



Francisco Díaz Barrancas

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Summary of CV

This section describes briefly a summary of your career in science, academic and research; the main scientific and technological achievements and goals in your line of research in the medium -and long- term. It also includes other important aspects or peculiarities.

Francisco Díaz-Barrancas received the B.S degree in computer engineer in 2017 and the M.S degree in computer technologies research in 2018, both from the University of Extremadura (UEX), Mérida, Spain. He is currently working toward the Ph.D. degree in the visual appearance in virtual reality devices.

He is a Research Assistant at the University of Extremadura (UEX) in Spain. He has been involved in several projects related to application of hyperspectral and virtual reality techniques to measure the color performance of LED light sources.

**Francisco Díaz Barrancas**

Surname(s): **Díaz Barrancas**
Name: **Francisco**
ORCID: **0000-0002-4930-4780**
Date of birth: **01/07/1995**
Gender: **Male**
Nationality: **Spain**
Country of birth: **Spain**
Aut. region/reg. of birth: **Extremadura**
City of birth: **Badajoz**
Contact aut. region/reg.: **Extremadura**
Email: **frdiaz@unex.es**
Personal web page: **<https://francisco-diaz-barrancas.github.io/>**

Current professional situation

Employing entity: Universidad de Extremadura **Type of entity:** University
Department: Expresión Gráfica, Centro Universitario de Mérida
Professional category: Personal de Apoyo a la Investigación
City employing entity: Merida, Extremadura, Spain
Email: frdiaz@unex.es
Start date: 01/10/2020
Type of contract: Temporary employment contract **Dedication regime:** Full time
Field of management activity: University

Previous positions and activities

	Employing entity	Professional category	Start date
	Universidad de Extremadura	Personal Científico e Investigador	19/10/2017

Employing entity: Universidad de Extremadura **Type of entity:** University
Department: Ingeniería en sistemas informáticos y telemáticos, Centro Universitario de Mérida
City employing entity: Merida, Extremadura, Spain
Professional category: Personal Científico e Investigador
Email: frdiaz@unex.es
Start-End date: 19/10/2017 - 31/08/2020 **Duration:** 2 years - 10 months - 13 days
Type of contract: Temporary employment contract
Dedication regime: Full time
Primary (UNESCO code): 120317 - Informatics
Field of management activity: University



Education

University education

1st and 2nd cycle studies and pre-Bologna degrees

1 University degree: Higher degree

Name of qualification: Máster Universitario en Ingenierías y Arquitectura

Degree awarding entity: Universidad de Extremadura

Type of entity: University

Date of qualification: 20/06/2018

Average mark: Excellent

2 University degree: Graduado

Name of qualification: Grado en Ingeniería Informática en tecnologías de la información

City degree awarding entity: Mérida, Extremadura, Spain

Degree awarding entity: Universidad de Extremadura

Type of entity: University

Date of qualification: 22/06/2017

Average mark: Good

Specialised, lifelong, technical, professional and refresher training (other than formal academic and healthcare studies)

1 Training title: LearnEnglish Select Santander- Select Intermediate Level (B1)

Awarding entity: EMBAJADA DEL REINO UNIDO (BRITISH COUNCIL)

End date: 13/02/2021

Duration in hours: 25 hours

2 Training title: From Reality to Virtuality: The science and the art of creating VR experiences

Awarding entity: University of Oulu

End date: 15/06/2019

Type of entity: University

Duration in hours: 40 hours

3 Type of training: Course

Training title: Introducción al desarrollo de videojuegos con Unity

City awarding entity: Merida, Extremadura, Spain

Awarding entity: Universidad de Extremadura

End date: 03/05/2019

Type of entity: University

Duration in hours: 40 hours

4 Training title: eHealth: Tecnologías para la salud 2018

Awarding entity: Instituto internacional de investigación e innovación del envejecimiento

End date: 12/09/2018

Type of entity: Healthcare Institutions

Duration in hours: 15 hours

5 Type of training: Course

Training title: Curso de Big Data y Supercomputación: "Transformando datos en conocimiento"

City awarding entity: Cáceres, Extremadura, Spain

**Awarding entity:** Computaex**End date:** 19/12/2016**Duration in hours:** 23 hours

Language skills

Language	Listening skills	Reading skills	Spoken interaction	Speaking skills	Writing skills
English	B1	B1	B1	B1	B1

