

# Postdoc with focus planar Ge Research Group Katsaros

Full Time

| Klosterneuburg (Vienna), Austria

| € 56.000 gross/year\*

## IST Austria is growing. Grow with us!

IST Austria is a growing international institute for conducting frontier research in mathematics, computer science, and the life and physical sciences. We recruit passionate professionals from all over the world and from all fields who support our goals of excellence in research and science management. Located on a beautiful campus on the outskirts of Vienna, we offer numerous opportunities for personal growth in a stable working environment. [Get an insight!](#)

### Postdoc position with focus on Qubits in planar Ge

While GaAs structures represent the current state-of-the art in device complexity, Si devices hold the current records in coherence times due to the nuclear-spin free environment in isotopically purified samples. Ge which has been much less studied, has recently emerged as a very promising material platform for hosting spin qubits due to the suppressed hyperfine interaction and strong spin orbit coupling. In only three years a single Loss-DiVincenzo qubit, 2-qubit and most recently even 4-qubit devices have been demonstrated.

In the [Nanoelectronics group of Georgios Katsaros](#) we have recently realized a hole spin qubit with dephasing times of 1  $\mu$ s operating already at fields of 500  $\mu$ T, within the range of magnetic fields currently used for on-chip biasing of superconducting circuits. This was achieved by using the large out of plane g-factors of holes in Ge and by encoding the qubit in the singlet-triplet states of a double quantum dot device. In this project we aim to use hole qubits in planar Ge devices and make further steps towards the realization of a hole spin based quantum processor. More information: [nanoelectronicsgroup.wordpress.com](http://nanoelectronicsgroup.wordpress.com)

## Your profile

- PhD and solid background in the following areas: microwave techniques, low temperature physics and quantum information
- Excellent track record in spin or superconducting qubits
- Excellent communication and presentation skills
- High motivation and ability to work closely with scientists of other disciplines
- Excellent command of English (working language)
- A proven ability to conduct independent research, as well as to work effectively as a member of a research team

**Application documents:** motivation letter, CV and two reference letters; **flexible start date**

**To submit your application please email:** [georgios.katsaros@ist.ac.at](mailto:georgios.katsaros@ist.ac.at)

\* This position comes with possible overpayment depending on education, qualification and work experience. IST Austria processes your personal data in accordance with the law. For more information, please refer to [www.ist.ac.at/data-protection](http://www.ist.ac.at/data-protection).

## Your benefits



Education & training



Cafeteria



Childcare



Free shuttle bus



Multiple health offers



Pension insurance