**CURRICULUM VITAE**

|  |  |
| --- | --- |
| **1. Family Name:** | Martins |
| **2. First Name:** | Carlos |
| **3. Date of Birth:** | 26 November 1986 |
| **4. Nationality:** | Portuguese |
| **5. Civil Status:** | Single |
| **6 Address:** | Eckenheimer Landstr. 325, 60320 Frankfurt am Main, Germany |
| **7. Contact Details:** | mobile: +49 1573 196 72 10  e-mail: carlos.cotafomartins@gmail.com |

**8. Education**

MSc. in Civil Engineering - Hydraulics and Water Resources (16/20) - Instituto Superior Técnico, Technical University of Lisbon, Portugal (2004 - 2010).

**9. Other Training**

Design, Construction and Operation of Small Dams, FUNDEC - Association for Training and Development of Civil Engineering and Architecture - Instituto Superior Técnico - Technical University of Lisbon, November 2011.

**10. Key Qualifications:**

* Water resources assessment and modeling: evaluation of surface water resources availability and demand according to water uses.
* Hydrological studies: hydrological modelling (numerical and GIS), flow duration curves, peak flood flows.
* Design of open surface hydraulic structures: fluvial storage, diversion schemes, and irrigation schemes; hydraulic design and layout of the of dams’ appurtenant structures (spillways, bottom outlets and intakes), diversion works, and energy dissipators.
* Design of pressurized hydraulic structures: calculation of head losses; turbine and pump selection and operation criteria; transient analysis; water hammer control devices.
* Business development and project acquisition: international donors (World Bank, KfW, ADB).
* Project management of water resources and hydropower related projects.

**11. Languages (1 – excellent; 5 – basic)**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Speaking** | **Reading** | **Writing** |
| Portuguese | native | | |
| English | 1 | 1 | 1 |
| Spanish | 1 | 1 | 2 |
| French | 2 | 2 | 3 |
| German | 3 | 3 | 4 |

**12. Professional computer literacy:**

* advanced user of Microsoft Office tools (Excel, Word, PowerPoint).
* advanced user of Geographic Information Systems (GIS): ArcGis (3D Analyst, Spatial Analyst, Model Builder).
* good command of AutoCAD.
* basic knowledge of HEC-RAS and HEC-HMS.

**13. Countries of Work Experience (last 10 years)**

Ecuador, Mozambique, Nigeria, Nepal, Pakistan; Rwanda, Uganda, Uzbekistan, Zambia.

**14. Employment Record**

11/2015 - 09/2019 intec GOPA-International Energy Consultants GmbH, Bad Homburg, Germany; Project Manager - Hydropower

03/2013 - 10/2015 INTEGRATION environment & energy GmbH, Graefenberg, Germany; Hydropower Engineer

