

Progress Report Scanning Cover Sheet

5F32AA015876-03

PI Name: SAID, YASMIN
Org: GEORGE MASON UNIVERSITY
Start Date: 05/26/2008
Snap: N/A (NEEDS TO BE BOOKMARKED)
Appl ID: 7491624
Rec'd Date: 05/30/2008

Department of Health and Human Services Public Health Service Ruth L. Kirschstein National Research Service Award Individual Fellowship Progress Report <i>Follow instructions carefully</i>		Review Group Type 5 Activity F32 Fellowship Number F32 AA 15876-03
Total Project Period From: 05/26/2006 Through: 05/26/2009		Requested Budget Period From: 05/26/2008 Through: 05/26/2009
1. TITLE OF RESEARCH TRAINING PROPOSAL A Social Network Model of Ecological Alcohol Systems		
2a. FELLOW (Name and address, street, city, state, zip code) Yasmin H. Said [REDACTED] [REDACTED]		2b. FELLOW'S E-MAIL ADDRESS [REDACTED]
2c. DEPARTMENT, SERVICE, LABORATORY, OR EQUIVALENT Department of Computational and Data Sciences		2d. MAJOR SUBDIVISION [REDACTED]
3a. NAME OF SPONSOR Edward J. Wegman		3b. SPONSOR'S E-MAIL ADDRESS [REDACTED]
4. SPONSORING INSTITUTION (Name and address, street, city, state, zip code) George Mason University 4400 University Drive Fairfax, VA 22030-4444		6a. TITLE AND ADDRESS OF OFFICIAL IN SPONSORING INSTITUTION BUSINESS OFFICE Michael Laskofski, Director Office of Sponsored Programs, MS 4C6 George Mason University 4400 University Drive, Fx., VA 22030
5. ENTITY IDENTIFICATION NO. [REDACTED]		6b. E-MAIL ADDRESS: mlaskofs@gmu.edu
7. HUMAN SUBJECTS <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES 7a. Research Exempt <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES If Exempt ("Yes" in 7a): Exemption No. 4		8. VERTEBRATE ANIMALS <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES 8a. If "Yes," IACUC approval date
If Not Exempt ("No" in 7a): IRB approval date <input type="checkbox"/> Full IRB or <input type="checkbox"/> Expedited Review		8b. Animal welfare assurance no.
7b. Human Subjects Assurance No. A00000549		7c. NIH Defined Phase III Clinical Trial <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES
10. NAME AND TITLE OF OFFICIAL SIGNING FOR APPLICANT ORGANIZATION (Item 14) NAME Michael Laskofski TITLE Director, Sponsored Programs TEL 703-993-4573 FAX 703-993-2296 E-MAIL mlaskofs@gmu.edu		9. TRAINING SITE(S) (Organizations and addresses) Additional site: Buffalo State - SUNY Center for Health and Social Research 1300 Elmwood Avenue, Buffalo, NY 14222
11. FELLOW'S TELEPHONE INFORMATION OFFICE (703) 993-9685 FAX (703) 993-9300 HOME [REDACTED]		
12. CORRECTIONS (Items 1 - 6)		
ASSURANCES/CERTIFICATIONS: The following assurances/certifications are verified by your signature in Item 13. See Section II.A., Specific Instructions for the Fellow, for further information. If unable to certify compliance, provide an explanation and place it after this page. • Debarment and Suspension • Delinquent Federal Debt.		
13. CERTIFICATION AND ACCEPTANCE: I certify that the statements herein are true, complete, and accurate to the best of my knowledge, and I agree to comply with the Public Health Service terms and conditions if an award is issued as a result of this report. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. I certify that the award will not support residency training.		
SIGNATURE OF FELLOW NAMED IN ITEM 2: <i>Yasmin Said</i>		DATE May 26, 2008
14. SPONSOR AND SPONSORING ORGANIZATION CERTIFICATION AND ACCEPTANCE: We, the undersigned, certify that the statements herein are true, complete, and accurate to the best of our knowledge. If this application results in an award, appropriate training, adequate facilities, and supervision will be provided, and we accept the obligation to comply with the Public Health Service terms and conditions of award. We are aware that any false, fictitious, or fraudulent statement or claim may subject us to criminal, civil, or administrative penalties.		
SIGNATURE OF SPONSOR NAMED IN 3 (In ink. "Per" signature not acceptable.) <i>Edward J. Wegman</i>		DATE May 26, 2008
SIGNATURE OF OFFICIAL NAMED IN 10. (In ink. "Per" signature not acceptable.) <i>Michael Laskofski</i>		DATE May 26, 2008

