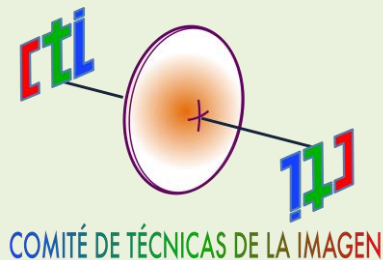


Premio Justiniano Casas

**9th EDITION OF THE "JUSTINIANO CASAS"
PRIZE FOR RESEARCH ON OPTICAL IMAGING**

LASING




SEDOPTICA
SOCIEDAD ESPAÑOLA DE ÓPTICA


OPTICA PURA Y APLICADA
LA REVISTA EN ESPAÑOL DE ÓPTICA Y FOTÓNICA

The Spanish Optical Society Committee for Image Techniques, under the sponsorship of LASING S.A., hereby publishes the call for applications for the **9th edition of the Justiniano Casas Prize for Research on Optical Imaging**, in accordance with the following

TERMS AND CONDITIONS

1.- Objective.

The objective of the prize is to promote and incentivize scientific research in all areas related to optical imaging, from progress in basic knowledge to the development of applications in the field. In particular, the prize tries to stimulate research activity from its origins, in the framework of doctorate studies, and to foster the incorporation of new researchers in this field.

2.- Periodicity.

This prize is awarded every two years.

3.- Requirements.

Those persons with a doctorate degree whose PhD. Thesis is related to research on Optical Imaging (see the list of topics in Annex I) and who fulfil the following requisites may apply for this year's prize:

- ⦿ PhD Viva between January 1st, 2021 and December 31st, 2022, and have achieved top qualification in the defence of their PhD. thesis.
- ⦿ PhD Viva in English, Portuguese, Spanish or any of the Spanish official languages.
- ⦿ To be a member (candidate and supervisor) of the Spanish Optics Society (SEDOPTICA) or to have applied for membership before the deadline for the application submission. This condition will also be considered fulfilled in the case of PhD candidate and supervisor/s have a membership application in some of the societies or networks in optics integrated within the Red Iberoamericana de Óptica (RIO). In case of more than one PhD supervisors, it will be enough that one of them to fulfill the status of membership.
- ⦿ To accept to participate, as well as their supervisor/s, in the awards ceremony or to send a representative in case of being selected. Moreover, in case of being awarded, the scientific content of the thesis will be described in the form of an article in the publication modality of "PhD revision" of the journal "*Óptica Pura y Aplicada*" (http://www.sedoptica.es/Menu_Volumenes/autores.php), presenting the original proposals, the main achievements and results. Equations and figures can be included. Maximum extension: 10 pages. This summary will be presented in Spanish or in English.

4.- Place, procedure and deadline for the application submissions.

Application forms must be sent to the address indicated in Annex II, in the form specified therein, together with the required documentation. The application period will be open from 00h (UTC) on December 20th, 2023 until 24h (UTC) on April 7th, 2024. The submission of the application implies the acceptance of the terms and conditions of the prize. After receiving all the documentation correctly, the Secretary of the Committee will inform the candidate via email to the email address provided in the application form.

5.- Prizes.

Two prizes are established for the authors of the theses, a first prize of 1000€ and a second prize of 500€. Winners will receive a diploma and a bank check for the corresponding amount. Respective supervisors will receive a commemorative plaque with the indication of the prize. The awards ceremony will take place during the XIV Reunión Nacional de Óptica (RNO2024) from the 3th to 5th of July 2024 in the Facultad de Economía y Empresa at the Universidad de Murcia. According to jury criteria, the prizes may not be awarded to any candidate.

6.- Jury.

The jury will be composed of five members, four of them belonging to the Image Techniques Committee, designated by its President after consulting the opinion of the members of the Board of Directors of the Committee, and one will be nominated by the sponsor (LASING S.A.). The jury may collect the external reports it deems appropriate for a better evaluation of the work presented. None of the jury members will have participated as co-author of any article published by any candidate for the prize, at least during their predoctoral period.

7.- Evaluation Criteria.

The jury will consider the following criteria:

- a)** The quality of the thesis and its resulting publications (60 points).
- b)** The adequacy of the work to the scope of Optical Imaging in any of its multiple variants outlined in Annex I (10 points).
- c)** The practical interest of the achieved results especially valued by the existence of patents derived from thesis work (15 points).
- d)** The formal framework through which the doctoral thesis was developed (competitive funding support, research stays, etc.) (15 points).

8.- Decision period and notification.

The jury must reach a decision within two months of the deadline of the submission period, considering the date of the awards ceremony. The jury's decisions are unappealable. Prize winners will be notified, and it will be also published on the website of the Spanish Society of Optics and in the "*Óptica Pura y Aplicada*" Journal (in the "Los comités informan" section). The sponsor company, LASING S.A. may disseminate for advertising purposes, the results of the awarded works, always indicating the authors and their affiliation.

