Seeking international collaborators for upcoming Quantum Technology call

Can act as:

- Coordinator
- Work Package Leader

Seeking expertise:

- Photonics
- Glass processing
- Quantum computing
- Microfabrication
- Cryogenics
- 3D electronics
- Microwave oscillators
- High tc superconducters
- Light matter interaction
- Quantum sensing
- Coating development
- Countermeasures
- RF and microwave electronics

- Areas of Collaboration –

1. **Quantum Sensing and Computing Platforms**
Partners with expertise in microwave cavity QED, superconducting techniques, or related fields are encouraged to join our consortium. Your contributions will be vital to advancing quantum nondemolition measurement techniques and exploring novel quantum computing applications.

2. **3D Integration and Coating Technologies**
We are engaged in research on the three-dimensional integration of microwave electronics with photonic and other functional layers. Our team possesses specialized technology for coating laser-structured thick glass wafers with thick metal films. We aim to extend this expertise to the deposition of high-temperature superconductors on transparent substrates. Prospective partners with advanced coating technologies are especially welcome.

3. **Theoretical Investigations and Signal Detection**
As our platform is novel, it requires comprehensive theoretical research. Key areas include the broadband, instantaneous detection of radio-frequency and microwave signals by trapped electrons, as well as the evaluation of their potential in quantum computing applications. We seek consortium partners who can contribute significant theoretical insights to these challenges.

4. **Expertise in Electronic Countermeasures**
There exists an existing knowledge gap regarding the specific requirements of passive radio-frequency detectors used in electronic countermeasures. We are therefore looking for a partner with proven expertise in this field to provide advisory support.

5. **System Integration**
Although our group offers substantial expertise in the design of microwave Paul traps, we are eager to collaborate with partners who can help scale the platform and integrate all functional components at the wafer level.

If you want to know more contact us at pre-award@ist-id.pt