**Ruth L. Kirschstein National Research Service Award
Individual Fellowship Progress Report for
Continuation Support**

FELLOWSHIP NUMBER

1 F32 AA 15876-02

15a. PERMANENT MAILING ADDRESS OF FELLOW (Street, city, state, zip code)

[REDACTED]
[REDACTED]

15b. PERMANENT PHONE NUMBER

[REDACTED]

16. Human subjects and vertebrate animals (see instructions)

A. Human Subjects (Complete Item 7 on the Face Page)

Use of Human Subjects ☐ Change ☒ No Change Since Previous Submission

B. Vertebrate Animals (Complete Item 8 on the Face Page)

Use of Vertebrate Animals ☐ Change ☒ No Change Since Previous Submission

WOMEN AND MINORITY INCLUSION IN CLINICAL RESEARCH

See PHS 416-1 Instructions. Use Inclusion Enrollment Report Format Page and, if necessary, Targeted/Planned Enrollment Format Page.

17. SUMMARY OF ACTIVITIES (Use continuation pages. Do not exceed 3 pages.)

A. CHANGES

Since submission of the last application/progress report, have any significant changes occurred in the training program, particularly the research project, academic status, or time distribution of activities (i.e., percentage of time devoted to research project, course work, teaching, etc.)? If so, explain.

B. PROGRESS

Describe concisely the research performed and research training obtained during the past year. List all courses and publications. Complete the Gender and Minority Inclusion table(s) (see below), if applicable.

C. RESEARCH TRAINING PLANS

Describe concisely the research and research training planned for the requested budget period, including any course work.

A: CHANGES

The major change has been associated with classroom coursework. Because of unprecedented travel opportunities, I have taken coursework informally. Interest in social network and text mining work has allowed me to spend approximately two months in Saudi Arabia last Fall. There I made contact with a number of physicians concerned with drug and alcohol use in Saudi Arabia. This Spring, I was invited as a Visiting Fellow of the Isaac Newton Institute for Mathematical Sciences (INI), Cambridge University, England. The theme of my research project and my academic status are unchanged. I have spent somewhat more time on research and somewhat less time on formal classroom instruction.

B: PROGRESS

TRAINING: I have been intensively studying materials relevant to the F32 proposal. I have continued my studies with the group (Drs. William Wiecek and Kelly Marczyński) at Buffalo State College, especially working with the Erie County 2005 Indicators database. Their work also involves interviewing DWI convicted drivers asking them questions concerning the links between alcohol and STDs, especially HIV/AIDS. I have spent several months in Saudi Arabia working with Dr. Abdulrahman Al-Mazrou and Dr. Faroque Khan of the King Fahad Medical City and Dr. Abdullah Al-Ammari of the King Abdul Aziz Medical City learning about their problems with alcohol and drugs and their procedures for dealing with issues. I also studied social network analysis under Dr. Stanley Wasserman whose book is widely regarded as the authoritative treatment of social network analysis. Dr. Wasserman gave the short course at the Army Conference on Applied Statistics in October, 2007. Beginning January 2 until the present time, I was honored to be appointed as Visiting Research Fellow at the Isaac Newton Institute, Cambridge University. There I was able to study under some of the most distinguished statisticians internationally. The theme of the program at the Institute was Statistical Theory and Methods for Complex, High-Dimensional Data. Of particular interest was a subtheme of combinatorics and statistical mechanics. It turns out that combinatorial methods used in statistical mechanics can be adapted to agent-based simulation. Based on discussions at the INI, the Statistics and Applied Mathematical Sciences Institute (SAMSI) will be developing a program in Fall 2008 to which I have been invited. I have been involved with many conferences during the past year. Details follow.