9.- Publication in the *Pure and Applied Optics* Journal.

A summary of the winners' work will be published in the journal "*Óptica Pura y Aplicada*" (indexed SJR, IET, DOAJ, ICYT, e-journals, latindex, http://www.sedoptica.es/Menu_Volumenes/index.php) in the publication modality of "PhD. Revisions".

ANEXO I

Imaging Sciences constitutes a renewed field of research and development in science that currently has a frenetic scientific and innovative activity. Today, the term image refers not only to the optical image and multiple analysis techniques, reconstruction, and visualization, but also machine vision, computer vision, medical imaging, algorithms for image processing or three-dimensional vision, among many other areas.

In this context, the following issues are understood as related to research in optical image, among others:

- Image formation. Aberrations and their compensation. Optical design.
- Imaging: Monochromatic, polychromatic, hyperspectral, infrared, integral, ultraviolet, astronomic, three-dimensional, holographic, in motion, temporal, polarimetric, nuclear, optical, and digital.
- Image and partial coherence.
- Imaging with metamaterials.
- Optical lithography.
- Optical information. Fourier Optics. Optical correlation. Pattern recognition.
- Image processing: analysis, restoration, enhancement, compression, segmentation, etc.
- Algorithms, devices and systems for image processing. Computational image.
- Application of human vision models to image analysis.
- Optical imaging techniques, opto-electronic and digital-optical techniques.
- Optical security.
- Optical microscopy (linear and nonlinear techniques).
- Quantum imaging.
- Adaptative optics.
- Optical tweezers.
- Applications of optical imaging to industry, medicine, bioengineering, science, and the information society.



ANNEX II

Documentation to be presented in the application, in PDF format.

- ⊙ Application form with all the fields filled in (available with this document or at https://www.sedoptica.es/comites_SEDO/imagen/premio-convocatoria.html).
- ⊙ A copy of the thesis document.
- ⊙ A copy of each of the publications and patents derived from the thesis.
- ⊙ A summary of the thesis (summary A), in DIN A4 format and Times New Roman font size 12pt, single spacing, with the following content:

Summary A: The value of the candidate's contributions and the relationship between the achieved publications and patents with the thesis. The following information must also be stated: existence and type, if applicable, of predoctoral funding support under the work was carried out; year in which the thesis was started; research stays in other centres directly related to the thesis indicating centre, supervisor and period; other prizes awarded by the thesis; other merits and information that are considered relevant concerning the development of the thesis. Maximum extension: 3 pages. This summary will be presented in Spanish or English.

- ⊙ Another summary (summary B) only mandatory for the winning candidates, and optional for the rest of the candidates. This summary can be presented when the application is made or once the winners have been known, but always before the awards ceremony. In any case, all candidates may send a summary of their thesis to the journal "Óptica Pura y Aplicada" for publication based on the following content:

Summary B: The scientific content of the thesis will be described in the form of an article indicating the original proposals, the main achievements and results using the publication modality of "PhD. Revision" in the journal "Óptica Pura y Aplicada" (http://www.sedoptica.es/Menu_Volumenes/autores.php). Equations and figures can be included. Maximum extension: 10 pages. This summary will be presented in Spanish or English.

- ⊙ In case of membership to SEDOPTICA or any of the societies and optics networks integrated within the Ibero-American Optics Network (RIAO), the corresponding supporting documentation will be attached for later verification by the Prize organization.

The jury may require the participants the supporting documentation they deem appropriate.

Application submission

- a) Submission of the Application Form and the summary A (summary B is optional at the time of submission, see previous section) by email to: ctisedoptica@gmail.com **indicating in the "Subject" section: Premio Justiniano Casas 9.**
- b) Submission of the thesis copy, and of the publications and patents (see previous section), through the following file request address of "Dropbox":
<https://www.dropbox.com/request/Oc6g5qbtLEYbhoFZmK7E>

Applications will be considered to meet the submission deadline if both, the emails and files, are received before the closing date for the presentation of applications.





**Application form for the 9th Edition of
*Justiniano Casas Prize for Research on Optical Imaging***

Name of the
applicant:

Mailing address:

Telephone:

Email:

Thesis title:

Thesis viva date:

Institution:

Examination grade:

Thesis supervisor 1:

Thesis supervisor 2:

Signature of the applicant,

Place and date:

- Submission of this application form and the summary A (summary B is optional at the time of application, please consult the call) by email to ctisedoptica@gmail.com indicating in "subject": Justiniano Casas 9 Award

- Submission of the thesis copy, and of the publications and patents (see previous section), through the following file request address of "Dropbox",

<https://www.dropbox.com/request/Oc6g5qbtLEYbhoFZmK7E>