Palmas de Gran Canaria, Spain*
Maria De Marsico *Sapienza Università di Roma, Italy*

The 13th edition of the International Conference on Pattern Recognition Applications and Methods ([ICPRAM 2024](#)) was organized as a hybrid event to allow remote attendance for those, especially students, having travel and funding problems. The in-person meeting was held in Rome, Italy, February 24-26, 2024. Remote attendees and presenters had the option to connect via streaming.

The conference was supported by several international organizations with different roles. ICPRAM 2024 was technically co-sponsored by IEEE Computational Intelligence Society and by the ACM Special Interest Group on Artificial Intelligence (ACM SIGAI), in cooperation with the International Neural Network Society (INNS) and the European Association for Biometrics (EAB). The conference was also endorsed by IAPR. The conference sponsor was the Institute for Systems and Technologies of Information, Control and Communication (INSTICC).

The general Chair of ICPRAM 2024 was Ana Fred, who has continued in that role since the first edition. This year, Modesto Castrillón-Santana substituted Gabriella

Sanniti di Baja, who had been Program Co-Chair since 2016, joining Maria De Marsico, the other Program Co-Chair since the second edition in 2013.

ICPRAM, as the acronym suggests, has always aimed at facilitating the meeting of researchers engaged in highly diversified areas of Pattern Recognition, including both theoretical work and design/implementation of applications. ICPRAM 2024 received 149 submissions from 37 countries, out of which 30 (20%) were accepted for oral presentation as full papers, 49 were accepted for oral presentation as short papers, and 33 were accepted for poster presentation. Each contribution was peer reviewed by at least two highly qualified reviewers, and a further assessment of reviews was done by the Program co-Chairs.

Notwithstanding the difficulties of a hybrid meeting, ICPRAM 2024 once again achieved its goals, thanks to the efforts of the organizing team. The attendance numbers testify the enduring success of the hybrid formula, with a total of 139 participants. Out of these, 104 were on site and 35 online. This seems to confirm the suitability of the hybrid choice. Therefore, hybrid support will be maintained for the next edition too, even though the number of remote attendees has slightly decreased with respect to the past edition, since attending in presence remains a unique opportunity for meetings and discussion.

INSTICC ICPRAM 2024



ICPRAM 2024 invited four keynote speakers, chosen among the most representative international researchers in Pattern Recognition-related areas. **From left to right above**, Alice J. O'Toole (School of Behavioral and Brain Sciences, The University of Texas at Dallas, United States) spoke on *Combining Images and Words in Deep Networks that Identify People from Body Shape*. Carol Smith (AI Division,

Trust Lab, Carnegie Mellon University, Software Engineering Institute, United States) spoke on *Letting Go of the Numbers: Measuring AI Trustworthiness*. Marco Cristani (University of Verona, Italy) delivered a talk entitled *Forecast the Forecasting*. And Jean-Luc Dugelay, (Multimedia, EURECOM, France), presented *A Review on Malicious Facial Image Processing and Possible Counter-Measures*.

The conference assigned the Best Scientific Paper Award, the Best Student Paper Award, the Best Industrial Paper Award and the Best Poster Presentation Award. Works nominated for the first three awards were selected by the Program/Conference Chairs among ICPRAM 2024 full papers, considering the best combined review marks (assessed by the Program Committee) and the paper presentation quality (assessed by the Session Chairs at the conference venue and by the Conference Chairs who personally attended all the candidate presentations). As in past editions of the conference, the Best Poster Presentation Award was given to the most appealing poster.

The author and co-authors of an awarded paper each received:

- A signed and stamped official award certificate
- The announcement of their achievement on a special conference webpage
- A one-year free membership of [INSTICC](#), warranting full access to the SciTePress Digital Library. If already an INSTICC member, then this offer adds one year to the current membership
- A personal voucher for a free or reduced registration fee in one event sponsored by INSTICC, valid during a 12-month period (if the presenter attends the closing session and receives an award)

ICPRAM 2024 award winners are listed to the right.

ICPRAM 2024 AWARD WINNERS

BEST PAPER AWARD

MAC: Multi-Scales Attention Cascade for Aerial Image Segmentation
by Yubo Wang, Zhao Wang, Yuusuke Nakano, Katsuya Hasegawa, Hiroyuki Ishii, and Jun Ohya

BEST STUDENT PAPER AWARD

AirEyeSeg: Teacher-Student Insights into Robust Fisheye UAV Detection
by Zhenyue Gu, Benedikt Kolbeinsson, and Krystian Mikolajczyk

BEST INDUSTRIAL PAPER AWARD

CaRaCTO: Robust Camera-Radar Extrinsic Calibration with Triple Constraint Optimization
by Mahdi Chamseddine, Jason Rambach, and Didier Stricker

BEST POSTER PRESENTATION AWARD

Noise Simulation for the Improvement of Training Deep Neural Network for Printer-Proof Steganography
by Telmo Cunha, Luiz Schirmer, João Marcos, and Nuno Gonçalves

All accepted and presented papers are included in the conference proceedings published by SciTePress, which will be submitted for indexation by the well-known abstract and citation databases of peer-reviewed literature, including SCOPUS.