Teaching experience

General teaching experience

- Name of the course:** Fundamentos de Programación
University degree: Graduado o Graduada en Ingeniería Informática en Tecnologías de la Información
Start date: 15/09/2020 **End date:** 20/12/2020
Entity: Centro Universitario de Mérida **Type of entity:** University Centres and Structures and Associated Bodies
Faculty, institute or centre: Centro Universitario de Mérida
- Name of the course:** Sistemas de Comunicación Multimedia
University degree: Graduado o Graduada en Ingeniería de Diseño Industrial y Desarrollo de Productos
Start date: 01/02/2020 **End date:** 14/05/2020
Entity: Centro Universitario de Mérida **Type of entity:** University Centres and Structures and Associated Bodies
Faculty, institute or centre: Centro Universitario de Mérida

Scientific and technological experience

Research and development groups/teams

Name of the group: Grupo Orión
Aims of the group: Virtual reality, Extended reality, Color appearance
Type of collaboration: Co-authorship of projects and their development
Affiliation entity: Universidad de Extremadura **Type of entity:** University
Start date: 19/10/2017



Scientific or technological activities

R&D projects funded through competitive calls of public or private entities

- 1** **Name of the project:** PROYECTOS Y AYUDAS PLAN REGIONAL
Entity where project took place: Universidad de Extremadura **Type of entity:** University
Name principal investigator (PI, Co-PI....): María Isabel Suero
Nº of researchers: 10
Funding entity or bodies: Consejería de Economía e Innovación Tecnológica **Type of entity:** GR18131
Start-End date: 29/05/2018 - 04/11/2021
Total amount: 26.360,25 €
- 2** **Name of the project:** Aplicación de técnicas hiperespectrales y de realidad virtual a la medida del rendimiento de color de fuentes luminosas LED
Entity where project took place: Universidad de Extremadura **Type of entity:** University
Name principal investigator (PI, Co-PI....): Pedro José Pardo
Nº of researchers: 6
Funding entity or bodies: Consejería de Economía e Innovación Tecnológica **Type of entity:** IB16004
Start-End date: 03/06/2017 - 08/11/2020
Total amount: 115.261,3 €

Scientific and technological activities

Scientific production

Publications, scientific and technical documents

- 1** Francisco Díaz Barrancas; Halina Carmen Cwierz; Pedro José Pardo; Ángel Luis Pérez; María Isabel Suero. Colour appearance in immersive three-dimensional virtual environments. Coloration Technology. 137, pp. 38 - 43. Wiley, 14/12/2020.
Type of production: Popular science article **Format:** Journal
Corresponding author: Yes
- 2** Francisco Díaz Barrancas; Halina Carmen Cwierz; Pedro José Pardo; Ángel Luis Pérez; María Isabel Suero. Spectral Color Management in Virtual Reality Scenes. Sensors. 20 - 19, pp. 5658. MDPI, 03/10/2020.
Type of production: Popular science article **Format:** Journal
Corresponding author: Yes



Works submitted to national or international conferences

- 1** **Title of the work:** Application of spectral computing technics for color vision testing using virtual reality devices
Name of the conference: Electronic Imaging
Corresponding author: Yes
City of event: Burlingame, United States of America
Date of event: 26/01/2020
End date: 30/01/2020
Organising entity: Society for Imaging Science and Technology
Halina Carmen Cwierz; Francisco Díaz Barrancas; Pedro José Pardo; Ángel Luis Pérez; María Isabel Suero.
- 2** **Title of the work:** Visual fidelity improvement in virtual reality through spectral textures applied to lighting simulations
Name of the conference: Electronic Imaging
Corresponding author: Yes
City of event: Burlingame, United States of America
Date of event: 26/01/2020
End date: 30/01/2020
Organising entity: Society for Imaging Science and Technology
Francisco Díaz Barrancas; Halina Carmen Cwierz; Pedro José Pardo; Ángel Luis Pérez; María Isabel Suero.
- 3** **Title of the work:** A virtual scene with conservation objects with different illuminants and colour management
Name of the conference: A conservation Carol: approcci interdisciplinari nell'ambito della conservazione dei beni culturali
Corresponding author: Yes
City of event: Milano, Lombardia, Italy
Date of event: 20/12/2019
Organising entity: Università degli studi di Milano
Francisco Díaz Barrancas; Halina Carmen Cwierz; Pedro José Pardo; Ángel Luis Pérez; María Isabel Suero.
- 4** **Title of the work:** Aplicación de texturas hiperespectrales a objetos 3D en escenas de Realidad Virtual
Name of the conference: XII Congreso Nacional del Color
Corresponding author: Yes
City of event: Linares, Andalusia, Spain
Date of event: 25/09/2019
End date: 27/09/2019
Organising entity: SOCIEDAD ESPAÑOLA DE OPTICA SEDO
Francisco Díaz Barrancas; Halina Carmen Cwierz; Pedro José Pardo; Ángel Luis Pérez; María Isabel Suero.
- 5** **Title of the work:** Cómo realizar una correcta gestión del color en sistemas de realidad virtual
Name of the conference: XII Congreso Nacional del Color
City of event: Linares, Andalusia, Spain
Date of event: 25/09/2019
End date: 27/09/2019
Organising entity: SOCIEDAD ESPAÑOLA DE OPTICA SEDO

