



National Science Foundation

4201 Wilson Boulevard
Arlington, Virginia 22230

Subject: Unsolicited proposals to the Division of Mathematical Sciences addressing cross-cutting topics in analysis, modeling, and computation of stochastic systems

Dear Colleague:

In recent years, there has been a surge of research activities within the mathematical sciences community on analysis, modeling, and computation of inherently stochastic systems. Such studies are interdisciplinary with a broad range of applications, including models in biology, nanoscience, fluid mechanics, solid mechanics, atmospheric sciences, oceanography, finance, economics, and social sciences, *etc.* Unanswered and challenging questions arise from stochastic refinements of deterministic laws that are necessary and appropriate for uncertainty quantification, understanding of observed variabilities, and prediction.

The Division of Mathematical Sciences (DMS) of the Directorate for Mathematical and Physical Sciences (MPS) of the National Science Foundation (NSF) recognizes the needs and opportunities posed by this recent surge. Unsolicited research proposals to DMS (proposals submitted to disciplinary programs) addressing cross-cutting topics in one or more aspects of mathematical analysis, modeling, and computation of stochastic systems will be considered as a division-wide focused topic area. Such proposals will be managed by a team consisting of program directors in Applied Mathematics, Computational Mathematics, and Probability Programs within DMS.

Proposals addressing this focused topic area should include the phrase, "AMC-SS:" at the beginning of the proposal title. Such proposals should be submitted to the disciplinary programs designated by the PI in accordance with the target dates of the relevant disciplinary programs, see the NSF web site, <http://www.nsf.gov/div/index.jsp?div=DMS>.

Proposals requesting levels of effort that are typical for Focused Research Groups (FRG) activities are not appropriate for this focused topic area and should be submitted to the next round of the FRG competition.

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Sincerely,

William Rundell
Division Director
Division of Mathematical Sciences