**Job Title:** DSP and Communications Engineer

**Company:** For almost three decades, MESO has been developing and applying dynamical and statistical geophysical models for government and commercial clients ([http://www.meso.com](http://www.meso.com)). MESO also conducts contracted scientific research and development for government and private-sector entities. We plan to expand and diversify our workforce by hiring an engineering team who will commercialize the next generation of environmental sensing technology. MESO provides the flexibility and freedom of working in a small company with the benefits and vision of a larger organization.

**Location:** MESO headquarters is located in New York's Capital Region at the Rensselaer Technology Park ([http://www.rpitechpark.com/](http://www.rpitechpark.com/)), Troy, NY.

**Job Description:** In this position, the person will play a key role for MESO working with an engineering team of small business partners to design, develop, test, and commercialize a new observing system known as “GlobalSense”. The GlobalSense system features an ensemble of completely disposable, airborne probes, mechanisms to deploy probes, and receiver platforms to gather data from probes. The ultra-compact probes will integrate micro- and nanotechnology-based components in a biologically inspired (e.g. dandelion seed) design to provide low cost, wireless sensing capability and will function as passive drifters using no active propulsion or flight.

Specific duties related to the GlobalSense project include software development for probe microprocessor units to handle sensor data acquisition, communication with any other digital components, power conservation, packet encoding, and transmission. The person will also responsible for assembling and testing multiple receiver units built using commercial-off-the-shelf hardware (e.g. data processing computer, software-defined radio receiver, low-noise amplifier, antenna, and assorted cables). Additional responsibilities include receiver software development to (a) decode hundreds of probe signals leveraging TDMA and FDMA, (b) decompress data packets, (c) perform limited quality control, and (d) analyze results for comparison with independent, ground-truth measurements.

**Required Skills:**

- Bachelor’s degree in electrical engineering
- Ultra-low power digital signal processing (DSP) and communication theory/practice for wireless microsystems (microcontrollers, analog/digital sensors including GPS, transceivers)
- C/C++, Matlab, Linux
- Strong inter-personal and communication skills
- Strong analytical, programming, and problem solving skills
- Detail-oriented self-starter who can take direction then proceed independently

**Desired Skills:**

- Masters or Doctoral degree in electrical engineering
- Experience with software radios
- Experience with forward error correction, CDMA, TDMA, FDMA
- At least two years of experience in academia or industry working with DSP microsystems

**Salary:** Negotiable, based on experience.

**Contact:** Resumes and cover letters for this position should be sent to [jmanobianco@meso.com](mailto:jmanobianco@meso.com).