

## Fluid Dynamics Modeler

Compact Membrane Systems (CMS) is on a mission to save the planet. We create technology to capture and reduce greenhouse gas emissions, avert global warming, and transform industry into a long-term sustainable enterprise. One membrane system at a time. CMS is a high-growth, advanced materials company based in Wilmington, Delaware that offers its employees personal growth, autonomy, and the opportunity to work on award-winning disruptive technology that is bringing 21<sup>st</sup> century innovation to the industrial economy.

We are looking for a creative, collaborative fluid dynamics modeler who can help design the future membranes of industrial gas separation. This person will be an integral member of the development team and will connect theoretical concepts to practical design elements. They will work closely with the experimental R&D team as well as the manufacturing transition team to enable the design of effective, robust and high performing membrane cartridges.

### What you will be doing

- Develop predictive tools and models to support the membrane separation technology development efforts at CMS. Modeling techniques include computational fluid dynamics (CFD), process models and flowsheets (e.g., Symmetry, ASPEN), statistical techniques, design of experiments (DoE), and first-principles engineering models.
- Identify opportunities to use engineering knowledge and computational tools to help solve project challenges.
- Plan and execute experimental studies in collaboration with experimental experts to support/validate modeling efforts.
- Communicate and present results internally at meetings and at external forums. Present scientific results to a diverse audience through data analysis and visualizations.
- Work with external partners (e.g., universities, research organizations) to execute and deliver well-defined modeling projects.

### Position Benefits

The pay range we are offering is \$90,000-\$110,000 and will be based on experience. In addition to the annual salary, you will receive:

- PTO (paid time off)
- paid holidays
- Flexible work schedule
- Hybrid Work Option (if applicable to the role)
- Comprehensive benefit offering that includes:
  - Medical
  - Dental
  - Vision
  - 401k
  - Participation in the CMS Stock Option Plan

## What you Need for this Position

- Experience in computational fluid dynamics (CFD)
- Proficiency in fundamental chemical engineering concepts such as mass, momentum, and energy transport phenomenon.
- Ability to set up and solve linear, non-linear, differential and partial differential equations. Strong programming and coding skills and experience with various numerical techniques is required.
- Proficiency in programming using some standard languages such as C/C++, Python, Matlab, etc.
- Demonstrated expertise in modeling of gas/gas or gas/liquid flows and separation using membranes
- Capability and willingness to design and execute hands-on laboratory experiments to support modeling efforts.
- Experience with various membrane separation unit operations (gas separation, gas/liquid contacting, pervaporation, nanofiltration, etc.) is desired.
- Ability to balance multiple priorities
- Comfort with being the go-to person and expert in your areas of expertise
- History of working in a highly dynamic and collaborative team

## About Compact Membrane Systems (CMS)

We decarbonize today's infrastructure for a cleaner tomorrow. CMS develops and deploys new climate-oriented technologies for carbon capture, renewable gas, and improvements to existing industrial processes. We live and breathe on the cutting edge of industrial technology. CMS enables large, capital-intensive industrial operations to meet the needs of a changing world and a climate challenge: operating more efficiently, while also supporting the growth of new, green industries.

We are a small but mighty group of inquisitive self-starters who are passionate about learning and making a positive impact on our team-mates, colleagues, customers, and the world every day. Our individual missions and work are varied, our work culture is collaborative, and our organization is flat.

CMS operates a research facility, product development shop, and membrane manufacturing facility.

## Location

Compact Membrane Systems is located in Wilmington, Delaware. This great spot in the Northeast features friendly people, low cost of living, and abundant open spaces and nature. Commute from Center City Philadelphia, live in the burbs, or be tucked away, out of view of any neighbors.

## Why you should apply

### *Growth*

When you join CMS, you join an entrepreneurial environment focused on company acceleration and your professional growth. CMS employees quickly become experts in their domain, and act as the face of the company to customers and other external stakeholders. We are a small team and you are getting in on the ground floor. You will have plenty of headroom to grow.

### *Innovation*

Game changing innovation happens at small companies, where teams are creative, leadership is nimble, and politics are rare. Our thinking is not limited by 'what we have always done', impacting our existing portfolio, or the latest, quarterly change.

### *Access*

Our small size means that everyone has a variety of projects and collaborations across the organization, with visibility to leadership.

### *Culture*

We are a friendly home for ambitious, curious, self-directed self-starters who enjoy finding new solutions to new problems. The culture and work provide opportunities to chart your path within CMS, and externally with our customers and partners.

### *Impact*

CMS takes on some of the toughest scientific challenges in industry, delivering innovative technology and high value solutions. We don't do me-too technology or incrementalism. We over deliver for our customers and our partners. We have high expectations of our products and our team.

For more information, to speak to a CMS colleague or to submit your resume, please contact [resumes@compactmembrane.com](mailto:resumes@compactmembrane.com)

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