

## PERSONAL DATA

Name: Lorenzo Brualla  
Birth date: 23/05/1972  
Nationality: Spanish  
Privatadresse: Paseo Xifré 29, E-08350 Arenys de Mar, Spain  
Email: lorenzo.brualla@uni-duisburg-essen.de  
ResearcherID: B-4672-2013  
ORCID: 0000-0003-3385-9623

## EDUCATION AND ACADEMIC CAREER

Nov 2012: Habilitation und venia legendi für das Fach Experimentelle Radioonkologie  
Title: 'Monte Carlo simulation of medical linear accelerators'  
Medizinische Fakultät, Universität Duisburg-Essen

1998–2002: *Doctor en Ciencias (Físicas)* (Doctor in Sciences (Physics))  
Final mark: Excellent Cum Laude  
Universitat Politècnica de Catalunya (Spain)  
Supervisor: Prof. Dr. J. Boronat  
Thesis title:  
'Path integral Monte Carlo. Algorithms and applications to quantum fluids'  
Available at: <http://hdl.handle.net/2117/93888>

1997: Post-graduate course on Plasma Physics  
Imperial College of Science, Technology and Medicine (United Kingdom)  
Supervisor: Prof. Dr. M. Haines

(1995–1996): Military Service. Artillery Academy (Spain)

1989–1995: *Licenciado en Física* (5-years degree equivalent to B.Sc., M.Sc. in Physics)  
Universidad Simón Bolívar (Venezuela)  
Supervisor: Prof. Dr. P. Martin  
Thesis title: '*Aproximaciones analíticas a funciones de Kelvin en la propagación de ondas en conductores cilíndricos*' ('Analytic approximations to Kelvin functions applied to wave propagation in cylindrical conductors').  
Degree homologated by the Spanish Ministerio de Educación y Cultura to the Spanish title *Licenciado en Ciencias Físicas*

## WORK EXPERIENCE

- Aug 2018–present: Wissenschaftlicher Mitarbeiter. TV-L 14 Stufe 5  
Westdeutsches Protonentherapiezentrum Essen  
(Direktorin Prof. Dr. med. B. Timmermann)  
Hufelandstraße 55, D-45147 Essen, Germany
- Dec 2008–May 2018: Wissenschaftlicher Angestellter, TV-L 14 Stufe 5  
Universität Duisburg-Essen  
Medizinische Fakultät  
Universitätsklinikum Essen  
Strahlenklinik (Direktor Prof. Dr. med. M. Stuschke)  
Hufelandstr. 55, D-45122 Essen, Germany
- Jul 2004–Nov 2008: Post–doctoral Fellow of Dept. of Structure and Constituents of Matter  
Physics Faculty, Universitat de Barcelona  
Diagonal 647, E-08028 Barcelona, Spain  
Contract provided by the European Commission, MAESTRO project
- Apr 2002–Jun 2004: *Assegnista di Ricerca* Post–doctoral Fellow of the Condensed Matter Sector  
International School for Advanced Studies (SISSA),  
and INFN DEMOCRITOS National Simulation Center  
Via Beirut 2–4, I-34014 Trieste, Italy

## SHORT VISITS

- Sep 2007–Dec 2007: Visiting Consultant  
Department of Physics, College of Science  
Sultan Qaboos University  
P.O. Box 36, Code 123 Al-Khoud, Sultanate of Oman

## SUMMARY OF PUBLICATIONS

|                        | Total | As first or last author |
|------------------------|-------|-------------------------|
| Peer-reviewed articles | 51    | 35                      |
| Reviews                | 1     | 1                       |
| Book chapters          | 1     | 1                       |
| Letters to the editor  | 2     | 2                       |
| Published abstracts    | 62    | 41                      |

- h-index Web of Science (Thomson Reuters): 14
- Cumulative impact factor of all indexed publications (Thomson Reuters): 293

## DIRECTION OF FUNDED RESEARCH PROJECTS

### 1. Principal investigator: L. BRUALLA

**Title of the project:** Simulación y modelización de variaciones anatómicas aplicado a la planificación del tratamiento en radioterapia (Simulation and modeling of anatomic variations applied to radiotherapy treatment planning)

**Funding agency:** Junta de Comunidades de Castilla–La Mancha (Regional Government)

**Project number:** PBC06-0019 **Funded amount:** EUR 9,100

**Duration:** 2006–2009

### 2. Principal investigator: L. BRUALLA

**Title of the project:** Development of a procedure for hyper-pure germanium detector response calibration combining experimental measurements with Monte Carlo simulations

**Funding agency:** Deutsche Forschungsgemeinschaft

**Project number:** BR 4043/1-1 **Funded amount:** EUR 164,948

**Duration:** 2011–2013

### 3. Principal investigator: L. BRUALLA

**Title of the project:** A user-friendly Monte Carlo system for the accurate simulation of clinical beams and dose distributions in radiotherapy patients

**Funding agency:** Deutsche Forschungsgemeinschaft

**Project number:** BR 4043/3-1 **Funded amount:** EUR 291,047

**Duration:** 2015–2018

### 4. Principal investigator: L. BRUALLA

**Title of the project:** Monte Carlo characterization of a new detector holder for IAEA/WHO dosimetry audits

**Funding agency:** International Atomic Energy Agency

**Duration:** 2019 **Funded amount:** EUR 9,000

### 5. Principal investigator: L. BRUALLA (WPE)

**Project coordinator:** I. Thierry-Chef (ISGlobal, Spain)

**Title of the project:** HARMONIC. Health effects of cardiac fluoroscopy and modern radiotherapy in paediatrics

**Funding agency:** Euratom research and training programme 2014-2018. H2020 Framework programme of the European Commission

**Project number:** 847707

**Funded amount granted to the WPE:** EUR 787,225

**Funded amount granted to the Consortium:** EUR 7,000,000

**Duration:** 2019–2024