Vacancy: Mathematical Physicist
Radac BV, Delft (32 - 40 hours)

Are you driven by translating complex ocean physics into robust mathematics and functional algorithms?
If you have a strong background in physics, specialized experience in (radar) signal processing, and the ability to connect electromagnetic sensor data to large-scale fluid mechanics, this role was built for you. We are looking for someone who isn't satisfied until they understand the exact physical reality behind every data point.

About Radac
Radac is a family-owned specialist in ocean wave measurement, based in Delft, active since 1996. We engineer high-end radar technology to master the physical motions of the sea surface. The ocean is chaotic and powerful, but offshore operations cannot afford uncertainty. We apply our technical ingenuity to real maritime challenges: making offshore operations safer, enabling the clean energy transition, and building technology that is indestructibly solid.

The Challenge
Working at the crossover of wave dynamics, RF measurement, and stochastic signal processing, your primary challenge is designing the algorithms that bridge raw radar signals with physical ocean parameters. You will ensure our end-to-end data processing pipeline is rooted in physical truth and robust mathematics.

Responsibilities:

- Algorithm Development: Design, verify, and document signal processing algorithms that convert raw radar data into accurate wave data.
- Physical Analysis: Apply physical intuition and signal processing techniques to separate genuine sea surface movements from radar-specific phenomena (e.g., sea clutter, backscatter, specular reflection, and spray)
- Proactive Improvement: Stay curious and identify new methods or theories to enhance our data processing chain.
- Scientific Documentation: Ensure every algorithm is backed by a clear technical derivation.

Profile requirements:

- Educational Background: A Master’s or PhD in (Applied) Physics or Mathematics or a related quantitative field
- Core Expertise: Proven experience in signal processing algorithm design, preferably working with radar, RF, or wave-scattering data.
- Technical Depth: Strong grasp of classical mechanics and stochastic processes.
- Programming: Working knowledge of Python to turn theoretical models into working code.
- Autonomy & Drive: Self-driven and proactive; you take full ownership of your work and thrive in a small team.
- Analytical Mindset: You work in a structured and detail-oriented manner, never satisfied with a "black box" solution.
- Language: Excellent command of English; Dutch is a plus.

What we offer
We offer a dynamic work environment with an innovative character and room for personal development. You will join a small, expert team in Delft where technical depth is valued and where your work directly impacts the safety and efficiency of offshore operations worldwide.

Interested in this position and our company?
We would love to receive your motivation letter and CV! Please send them to katja@radac.nl.
Note: Acquisition in response to this advertisement is not appreciated.

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