Halina Carmen Cwierz; Francisco Díaz Barrancas; Pedro José Pardo; Ángel Luis Pérez; María Isabel Suero.

- 6 Title of the work:** Herramienta para la valoración de la capacidad de discriminación del color de observadores normales y defectivos mediante un test de ordenación de color, reproducido en un entorno de realidad virtual

Name of the conference: XII Congreso Nacional del Color

Corresponding author: No

City of event: Linares, Andalusia, Spain

Date of event: 25/09/2019

End date: 27/09/2019

Organising entity: SOCIEDAD ESPAÑOLA DE OPTICA SEDO

Halina Carmen Cwierz; Francisco Díaz Barrancas; Pedro José Pardo; Ángel Luis Pérez; María Isabel Suero.

- 7 Title of the work:** Reconstrucción de objetos 3D mediante técnicas SFM y obtención de texturas hiperespectrales

Name of the conference: XII Congreso Nacional del Color

Corresponding author: Yes

City of event: Linares, Andalusia, Spain

Date of event: 25/09/2019

End date: 27/09/2019

Organising entity: SOCIEDAD ESPAÑOLA DE OPTICA SEDO

Francisco Díaz Barrancas; Halina Carmen Cwierz; Pedro José Pardo; Ángel Luis Pérez; María Isabel Suero.

- 8 Title of the work:** Hyperspectral textures for a better colour reproduction in virtual reality

Name of the conference: 15th Conferenza del Colore

Corresponding author: Yes

City of event: Macerata, Marche, Italy

Date of event: 05/09/2019

End date: 07/09/2019

Organising entity: Gruppo del Colore – Associazione Italiana Colore

Francisco Díaz Barrancas; Halina Carmen Cwierz; Pedro José Pardo; Ángel Luis Pérez; María Isabel Suero.

- 9 Title of the work:** Improvement of realism sensation in virtual reality scenes applying spectral and colour management techniques

Name of the conference: The 25th Symposium of the International Colour Vision Society

Corresponding author: Yes

City of event: Riga, Latvija, Latvia

Date of event: 05/07/2019

End date: 08/07/2019

Organising entity: International Colour Vision Society

Francisco Díaz Barrancas; Halina Cwierz; Pedro José Pardo; Ángel Luis Pérez; María Isabel Suero.

- 10 Title of the work:** Validity of virtual-reality-based systems applied to lighting and colour rendering research

Name of the conference: The 25th Symposium of the International Colour Vision Society

Corresponding author: No

City of event: Riga, Latvija, Latvia

Date of event: 05/07/2019

End date: 08/07/2019

Organising entity: International Colour Vision Society

Pedro José Pardo; Halina Cwierz; Francisco Díaz Barrancas; Ángel Luis Pérez; María Isabel Suero.

11 Title of the work: IMPROVING PROGRAMMING LEARNING WITH AUGMENTED REALITY AND GAMIFICATION

Name of the conference: EDULEARN 2019

Corresponding author: No

City of event: Palma de Mallorca, Balearic Islands, Spain

Date of event: 01/07/2019

End date: 03/07/2019

Organising entity: IATED

Halina Cwierz; Francisco Díaz Barrancas; Pedro José Pardo; Juan Ignacio Guisado; Cristina Ruiz Palma.

