CURRICULUM VITAE

JOSÉ M. HORAS AZNAR

Master in Physics

jose.horas@gmail.com
https://github.com/josehoras

CORE COMPETENCIES

- Passionate about Artificial Intelligence and Neural Nets
- Strong mathematical background and analytical thinker as Physics graduate
- Translating the physical reality into mathematical models as Modelling Engineer
- Working with production and different stakeholders as Equipment Engineer
- Excellent adaptability to new environments and cultural settings, relocation from Spain to Germany, as well as more than a year travel in Asia
- High perceptivity and proactive learner with a practical approach (https://github.com/josehoras)

PROFESSIONAL EXPERIENCE

08/2018 - present **Student on AI and Neural Networks**

- Graduated to Udacity Nanodegree:
  Self-Driving Car Engineer
- Graduated to Udacity Nanodegree:
  Intro into Self-Driving Cars
- Audit lessons and assignments of Stanford's CS231n:
  Convolutional Neural Networks for Visual Recognition
- Audit lessons and assignments of Stanford's CS224n:
  Natural Language Processing with Deep Learning

03/2017 - 06/2018 **Sabbatical**

South – South East Asia

- Gap year discovering different cultures, performing volunteering work, and expanding personal limits and skills

05/2013 - 12/2016 **RF Modelling Engineer**

Intel GmbH

- Design and modeling of new devices (transistors, capacitors…) in new silicon technologies
- Automate devices and full test chip generation, greatly improving development time
- Measure and device characterization
- Transfer of knowledge and automation procedures to the team

02/2011 - 06/2013 **Lead Probing Engineer**
Intel Mobile Communications
- Manage probing qualification projects
- Define technology roadmap
- Vendor management
- Support new probing technologies at the production line

05/2008 - 02/2011 **Probing Engineer**
Infineon GmbH
- Qualify front-end test equipment (probecards)
- Manage coordination between vendors, test developers, and production
- Engineering laboratory maintenance

10/2007 - 12/2007 **Visiting scientist**
Ludwig Maximilians University (Munich)
- Measure and investigation of quantum Hall systems

09/2006 - 09/2007 **Master thesis in physics**
Ludwig Maximilians University (Munich)
- Unconventional aspects of the quantum Hall effect on narrow gated Hall bars

06/2006 - 09/2006 **Research student**
Ludwig Maximilians University (Munich)
- Characterization and processing of GaAs/AlGaAs wafers

IT SKILLS

- Deep Learning Frameworks: TensorFlow, Keras, PyTorch
- Programming Languages: Python, C++, SKILL
- Python Libraries: ROS, OpenCV, numpy, matlibplot, pandas
- Develpment Tools: Jupyter Notebooks, Docker, Git, GitHub

LANGUAGE SKILLS

- Spanish: Native speaker
- English: Excellent
- German: Excellent

EDUCATION

10/2006 - 10/2007 **Master in Physics**
Dr. Stefan Ludwig's group at the Ludwig Maximilians University (Munich)
"*Unconventional aspects of the quantum Hall effect on narrow gated Hall bars*"
(Grade: 1.00)

- Processing of GaAs wafers (wet etching, physical vapour deposition)
- Electron microscopy (SEM, AFM)
- Electrical measurements (Lock-in amplifier, resistance bridge, Labview)
- Cryogenic Physics

10/2002 - 08/2003 Year of study performed at Ludwig Maximilians University (Munich)

10/1996 - 07/2004 Master in Physics at Hispalense University (Seville)

SCIENTIFIC PUBLICATIONS

"Asymmetric nonlinear response of the quantized Hall effect"
A. Siddiki, J. Horas, D. Kupidura, W. Wegscheider, and S. Ludwig
New Journal of Physics **12**, 113011 (2010) arXiv:0911.4832

"Interaction mediated asymmetries of the quantized Hall effect"
A. Siddiki, J. Horas, J. Moser, W. Wegscheider, and S. Ludwig
Eur. Phys. Lett. **88**, 17007 (2009) arXiv:0905.0204

"Investigations on unconventional aspects in the quantum Hall regime of narrow gate defined channels"
J. Horas, A. Siddiki, J. Moser, W. Wegscheider and S. Ludwig
Physica E **40**, 1130-1132 (2008) arXiv:0707.1142