In addition, we will publish a volume in the Springer series *Lecture Notes in Computer Science*, including the revised and extended versions of selected papers, as well as a special issue of the Springer *Nature Computer Science* journal with the revised and extended versions of the best conference papers.



ICPRAM 2024 also offered to participants further occasions to meet and discuss in a relaxed atmosphere. A Welcome Reception was offered on the first conference day, while on the second day, participants could enjoy a bus tour towards Castelo di Decima, where it was possible to enjoy a delicious

aperitif with the following dinner. Finally, a Farewell Cocktail was offered to say goodbye to the attendees.

We thank the authors, all the members of the international Program Committee and the additional reviewers, the invited speakers, and all members of the INSTICC team whose collaboration has been fundamental for the success of this conference.

We look forward to meeting researchers at the 14th edition of ICPRAM in Porto, Portugal, February 23-25, 2025.

Report Submitted by

Ana Fred *Instituto de Telecomunicações/IST, Portugal*
Maria De Marsico *Sapienza University of Rome, Italy*
Modesto Castrillón-Santana *Universidad de Las Palmas de Gran Canaria, Spain*

[ICPRAM 2025](#) will be in Porto: Put it on your agenda!



Porto, Portugal

Adobe Stock 79650880 by SeanPavonePhoto

2024 WINTER SCHOOL ON BIOMETRICS

21-25 January 2024 Shenzhen, China



The 8th Winter School on Biometrics (WSB2024) was a training course to promote research in biometrics and related fields and was successfully held from January 21 to 25, 2024, in Shenzhen, China. It was jointly organized by the Department of Computer Science, Hong Kong Baptist University, the Institute of Automation, Chinese Academy of Sciences and the Department of Computer Science and Engineering, Southern University of Science and Technology. It was supported by the IAPR TC4 and IEEE Biometrics Council. There were 73 participants, including 60

paid participants and 13 volunteer students. Four were from outside China (3 from India, and 1 from Vietnam). The IEEE grants were given to 8 students whom the winter school directors carefully selected.

Fourteen lectures were given by researchers in the field of biometrics. The lecturers are Prof. Raffaele Cappelli, Prof. Anil Jain, Prof. Josef Kittler, Prof. Ajay Kumar, Prof. Xiaoming Liu, Prof. Brain Lovell, Prof. Chen Change Loy, Prof. Anoop M Namboodiri, Prof. Karthik Nandakumar, Prof. Mark Nixon, Prof. Vishal M. Patel,

Prof. Arun Ross, Prof. Tieniu Tan, and Prof. Pong C Yuen. Eleven of them gave lectures physically in Shenzhen, and the other 3 were given online due to traveling problems. The topics covered biometric identification with face, fingerprint, palmprint, gait, soft biometrics, privacy in biometrics, trustworthy biometrics, multimodal biometrics, large-scale applications, etc. The lecturers are internationally renowned experts from all over the world. They presented the most up-to-date view of biometrics and shared their experiences with young students and researchers.





The hands-on session was organized by OpenCV China Team. Ms. Jia Wu and Mr. Wanli Zhong gave lectures on how to develop a real-time face recognition and human interaction system. Most participants finished their projects on face recognition and submitted their reports. Three teams were awarded for their excellent work.

In addition to the lectures shown below, an open poster session, a mentoring session, and a social program were organized to encourage sharing and communication. In the poster session, 13 students presented their work. In the mentoring session, the participants were divided into 9 groups. One of the lecturers was the mentor in each

LECTURERS AND LECTURE TITLES

Raffaele Cappelli (University of Bologna, Italy)

Hands on Fingerprint Recognition with OpenCV and Python

Anil Jain (Michigan State University, US)

Introduction to Biometrics

Josef Kittler (University of Surrey, UK)

Self-Supervised Learning

Ajay Kumar (The Hong Kong Polytechnic University, Hong Kong, China)

Contactless Palmprint Recognition

Xiaoming Liu (Michigan State University, US)

Biometric Recognition at a Distance

Brian Lovell (The University of Queensland, Australia)

Biometrics in Surveillance Videos

Chen Change Loy (Nanyang Technological University, Singapore)

Harnessing Generative Priors for Visual Content Restoration

Anoop M Namboodiri (IIIT Hyderabad, India)

Large-scale Biometrics Recognition

Karthik Nandakumar (Mohamed bin Zayed University of Artificial Intelligence, UAE)

Biometric Matching in Encrypted Domain

Mark Nixon (University of Southampton, UK)

Gait Biometrics, Forensics and Soft Biometrics

Vishal M Patel (Johns Hopkins University, US)

Federated Learning for Biometrics

Arun Ross (Michigan State University, US)

