



Postdoc Call 2022

The Department of Electrical Engineering at University of Santiago, Chile (<http://www.die.usach.cl>) is seeking candidates for postdoctoral positions in the field of electrical engineering.

Currently, there is a funding form open for applications. Applicants shall be sponsored by the Department of Electrical Engineering at the University of Santiago of Chile.

Foreign researchers who apply for a project in this contest must prove residence in Chile on the institutional sponsorship closing date, by presenting a resident visa, which must be included in the annexes section of their application. In case of award, you must present residency documentation that allows you to receive resources.

ANID Post doctorate Call:

Benefits:

- a.- **\$27.588.000 CLP (Chilean Pesos)** Gross Salary per year, subject to legal discount of 10,75% taxes.
- b.- **\$4.500.000CLP** per year for travel expenses and any operational cost.
- c.- **\$3.000.000CLP** for installation cost. (Only once payment)

Main Conditions:

- a.- Deadline for application August 19th 2021, 16:00 hours of continental Chile
- b.- The postdoc should start in April 15th 2022.
- c.- Duration: 2 or 3 years
- d.- PhD must be obtained from 01.01.2018 until 28.08.2021 (recently graduated PhDs). If you became father/mother during that period of time, there is an extension of 1 year, i.e. from 01.01.2017.

Link to further information:

<https://www.anid.cl/concursos/concurso/?id=683>



Investigation Lines:

Electrical Power Systems

- Solid State Transformers
- Power electronics for Electromobility
- Hardware and Firmware development of Real Time Systems
- Wind Energy Conversion Systems
- HVDC and LFAC
- Microgrids
- Modular Multilevel Converters
- Technical-economic operation/planning of electrical systems with renewable integration
- Frequency stability in electrical systems with low inertia renewable integration
- Use of data Analytics and Big Data for predictive operation of electrical systems/synchrophasors
- Economic optimization of energy systems for air conditioning/electromobility/hydrogen / storage
- Development of energy efficiency technologies in the following areas: electric motors and control of industrial/mining processes

Telecommunications

- Optimization of energy efficiency algorithms applied to Wireless Sensor Networks (WSN: Wireless Sensor Network)
- Minimization of energy consumption in dynamic cognitive radio sensor networks
- Security algorithms applied to wireless sensor networks and wireless body area networks (WBAN: Wireless Body Area Networks)



- High security medical data management system applied to ubiquitous monitoring systems for the premature detection of diseases based on a WBAN using blockchain
- Models for the development of enabling infrastructure of Open Smart City
- Visible light communications: Link design and applications
- Indoor positioning (VLC)
- Blockchain and non-binary cryptography
- Data Analytics for Distributed Systems
- Hybrid communications networks for 6G
- Interference management for interference channels
- Interference alignment
- Lattice alignment and lattice codes
- Wireless communications
- Physical Layer Security
- Channel coding
- IoT - Wireless Sensor Networks

Automatic control

- Robotics and Applications
- Dynamical Systems and Applications
- Control Systems and Applications
- Robust control and estimation design to LPV dynamical systems, in special descriptor systems
- Application of robust and LPV control approaches to non-linear systems.

Interested applicants and further information please contact:

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