03/2010 - 02/2013 Gesto Energy Consulting, Algés, Portugal; Consultant

|  |
| --- |
| **15. Selected Project Experience** |
|  |
| Name of assignment or project: Small and Medium Hydropower Development Program  Year: 12/2018 - 09/2019  Location: Uzbekistan  Client: World Bank  Positions held: Internal Project Manager  Activities performed:   * Bid preparation; * Contractual agreements with client and project team members; * Coordination of mobilization phase and participation in inception mission in Tashkent;; * Following up project activities with project manager (external), client and beneficiary (Uzbekhydroenergo); * Planning and coordination of logistics for project missions; * Budget control.   Name of assignment or project: Consulting Services as Owner's Engineer to Support UEGCL in its Participation in a Public Private Partnership (PPP) for the Implementation of the Nyagak III Small Hydropower Plant (2 x 3.3 MW)  Year: 09/2018 - 09/2019  Location: Zombo District, Uganda  Client: Uganda Electricity Generation Company Limited (UEGCL)  Main project features: Support to UEGCL during design, construction and initial operation of the project  Positions held: Project Manager  Activities performed:   * Leading the project team and focal point for communication with the Client and stakeholders; * Organizing and participating in meetings and workshops in Uganda (both Kampala and at the project site); * Overall technical coordination and review of the PPP engineering consultant reports particularly in water resources and hydraulic design topics; * Quality assurance of reports and deliverables; * Budget control; * Preparation of updated bid and support in contract negotiations   Name of assignment or project: Advice and capacity building for evaluation and validation of studies as well as assistance in negotiating IPP / EPC contracts for 4 hydropower projects  Year: 09/2017 - 11/2018  Location: Madagascar  Client: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH  Main project features: Support the Ministry of Energy (MEH) in the evaluation and validation of technical and financial feasibility studies as well as negotiating power purchase agreements between Jirama and the private operators for the 4 hydropower plants (Ambodiroka 42 MW, Sahofika 300 MW; Antetezambato 120 MW, Volobe 90 MW)  Positions held: Internal Project Manager  Activities performed:   * Contractual agreements with project team members; * Coordination of mobilization phase; * Planning of missions; * Contribution to reviewing developers studies and reports particularly in water resources and hydraulic design topics; * Overall coordination with GIZ and the MEH.   Name of assignment or project: Africa-EU Renewable Energy Cooperation Programme (RECP) – Market Information and Project Scouting  Year: 06/2017 - 08/2017  Location: Zambia  Client: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH  Main project features: RECP aims at improving framework conditions for investment in renewable energy projects in Africa, by encouraging and supporting private sector engagement through providing market information as well as project scouting and match-making. The present assignment comprises four countries: Rwanda, Senegal, Uganda and Zambia.  Positions held: Hydropower Expert  Activities performed:   * Development of one model business case and two project case studies for hydropower projects in northwest Zambia (Mujila Falls, Lwakela) including: site visits, review of pre-feasibility studies, water resources assessment (computation of flow duration curve) and estimation of energy production, preparation of business model including sensitivity analysis, reporting.   Name of assignment or project: Consulting Services as Owner's Engineer to Support UEGCL in its Participation in a Public Private Partnership for the Implementation of the Nyagak III Small Hydropower Plant (2 x 3.3 MW)  Year: 2016 - 2018  Location: Zombo District, Uganda  Client: Uganda Electricity Generation Company Limited (UEGCL)  Main project features: Support to UEGCL during design, construction and initial operation of the project  Positions held: Internal Project Manager  Activities performed:   * Coordination of the project team and communication with the Client and stakeholders; * Overall technical coordination and review of the PPP engineering consultant reports particularly in water resources and hydraulic design topics; * Budget control.   Name of assignment or project: Feasibility Study for KGRTC Small Hydropower Station (10.78 MW)  Year: 06/2015 - 07/2017  Location: Zambia, Kafue Gorge  Client: Kafue Gorge Regional Training Centre (KGRTC)  Main project features: Assessment of options, feasibility study, design and tender documents for a small hydropower plant (size to be determined).  Positions held: Internal Technical Project Manager  Activities performed:   * Overall review of technical reports with a focus on surface water resources assessment and hydraulic design; * Participation in presentation and discussion of project options at the Client headquarters in Kafue, Zambia; * Review of project timelines; * Support and execution of trainings with Client's staff on the topics of water resources assessment and hydraulic design applied to hydropower plants.   Name of assignment or project: Nigeria Energy Support Programme (NESP)  Year: 03/2015  Location: Nigeria  Client: GIZ  Main project features: Assessment of hydropower projects in 3 States (Niger, Ogun and Cross River).  Positions held: International Hydropower Expert  Activities performed:   * Preparatory water resources assessment: collecting and processing rainfall and runoff data, and establishing hydrograms; * Site survey, flow measurements; * Preliminary techno-economic evaluation and reporting.   Name of assignment or project: Development of Hydropower and Renewable Energy (HRE) Project in Khyber-Pakhtunkhwa - Phase I  Year: 10/2013 - 10/2015  Location: Germany and Pakistan  Client: Pakistan Poverty Alleviation Fund (PPAF)/KfW  Main project features: Design of 5 MHP projects, Gollen Astore (130 kW), Gazeen (330 kW), Rech Bala (160 kW), Bagaria Khwar (30 kW), Pursat (125 kW), Gujjar Gabaral (40 kW)  Positions held: Hydraulic and Hydropower Engineer  Activities performed:   * Water resources assessment: hydrological modelling to establish flow duration curves and peak flood flows; establishing available flow for hydropower use considering complementary water uses (irrigation) in the watershed. * Hydraulic design: tyrolean intake, submerged intake, flood walls, gravel trap, settling basin, waterways, spillways, forebay, penstock, anchor blocks, support piers, and energy dissipation structures; * Preparation of construction drawings and bills of quantities; * Project implementation support: several one month missions in Khyber Pakhtunkhwa for evaluation of construction progress and design adjustments; * 10-day training and capacity building at PPAF office in Islamabad on micro/mini hydropower design: introduction to basic concepts water resources management and hydrology; training on using a spreadsheet template for hydraulic and structural calculations and on producing project drawings.   Name of assignment or project: Upper Tamor HPP (Nepal)  Year: 03/2013 - 07/2013  Location: Nepal  Client: on behalf of Integration environment & energy GmbH  Main project features: Feasibility studies for hydropower plants  Positions held: Hydraulic Engineer  Activities performed:   * Review of hydraulic designs, structural stability verifications, and cost estimation.   Name of assignment or project: Angola Energy 2025  Year: 08/2012 - 02/2013  Location: Portugal  Client: Ministry of Energy and Water  Main project features: The “Angola Energy 2025 – Power Sector Long Term Vision” had two major objectives: i) the Renewable Energy Atlas of Angola and ii) the Plan for the Electrical Sector until 2025.  Positions held: Consultant - Hydropower and Water Resources  Activities performed:   * Water resources assessment: Rainfall and runoff data processing, statistical tests on hydrological time series, rainfall mapping, and mapping of the mean annual runoff. * Selection of the country’s 20 strategic hydropower schemes: Data collection, preliminary budgeting and estimation of energy production, calculation of the LCOE, development of multi-criteria analysis (based on economical, technical and environmental criteria);   Name of assignment or project: Mozambique Renewable Energy Atlas  Year: 07/2011 - 07/2012  Location: Portugal  Client: FUNAE - Energy Fund for Mozambique Government  Main project features: The Renewable Energy Atlas contains resource maps indicating the potential calculated for solar, wind, biomass, hydropower, geothermal and ocean energy  Positions held: Consultant - Water Resources and Hydropower  Activities performed:   * Water resources assessment and hydrological studies: rainfall and runoff data collection and analysis (testing for statistical validity); modelling surface water distribution and availability: rainfall-runoff models and water balance; mapping (GIS) countrywide average monthly and yearly rainfall and runoff. * GIS methodology to highlight best potential locations for hydropower schemes.   Name of assignment or project: Cape Verde Renewable Energy Master Plan  Year: 03/2010 - 06/2011  Location: Portugal  Client: Ministry of Energy and Industry  Main project features: The study included an assessment of the renewable energy potentials existing on the different islands  Positions held: Trainee - Water Resources and Hydropower  Activities performed:   * Water resources assessment: modelling of surface water resources including statistical testing of rainfall and runoff time series and GIS mapping of average monthly and yearly rainfall and runoff; * Pre-feasibility studies of pumped storage schemes in the islands of Santiago and São Vicente including: hydrological modelling of average monthly flows, computation of peak flood flows, reservoir capacity and operation. |