

We are Hiring: Senior Operations Research Scientist (DFW Metroplex)

Join Our Research Group at Optym and Shape the Future of Optimization

Are you driven to go **deep into mathematics** and solve real-world problems? Do you love immersing yourself in **cutting-edge research**, developing novel algorithms, and producing results that matter? If so, our **newly founded research group** at Optym is looking for you.

Founded in **2024**, our team has already delivered **projections of over \$1 billion** in client value and generated **millions in profit** for Optym. We are led by **Dr. Ravi Ahuja**, a globally recognized leader in optimization, with an illustrious scientific background and a vision to combine theory and application to solve some of the hardest problems in **Transportation and Logistics**.

What We Work On

Our research group tackles complex, large-scale problems through advanced mathematical techniques, including:

- **Column Generation, Branch-Price, and ng-route Relaxations**
- **Dantzig-Wolfe and Benders Decomposition**
- **Dual Stabilization, Dual Optimal Inequalities, and Complementary Columns**
- **Discretization Discovery** for optimization problems
- **Network Flows, Resource-Constrained Shortest Path Solvers**
- **Preconditioner Matrices and Pre-conditioned Conjugate Gradient Solvers** for large-scale linear systems
- Specialized solvers for **Interior-Point Methods** and problem-specific structures

We go beyond research: we **publish papers**, produce results on **real data**, and develop solutions that **impact real people**.

How We Work

- **Scientific Rigor:** You will have the opportunity to **read and analyze scientific papers** in detail and apply advanced mathematical methods to real-world problems.

- **Deep Collaboration:** You will work closely with peers and mentors dedicated to helping you grow into a **stronger scientist and mathematician** every day.
- **Real Impact:** You will see your research produce tangible results for some of the world's largest transportation and logistics companies.
- **Clear Communication:** We **document everything in LaTeX** to ensure clarity and precision.

Responsibilities

- Collaborate with customers to understand business needs and design innovative solutions.
- Design and implement algorithms using **MIP, Network Optimization, and Discrete Optimization**.
- Analyze large-scale data sets using **Python, R, and Excel**.
- Program in languages like **Python, C#, or Java** to implement algorithms efficiently.
- Develop decision support systems that integrate and deliver your algorithms.

Requirements

- Ph.D. in **Operations Research, Industrial Engineering, Artificial Intelligence, Machine Learning, Computational Quantum Chemistry, Large-Scale Computational Linear Algebra** or related fields.
- Strong foundation in **optimization, modeling, and programming**.
- Excellent **problem-solving, data analytics, and communication** skills.
- Ambition to publish, deliver real-world results, and solve complex business challenges.
- Available **immediately** or by **January 2025**.

Location

- **Dallas-Fort Worth (DFW Metroplex)** or willingness to relocate.
- Hybrid work model: **In-office on Tuesdays, Wednesdays, and Thursdays**.

Why Optym?

Founded in **2000**, Optym is transforming the **Transportation and Logistics** industry through innovative **SaaS solutions**. With a team of 250+ professionals globally, Optym has delivered over **\$1 billion in business value** for top-tier clients.

- **World-Class Leadership:** Work under the guidance of Dr. Ravi Ahuja, one of the foremost scientists in optimization and network flows. Dr. Ahuja has been a faculty member at the **Massachusetts Institute of Technology (MIT)** and the **University of Florida**. He is the author of the seminal text on **Network Flows** and has published over **100 scientific papers**.

- **Innovative Culture:** Collaborate with a specialized team pushing the boundaries of operations research and mathematical optimization.
- **Real Growth:** Enjoy competitive wages, benefits, and a **generous profit-sharing plan** with equity opportunities.

At Optym, you won't just do research—you'll **solve problems, publish breakthroughs, and see your work come to life.**

Interested? Let's talk!

Email: julian.yarkony@optym.com

Let's grow together and redefine the future of optimization! #Hiring #Optimization #Research.