12 Title of the work: Un análisis preliminar de nuevos modelos de mutación dirigida en algoritmos genéticos.

Name of the conference: XVIII Conferencia de la Asociación Española para la Inteligencia Artificial

Corresponding author: No

City of event: Granada, Andalusia, Spain

Date of event: 23/10/2018

End date: 26/10/2018

Organising entity: Asociación Española para la Inteligencia Artificial

Borja Rodríguez Puerta; Francisco Díaz Barrancas; Francisco Chávez De la O; Francisco Fernández de Vega.

13 Title of the work: Colour Management in Virtual Reality applied to Lighting Simulations

Name of the conference: International Colour Association (AIC) Conference 2018

Corresponding author: No

City of event: Lisboa, Lisboa, Portugal

Date of event: 25/09/2018

End date: 29/09/2018

Organising entity: International Colour Association

Halina Cwierz; Francisco Díaz Barrancas; Pedro José Pardo; Ángel Luis Pérez; María Isabel Suero.

14 Title of the work: Is it possible to apply colour management technics in Virtual Reality devices?

Name of the conference: 14th Conferenza del Colore

Corresponding author: Yes

City of event: Firenze, Toscana, Italy

Date of event: 11/09/2018

End date: 12/09/2018

Organising entity: Grupo del Color- Asociación Italiana del Color

Type of entity: Associations and Groups

Francisco Díaz Barrancas; Pedro José Pardo; María Isabel Suero; Ángel Luis Pérez.

Other dissemination activities

1 Title of the work: European Researcher 'Night

Name of the event: Noche de los investigadores 2020

Type of event: Fairs and exhibitions

City of event: Mérida, Extremadura, Spain

Date of event: 27/09/2020

Organising entity: Universidad de Extremadura

Type of entity: University



- 2** **Title of the work:** III Semana de la ciencia y la Tecnología en Extremadura
Name of the event: Reto de Ada Byron
Type of event: Fairs and exhibitions
City of event: Mérida, Extremadura, Spain
Date of event: 15/11/2019
Organising entity: Servicio de difusión de la cultura científica
- 3** **Title of the work:** European Researchers ´ Night
Name of the event: Noche de los investigadores 2018
Type of event: Fairs and exhibitions
City of event: Mérida, Extremadura, Spain
Date of event: 12/09/2018
Organising entity: Universidad de Extremadura **Type of entity:** University
- 4** **Title of the work:** European Researchers´Night
Name of the event: Noche de los investigadores 2015
Type of event: Fairs and exhibitions
City of event: Mérida, Extremadura, Spain
Date of event: 11/11/2015
Organising entity: Universidad de Extremadura **Type of entity:** University

R&D management and participation in scientific committees

Evaluation and revision of R&D projects and articles

Name of the activity: Review
Performed tasks: Review article
Entity where activity was carried out: Journal of the Optical Society of America A **Type of entity:** Associations and Groups
Start date: 27/01/2021

Other achievements

Stays in public or private R&D centres

- 1** **Entity:** Università Degli Studi di Milano
Faculty, institute or centre: Dipartimento di Informatica
City of entity: Milano, Lombardia, Italy
Start-End date: 01/10/2019 - 20/12/2019 **Duration:** 3 months
Goals of the stay: Doctorate
Provable tasks: Research stay
- 2** **Entity:** University of Granada **Type of entity:** University
Faculty, institute or centre: Ciencias de la Educación
City of entity: Granada, Andalusia, Spain
Start-End date: 01/07/2017 - 31/07/2017 **Duration:** 1 month
Goals of the stay: Guest



Provable tasks: Research stay

Prizes, mentions and distinctions

- 1** **Description:** Programa Santander Yuzz 'Jóvenes con ideas'
Awarding entity: BANCO SANTANDER, S.A.
City awarding entity: Almendralejo, Extremadura, Spain
Conferral date: 20/06/2020
- 2** **Description:** Best Poster Award 2018
Awarding entity: Gruppo del Colore- Associazione Italiana Colore
City awarding entity: Firenze, Toscana, Italy
Conferral date: 12/09/2018
Type of entity: Associations and Groups
- 3** **Description:** III Convocatoria Premios Investigar en Ciencias
Awarding entity: Universidad de Extremadura
City awarding entity: Badajoz, Extremadura, Spain
Conferral date: 19/02/2013
Type of entity: University