Mathematical Modeler	
Position	Mathematical modeler
Department	Information Technology – Global Innovation Center
Description I: MSD	MSD is an innovative, global healthcare leader committed to improving health and well-being in 140 countries around the world. Our product categories include heart and respiratory health, diabetes, infectious diseases, consumer products and women's health. We continue to focus our research on conditions that affect millions of people around the world - diseases like Alzheimer's, Diabetes and Cancer - while further expanding our strengths in areas such as vaccines and biologics. We aspire to be the best healthcare company in the world and are dedicated to providing innovative solutions for tomorrow. Note: MSD is known as Merck in the United States and Canada.
Description II: GIC	We are seeking energetic, forward-thinking professionals to join our Information Technology group in Prague. As part of that team, you will help launch our new IT Global Innovation Center focused on developing and applying advanced capabilities in information sciences, information security, mobility, social media and big data. You will have the opportunity to work on global teams to identify and tackle the biggest opportunities and challenges at the intersection of healthcare, information and technology. We offer project-based rotations to help with your professional development, and a flat, collaborative environment. Overall, our new Global Innovation Center in Prague offers technology professionals incredible opportunities to learn from others across the globe, to challenge themselves, and to enjoy a reward that technology careers don't often bring: the satisfaction of helping to save lives.
Qualifications, Skills & Experience	*We are seeking professionals with the following qualifications, skills and experience:* **Education Minimum Requirement** - PhD, MSc Degree or BSc Degree in Mathematics, Statistics, Information Technology, Operations Research / Optimization, Engineering, Epidemiology, or other related field. - **Required Experience and Skills -** • Extensive knowledge in one or more of the following areas: mathematical analysis and modeling, optimization, probability, stochastic processes, computational biology, chemical engineering, fluid dynamics - The ability to formulate models, analyze them, and program and run simulations in some appropriate system (for example R, Matlab, Mathematica, or more specialized software such as ANSYS Fluent or NONMEM in a particular research domain) - Demonstrated communication and interpersonal skills, including the ability to make high-level presentations for senior executives - An analytical problem solver: Strong analytical and problem-solving skills, and ability to work with incomplete or imperfect data - Passionate about applying mathematics to help prevent and cure disease **Desired Experience and Skills -** • Leads research programs with a high level of business impact; develops and manages collaborations with colleagues, outsource providers, vendors, contractors and academics when required • Fosters collaboration across groups, teams, and departments; able to act as a mentor, motivating and training junior scientists (depending on level) • Enhances individual and corporate reputation through one or more of the following activities: Preparing and publishing or presenting technical papers to internal and external audiences

Description: Applicants we Seek	Modeling can be an important part of scientific research. It can organize large and disparate data sets, it can force us to make our assumptions explicit, and it allows us to explore situations that may be difficult or time-consuming to set up experimentally. The Mathematical Modeler at the IT Global Innovation Center will work with colleagues to accelerate progress in vaccine, biologic, and pharmaceutical manufacturing, and also in research, marketing, and corporate areas. The incumbent will develop and apply quantitative mathematical, computational and statistical modeling and simulation methodologies to a wide range of problems in the pharmaceutical industry. Work may include, but is not limited to: fluid dynamics and bioreactor modeling, process optimization, quantitative decision analysis, disease modeling, (translational) PK and PK/PD modeling, epidemiological modeling, computational immunology, mass spectrometry- and NMR-based proteomics and metabolomics, and trial simulation and prediction.
	
	Primary job responsibilities include:
	
	• Work with colleagues to develop mechanistic mathematical models.
	• Assemble and use scientific literature and experimental data to estimate parameters in mathematical models.
	• Use tools such as SAP BI, Spotfire, R and SPSS to design and develop operational reports and analytical models including advanced techniques such as forecasts, simulations, and optimizations.
	• Assess the output of analytical solution and use the data to draw conclusions, identify options, and make recommendations.
	• Make recommendations that aid in the realization of value and sustaining analytical activities, which seek to embed analytical tools within business processes.
	• Promote a culture of modelling and analytics as a differentiator and competitive advantage – an environment that places high value on embedding analytical tools within business processes, and using information in real time to make fact-based decisions ¨
	
	We offer:
	    • Competitive remuneration
	    • Position in a leading global healthcare company
	    • Challenging career
	    • Professional growth based on performance
	    • Innovative and flexible working environment
	    • Wide range of benefits

To be considered for this position, please visit our career site at www.merck.com/careers to create a profile and submit your resume for requisition INF004169.