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Postdoctoral Researcher Mentoring Plan

This Postdoctoral Researcher Mentoring Plan has been prepared by Sylvain Charbonnier, School of Geosciences, University of South Florida. The Plan establishes guidelines for work to be performed by a Postdoctoral Researcher, in support of the NSF CAREER Project to University of South Florida entitled “Developing a consensual validation and benchmarking procedure for Pyroclastic Density Current (PDC) hazard models”. The Postdoctoral Researcher assigned to the project will work in the volcanology group, School of Geosciences, University of South Florida and will conduct research on: (1) implementation of the physical/sedimentological PDC model; (2) creation of a database of PDC metrics/components; and (3) initial set up of the model validation/benchmarking exercises.

1. Orientation will include in-depth conversations between Sylvain Charbonnier and the Postdoctoral Researcher. Mutual expectations will be discussed and agreed upon in advance. Orientation topics will include (a) the amount of independence the Postdoctoral Researcher requires, (b) interaction with coworkers, (c) productivity including the importance of scientific publications, (d) work habits and laboratory safety, and (e) documentation of research methodologies and experimental details so that the work can be continued by other researchers in the future.

2. Career Counseling will be directed at providing the Postdoctoral Researcher with the skills, knowledge, and experience needed to excel in his/her chosen career path. In addition to guidance provided by Sylvain Charbonnier, the Postdoctoral Researcher will be encouraged to discuss career options with researchers in the School of Geosciences and with his/her former students and colleagues.

3. Experience with Preparation of Grant Proposals will be gained by direct involvement of the Postdoctoral Researcher in proposals prepared by the volcanology group in the Department. The Postdoctoral Researcher will have an opportunity to learn best practices in proposal preparation including identification of key research questions, definition of objectives, description of approach and rationale, and construction of a work plan, timeline, and budget.

4. Publications and Presentations are expected to result from the work supported by the grant. These will be prepared under the direction of Sylvain Charbonnier and in collaboration with researchers in the volcanology group in the School of Geosciences as appropriate. The Postdoctoral Researcher will receive guidance and training in the preparation of manuscripts for scientific journals and presentations at conferences.

5. Teaching and Mentoring Skills will be developed in the context of regular meetings within the volcanology group during which graduate students and postdoctoral researchers describe their work to colleagues within the group and assist each other with solutions to challenging research problems, often resulting in cross fertilization of ideas.

6. Instruction in Professional Practices will be provided on a regular basis in the context of the research work and will include fundamentals of the scientific method, laboratory safety, and other standards of professional practice. In addition, the Postdoctoral Researcher will be encouraged to affiliate with one or more professional societies in his/her chosen field.

7. Technology Transfer activities will include regular contact with researchers at other universities, including the University at Buffalo Center for Geohazards and colleagues at Pisa University (Italy). The Postdoctoral Researcher will be given an opportunity to become familiar with the university-industry relationship including applicable confidentiality requirements and preparation of invention disclosure applications.

8. Success of the Mentoring Plan will be assessed by monitoring the personal progress of the Postdoctoral Researcher through a tracking of the Postdoctoral Researcher’s progress toward his/her career goals after finishing the postdoctoral program.