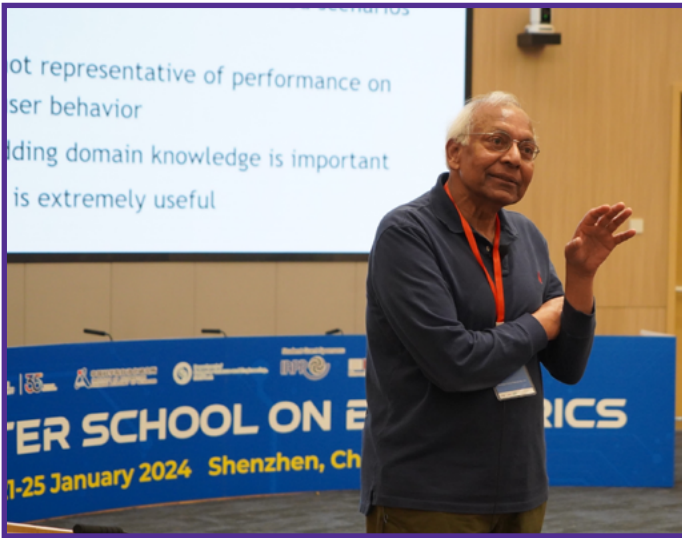
AI and Biometrics: Privacy and Synthesis of Data

Tieniu Tan (Chinese Academy of Sciences, China)

Biometrics: Progress, Problems and Prospects

P C Yuen (Hong Kong Baptist University, Hong Kong, China)

Remote Photoplethysmography Based 3D Facial Mask Presentation Attack Detection



group to guide the discussion on any topics that the students were interested in.

The social program was arranged for a cruise ship to go out to sea. Four professors, Prof. Mark Nixon, Prof. Josef Kittler, Prof. Chen Change Loy, and

Prof. Shiqi Yu, joined the program and shared their experiences with students. The students enjoyed the trip and the communication with friends and professors.

Report submitted by

Prof. Shiqi YU

Southern University of Science and Technology,
Shenzhen, China

A subset of winter school participants aboard the cruise. For a group photo of all BWS 2024 participants, see TC4 News ([here](#)).



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TO PATTERN RECOGNITION FOLKS

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ICPR 2028...
WHERE??
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MEETING AND EDUCATION PLANNER

Conferences and Dates

2024

Links to Previous Reports, plus
Venues & Paper/Application Deadlines

Month	Days	Meetings, Workshops & Schools (shaded = Sponsored by IAPR)	Previous ed/link to Report	Venue	Paper/ Application Deadline
June	3-7	SSB 2024 21st International Summer School for Advanced Studies on Biometrics for Secure Authentication: Trustful, Fair, and Privacy-Friendly	2023	Alghero Italy	closed
	19-22	MCPR 2024 16th Mexican Conference on Pattern Recognition	2023	Xalapa, Veracruz Mexico	closed
	24-28	GRAPHADON 2024 1st IAPR/CNRS Summer School on Graphs for Data Analysis		Rouen France	June 10 2024
	26-28	ISPR 2024 4th International Conference on Intelligent Systems and Pattern Recognition	2023	Istanbul Turkey	closed
July	3-6	ICPRAI 2024 4th International Conference on Pattern Recognition and Artificial Intelligence	2021	Jeju Island South Korea	closed
	10-11	DeLTA 2024 5th International Conference on Deep Learning Theory and Applications	2023	Dijon France	late-breaking Apr 30
	15-18	ICPRS 2024 14th International Conference on Pattern Recognition Systems	2023	London UK	closed
Aug/Sep	30-4	ICDAR 2024 18th International Conference on Document Analysis and Recognition	2021	Athens Greece	closed
Sept	9-11	S+SSPR 2024 Joint IAPR International Workshops on Statistical Techniques in Pattern Recognition and Structural and Syntactic Pattern Recognition	2022	Venice Italy	June 23 2024
	15-18	IJCB 2024 IEEE/IAPR International Joint Conference on Biometrics	2023	Buffalo, NY USA	Apr 30 2024
	25-27	CCIW 2024 Computational Color Imaging Workshop 2024	2022	Milan Italy	May 15 2024
Oct	10-12	ANNPR 2024 11th TC3 Workshop on Artificial Neural Networks in Pattern Recognition	2022	Montreal Canada	May 14 2024
Nov	26-29	CIARP 2024 27th Iberoamerican Congress on Pattern Recognition	2023	Talca Chile	June 1 2024
	27-29	DICTA 2024 International Conference on Digital Image Computing: Techniques and Applications	2021	Perth Western Australia	July 1 2024
Dec	1-5	ICPR 2024 27th International Conference on Pattern Recognition	2022	Kolkata India	closed
	19-21	CVIP 2024 9th International Conference on Computer Vision and Image Processing	2023	Chennai India	Apr 30 2024

2026

Aug	16-20	ICPR 2026 - 28th International Conference on Pattern Recognition	2022	Lyon France	TBD
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