

## Department of Mathematics and Statistics

Old Dominion University, a member of the highest Carnegie classification for doctoral institutions, is one of the few American institutions offering a program expressly in applied mathematics. There are currently 16 applied mathematics research faculty exploring a wide range of applied and computational projects. The 5 statistics faculty are ranked prominently based on publications in the *Annals of Statistics* and specialize in applied statistics and biostatistics. Most of the faculty have had research support from various funding agencies such as NASA, Eastern Virginia Medical School, National Science Foundation, Department of Energy and Department of Defense.

The department is part of the Computational Science and Engineering Initiative at Old Dominion University which is managed by the Center for Computational Science (CCS).

### Financial Aid

The prestigious, competitively awarded, *Dominion Graduate Scholarships* carry a \$18,000/year stipend and full tuition. Recipients remaining in good academic standing are assured of funding for a four-year period. Minimum requirements include GRE scores of 1200, combined verbal and quantitative, and an undergraduate GPA of 3.2 overall and 3.5 in the major. Graduate Assistantships carry a stipend of \$15,000/academic year. Part time support, as well as additional summer support, are also available.

### Location

Norfolk, in eastern Virginia, is located in one of the most favored climate regions of the United States. Proximity to the ocean moderates the summer heat, and winter temperatures usually approximate those in northern Florida. The NASA-Langley Research Center, the Jefferson National Accelerator Facility, the Virginia Modeling, Analysis and Simulation Center, the Center for Pediatric Research and the Eastern Virginia Medical School are within easy driving distance and provide excellent practical research internships for the ambitious graduate student.

### Contact

Send e-mail to [rcheng@odu.edu](mailto:rcheng@odu.edu) or go to <http://sci.odu.edu/math/>

Department of Mathematics & Statistics  
Old Dominion University  
2200 Engineering & Computational Sciences Bldg.  
Elkhorn Avenue  
Norfolk, VA 23529

Phone: 757-683-3882  
Fax: 757-683-3885

### Applied Math Faculty

**John Adam, Ph.D., Univ. of London.** Mathematical biology, mathematical modeling of tumor growth and wound healing.

**Przemek Bogacki, Ph.D., Southern Methodist Univ.** Numerical initial value problems, computer-aided geometrical design.

**Raymond Cheng, Ph.D., Univ. of Virginia.** Functional analysis, harmonic analysis, prediction theory.

**J. Mark Dorrepaal, Ph.D., Univ. of Toronto.** Classical fluid mechanics, viscous flows, asymptotic analysis.

**Fang Hu,\* Ph.D., Florida State.** Computational fluid dynamics, acoustics, turbulent mixing, numerical analysis.

**Sookyoung Joo, Ph.D., Purdue Univ.** Nonlinear partial differential equations, calculus of variations, modeling and simulation.

**Hideaki Kaneko, Ph.D., Clemson Univ.** Numerical integral equations, approximation theory, finite element methods.

**John Kroll, Ph.D., Yale Univ.** Geophysical fluid dynamics, oceanography, chaotic dynamics.

**D. Glenn Lasseigne, Ph.D., Northwestern Univ.** Computational fluid dynamics, combustion, supersonic flow, integral equations.

**Gordon Melrose, Ph.D., Old Dominion Univ.** Fracture mechanics, elasticity, singular integral equations.

**Richard Noren, Ph.D., Virginia Tech.** Integral equations.

**Yan Peng, Ph.D., Singapore Univ.** Fluid dynamics, lattice Boltzmann equation, gas kinetic scheme, high performance computing.

**John Tweed, Ph.D., Univ. of Glasgow.** Fracture mechanics, acoustics, radiation transport.

**Li-Shi Luo,\* Ph.D., Georgia Tech.** Kinetic theory and nonequilibrium statistical mechanics, Lattice Boltzmann equation and CFD, soft matter and complex fluids, scientific Computing.

**Jin Wang, Ph.D., Ohio State Univ.** Numerical analysis and scientific computing, fluid dynamics, mathematical biology.

**Ruhai Zhou,\* Ph.D., Univ. of New Mexico.** Numerical analysis, scientific computation, computational biology, environmental modeling.

\* Joint position, Center for Computational Science (CCS).

### Statistics Faculty

**Swarnali Banerjee, Ph.D., Univ. of Connecticut.** Sequential Analysis, statistical ecology, statistical inference, linear models and regression techniques.

**N. Rao Chaganty, Ph.D., Florida State Univ.** Estimating equations, Biostatistics, longitudinal data analysis.

**Norou Diawara, Ph.D., Auburn Univ.** Functional data analysis, design of experiments, biostatistics, time series.

**Michael Doviak, Ph.D., Univ. of Florida.** Applied statistics and biostatistics.

**Lucia Tabacu, Ph.D., Penn State.** Rank statistics, nonparametric factorial designs, quantile estimation.

# Computational and Applied Mathematics

## The Graduate Program in Mathematics and Statistics at Old Dominion University

**Dr. Hideaki Kaneko – Chair**  
**Dr. Fang Hu – Associate Chair for Research**  
**Dr. N. Rao Chaganty – Statistics Program Director and Assistant Chair**  
**Dr. Raymond Cheng – Graduate Program Director**

### The Graduate Program

The master's program and the doctoral program in computational and applied mathematics are designed to produce applied mathematicians and applied statisticians who can meet the growing demand for analytical and computational skills in traditional scientific and new multidisciplinary fields. Students in the program pursue an option in either applied mathematics or statistics/biostatistics. Interested students may also earn a Certificate in Modeling and Simulation.

We are proud of every graduate. Our lives and our research have been enriched by the time they spent with us. Our graduates are employed by universities, government agencies, insurance firms, pharmaceutical companies, research hospitals, software companies, defense contractors, etc. We look forward to adding your accomplishments to this list of our graduates.