- Interface 2007: Theme was Systems Biology, Philadelphia, PA. I organized two sessions: 1) Modelling Ethanol Abuse and HIV/AIDS and 2) Systems Approaches for Alcohol Abuse Modelling. Dr. Wegman presented a joint paper with me entitled, Assessing Interventions Related to Negative Effects of Ethanol on HIV/AIDS Spread. I also collaborated with several others to author papers listed later in this report. (May 2007)
- JSM2007, Salt Lake City, UT. I participated heavily in JSM 2008, the Joint Statistical Meetings. I organized four sessions. I gave a talk on Experiences with Congressional Testimony and co-authored several other talks listed below. (August 2007)
- Symposium on Arabic Language and Computers, Riyadh, Saudi Arabia. (November, 2007)
- ASA Climate Change Workshop, Boulder, CO. I was facilitator for a session. (November, 2007)
- Interface 2008: Theme was Risk:Reality, Durham, NC. I organized a session and co-organized a second session with Dr. Wegman. My session was Alcohol-Related Public Health Risks and our co-organized session was Text Mining Applications. (May 2008)
- Statistical Theory and Methods for Complex, High Dimensional Data, Cambridge UK. Semester long program (January to June 2008). I gave an invited talk entitled, Text mining and High Dimensional Statistical Analysis. Upcoming events include:
- HDM-2008 (High Dimensional Statistical Analysis and Data Mining Conference), Kayseri, Turkey. I have an invited talk on text mining. (June 2008)
- RSA Annual Meeting, Washington DC. Dr. Wegman and I have two posters. (July, 2008)
- JSM2008, Denver, CO. I have a contributed paper. (August, 2008)
- COMPSTAT2008, Porto, Portugal. Dr. Wegman, Dr. Wieczorek and I have an invited session on Alcohol Studies. Each of us will give a paper in the session. [REDACTED]

RESEARCH: I have been very active in alcohol studies as well as what have emerged as closely-related fields of social network analysis and text mining. Perhaps most exciting for me is the fact that I was approached by VDM-Verlag to publish an expansion of my dissertation. The title of the book will be Intervention to Prevention: A Policy Tool for Alcohol Studies. The publisher has already indicated that they wish to translate the book into German. A list of my papers is given below:

[REDACTED]

3. Wieczorek, William, Said, Yasmin, and Wegman, Edward (2008) Spatial and Computational Models of Alcohol Use and Problems, COMPSTATS2008, Invited Talk and Invited Paper, Porto, Portugal (Refereed paper)

[REDACTED]

7. Said, Yasmin and Wegman, Edward (2008) Agent-Based Simulation of the Alcohol Ecological System, Submitted to JASA Applications.

9. Wegman, Edward J., Said, Yasmin H., Scott, David W. (2009) Encyclopedia of Computational Statistics, New York: John Wiley and Sons.

20. Said, Yasmin H. (2007) On the Eras in the History of Statistics and Data Analysis, Journal of Washington Academy of Sciences, 93(1), 17-35.

21. Said, Yasmin H., Edward J. Wegman, Walid K. Sharabati, John T. Rigsby (2007) Implications of co-author networks on peer review, in Classification and Data Analysis, Macerata, Italy: EUM-Edizioni Università di Macerata, 245-248.

