Job Title: Optical Physicist Wireless Communication Modeling and Simulation

Reference Number: 303

Scope of Position:

- Looking for a physicist with expertise in wireless communication, optical physics, and computational physics.
- The role requires interaction with RD&E personnel in a team setting, so excellent communication skills, oral and written, are a must.

Day to Day Responsibilities:

Build models and use them in close conjunction with experiments to address complex technical problems in the areas of wireless communication, optical communication, optical behavior of textured glass surfaces, thin film structures, and optical devices. Examples of relevant research areas are:

- Behavior of wireless communication systems, and combined wireless/optical systems.
- Glass surface texture design and coating design for optimal light extraction, anti-reflective/anti-glare properties, sparkle behavior, etc.
- Imaging system behavior
- Laser processing of materials
- Optical fiber behavior
- Fiber coupling to sources and detectors of various sizes and performance levels
- Optical metrology and sensing

Travel Requirements: One or two times a year for 2-5 days to other Corning locations (domestic and international) or to pursue training opportunities (conferences, classes).

Hours of work/work schedule/flex-time: Monday to Friday, regular business hours 8 a.m. to 5 p.m.

Required Education: MS or PhD in physics, mathematics, electrical engineering, or closely related discipline.

Required Years and Area of Experience: 1+ years of experience in optical physics modeling and simulation.

Required Skills:
• Expertise in optical physics and electromagnetics.
• Skill in breaking down a complex practical problem, and figuring out how to address the problem using models and experiments.
• Working experience with industry-standard numerical tools used in optical physics and electromagnetics modeling.
• Sound understanding of numerical techniques such as finite element and finite-difference time-domain methods.
• Experience in programming.
• Ability to partner closely with experimentalists.

Desired Skills:

• Experimental experience.
• Computational physics, mathematical algorithms.
• Materials science, especially polymers and glass.
• Strong programming skills.
• Familiarity with software engineering practices: version control, test suites, etc.
• Familiarity with Linux.

Soft Skills (Communication/Team/Leadership):

• Strong interpersonal and communication skills, and ability to work as a team player.
• Must be a proactive and solution-oriented problem solver.
• Dedication to excellence, and advancing the state-of-the-art.
• Strong personal motivation to make a difference.