22. Said, Yasmin H., Edward J. Wegman, Walid K. Sharabati, John (2008) Style of author-coauthor social networks, Computational Statistics and Data Analysis, 52, 2177-2184; doi:10.1016/j.csda.2007.07.021, 2007

[REDACTED]

PROFESSIONAL NETWORKING: I continue to develop my network with scholars associated with alcohol research through direct contact, visits and invitations to participate in conferences. I do this to learn of methods and gain insights into alcohol studies. Some of my contacts include Drs. William Wiczorek and Kelly Marczynski of the Center for Health and Social Research at Buffalo State College, Dr. Maria Testa of the Research Institute on Addictions of the University of Buffalo, Dr. Paul Gruenewald of the Prevention Research Center, Gregory Bloss of NIAAA, Kendall Bryant of NIAAA, and Dr. Robert Wilson of the University of Delaware, Dr. Richard Scribner of the Louisiana State University School of Medicine, Drs. Linda and Bengt Muthen of UCLA, Dr. Charles Branas of the Center for Clinical Epidemiology and Biostatistics at University of Pennsylvania, Dr. Bridget Freisthler of the Department of Social Welfare at UCLA, and Dr. David Anderson of the Center for the Advancement of Public Health at George Mason University. I have been working with Hani Ali, M.D. of George Washington University and with Samer Ellaham, M.D. of Georgetown University respectively in the areas of neonatal pediatrics and cardiology especially with respect to effects of alcohol use in their respective specialty areas. I have been developing relationships with Ph.D. students as well. I have worked with a student, Byeonghwa Park, who has completed his comprehensive examinations and will soon go into candidacy for the Ph.D. He is working on implementing the extended model that we have described in several papers. I have also been working with another student, Walid Sharabati, who is developing algorithms for two-mode networks. Most network theory deals only with binary networks. Mr. Sharabati's work deals with frequency count adjacency matrices, i.e. matrices that measure the strength of association. Finally, I have been working with Dr. David Banks, a statistician from Duke University, on new grid models for agent-based simulation.

RESEARCH TRAINING PLANS: I plan to continue with formal and informal training. Specifically, I am planning coursework on behavioral biology of substance abuse, psychopathology, geographic information science and epidemiology. My research plans will follow the logical extension of existing work. Most importantly we are focusing on inclusion of HIV/AIDS as an additional acute outcome in our model. Also, Dr. Wegman and I are working on the inclusion of time-of-day effects into the model. We have also recognized that we are dealing with a two-mode social network (individuals and institutions) and have incorporated this dimension into our model. The two-mode network results based on zip code and ABC stores were presented at the 2007 RSA meeting and we were able to develop some mobility information from these results. I am also working to include and upgrade additional demographic information including gender and age distributions in my model. In summary, the research in the next year will focus on including HIV/AIDS, temporal and geospatial effects, mobility, two-mode social network, and gender and age-distribution demographics.

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18. SUPPLEMENTATION OF STIPEND: ☐ NO ☒ YES

If "yes," specify the amount(s) and dates on which supplementation occurred, and the source of the funds.

For the second year, there was a \$30,000 supplement from George Mason University funds supplied by the Commonwealth of Virginia.

19. COMMENTS OF SPONSOR (Use additional page, if necessary)

Evaluate the quality of the training (including academic work) and research progress made by the fellow during the past year. Include performance on cumulative and qualifying examinations, if applicable.

[REDACTED] We have begun to exploit the two-mode social network, individuals and institutions in the case of alcohol studies. During the last year we came to appreciate that the two-mode social network adjacency matrix has exactly the same structure as the term-document matrix used in text mining. Because of this Dr. Said has been able to exploit developments in both discipline areas, which accounts for the seeming emphasis on text mining. Dr. Said has audited courses on Computational Linguistics and Text Mining, on Statistical Methods for High Dimensional Data, and on Social Network Analysis. In addition she has spent time with the Center for the Advancement of Public Health under the leadership of David Anderson, Ph.D. Some of the coursework was provided by the Center for Social Complexity. Dr. Said's training previously had been focused on mathematics, computer science and statistics. We have made a great effort this past year in beefing up her background in the quantitative social science dimension. Dr. Wienczorek's Center has a strong geospatial focus while Dr. Anderson's has a strong focus on underage drinking. [REDACTED]

Dr. Yasmin H. Said is currently a Visiting Fellow at the Isaac Newton Institute for Mathematical Sciences at the University of Cambridge in England. She earned her A.B. in pure mathematics, her M.S. in computer science and information systems, and Ph.D. in computational statistics. She is the editor of Computing Science and Statistics, is an associate editor of the journal, Computational Statistics and Data Analysis, serves on the board of the Washington Statistical Society, and the Interface Foundation of North America. She was chosen to serve on the American Statistical Association Presidential Task Force on Science Policy and currently serves on the American Statistical Association Presidential Advisory Committee on Scientific and Public Affairs. She is one of the editors in chief and serves as managing editor of the multi-volume Wiley Encyclopedia of Computational Statistics. She is finalizing a book, Intervention to Prevention: A Policy Tool for Alcohol Studies, to be published by VDM Verlag. The publisher has indicated that they wish to translate this work into German. This past year, Dr. Said was elected as a member of the International Statistical Institute (ISI). [REDACTED]

[REDACTED] She is also an elected member of the Research Society on Alcoholism, an elected member of Sigma Xi, the Scientific Research Society, an elected member of the Washington Academy of Science, and is a member of more than 15 scientific, research, and professional societies. [REDACTED]

SPONSORING INSTITUTION'S ASSURANCES/CERTIFICATIONS

The following policies, assurances, and certifications are verified by the signature of the Official Signing for Sponsoring Institution on the Face Page. See Item 14 for further information. If unable to certify compliance where applicable, provide an explanation and place it after this page.

•Human Subjects Research •Research Using Human Embryonic Stem Cells •Research on Transplantation of Human Fetal Tissue •Women and Minority Inclusion Policy •Inclusion of Children Policy •Vertebrate Animals •Debarment and Suspension •Research Misconduct •Civil Rights (Form HHS 441 or HHS 690) •Handicapped individuals (Form HHS 641 or HHS 690) •Sex Discrimination (Form HHS 639-A or HHS 690) •Age Discrimination (Form HHS 680 or HHS 690) •Recombinant DNA Research, Including Human Gene Transfer Research •Financial Conflict of Interest •Prohibited Research •Select Agents and Toxins

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Dr. Yasmin H. Said is currently a Visiting Fellow at the Isaac Newton Institute for Mathematical Sciences at the University of Cambridge in England. She is the editor of Computing Science and Statistics, is an associate editor of the journal, Computational Statistics and Data Analysis, serves on the board of the Washington Statistical Society, and the Interface Foundation of North America. She was chosen to serve on the American Statistical Association Presidential Task Force on Science Policy and currently serves on the American Statistical Association Presidential Advisory Committee on Scientific and Public Affairs. She is one of the editors in chief and serves as managing editor of the multi-volume Wiley Encyclopedia of Computational Statistics. She is finalizing a book, Intervention to Prevention: A Policy Tool for Alcohol Studies, to be published by VDM Verlag. The publisher has indicated that they wish to translate this work into German. This past year, Dr. Said was elected as a member of the International Statistical Institute (ISI).

[REDACTED] She is also an elected member of the Research Society on Alcoholism, an elected member of Sigma Xi, the Scientific Research Society, an elected member of the Washington Academy of Science, and is a member of more than 15 scientific, research, and professional societies. She worked with me on Congressional Testimony on climate change. [REDACTED]

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Office of Sponsored Programs

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May 28, 2008

Heather Gill-Denny
Division of Extramural Activities Support, OER
National Institutes of Health
6705 Rockledge Drive, Room 2207, MSC 7987
Bethesda, MD 20817
301-594-6584

Re: Progress report NIH 1F32-AA015876-01A2

Dear Ms. Gill-Denny

Enclosed, please find a signed progress report for NIH 1F32-AA015876-01A2. Please let me know if you need any additional information.

Sincerely,

A handwritten signature in blue ink, appearing to read "Ray Loomis".

Ray Loomis, CRA
Research Administrative Manager
Gold Team Leader
Office of Sponsored Programs
George Mason University
(703)- 993-3756

Enclosure