SUMMARY PROPOSAL BUDG	FT 🗍		FOR	R NSF US	SE ONI Y	(
ORGANIZATION						DN (month
University of South Florida				F	Proposed	Grante
PRINCIPAL INVESTIGATOR / PROJECT DIRECTOR		AV	VARD N	0.		
Charles Connor						
A. SENIOR PERSONNEL: PI/PD, Co-PI's, Faculty and Other Senior Associates		NSF Fund Person-mor	ed nths	Fur Reques	nds sted By	Funds granted by N
(List each separately with title, A.7. show number in brackets)	CAL	ACAD	SUMR	prop	oser	(if differen
1. Laura Connor - Res. Assoc Comp Sci	1.00	0.00	0.00		7,405	
2.						
3.						
4.						
	0.00	0.00	0.00		•	
6. (0) OTHERS (LIST INDIVIDUALLY ON BUDGET JUSTIFICATION PAGE)	0.00	0.00	0.00		7 405	
7. (1) TOTAL SENIOR PERSONNEL (1 - 6)	1.00	0.00	0.00		7,405	
B. OTHER PERSONNEL (SHOW NUMBERS IN BRACKETS) 1. (0) POST DOCTORAL SCHOLARS	0.00	0.00	0.00		0	
1. (0) POST DOCTORAL SCHOLARS 2. (0) OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.)	0.00	0.00	0.00		U	
3. (1) GRADUATE STUDENTS	0.00	0.00	0.00		21,000	
4. (0) UNDERGRADUATE STUDENTS					0	
5. (1) SECRETARIAL - CLERICAL (IF CHARGED DIRECTLY)					Ű	
6. (0) OTHER					Ū	
TOTAL SALARIES AND WAGES (A + B)					28,405	
C. FRINGE BENEFITS (IF CHARGED AS DIRECT COSTS)					3,336	
TOTAL SALARIES, WAGES AND FRINGE BENEFITS (A + B + C)					31,741	
TOTAL EQUIPMENT E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN	SSIONS)			0 1,300 0	
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS	SSIONS)			1,300	
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS	SSIONS)			1,300	
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 0	SSIONS)			1,300	
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 3. SUBSISTENCE 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	SSIONS)			1,300	
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 3. SUBSISTENCE 0					1,300	
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 3. SUBSISTENCE 4. OTHER 0			3		1,300 0	
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PARTICIPANTS (0) 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN 1. SUPPORT COSTS 1. STIPENDS 1. STIPEND			5		1,300 0	
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PARTICIPANTS (0) TOTAL PARTICIPANTS (1) TOTAL PARTICIPANTS (2) TOTAL PARTICIPANTS (3) TOTAL PARTICIPANTS (4) TOTAL PARTICIPANTS (5) TOTAL PARTICIPANT			3		1,300 0	
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PARTICIPANTS (0) TOTAL PARTICIPANTS (0) TOTAL PARTICIPANTS (1) TOTAL PARTICIPANTS (2) CONSULTANT SERVICES C. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION C. ONSULTANT SERVICES C. POSSEMINATION C. CONSULTANT SERVICE C. POSSEMINATION			<u> </u>		1,300 0 0 0 0 0 900 0 0	
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PARTICIPANTS (0) TOTAL PARTICIPANTS (0) TOTAL PARTICIPANTS (1) TOTAL SAND SUPPLIES 2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION 3. CONSULTANT SERVICES 4. COMPUTER SERVICES			5		1,300 0 0 0 0 900 0 0 0 0	
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PAR' G. OTHER DIRECT COSTS 1. MATERIALS AND SUPPLIES 2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION 3. CONSULTANT SERVICES 4. COMPUTER SERVICES 5. SUBAWARDS			<u> </u>		1,300 0 0 0 0 900 0 0 0 0 0 0	
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PAR' G. OTHER DIRECT COSTS 1. MATERIALS AND SUPPLIES 2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION 3. CONSULTANT SERVICES 4. COMPUTER SERVICES 5. SUBAWARDS 6. OTHER			3 		1,300 0 0 0 0 900 0 0 0 0 0 0 0 0 0 0 0	
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PAR' G. OTHER DIRECT COSTS 1. MATERIALS AND SUPPLIES 2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION 3. CONSULTANT SERVICES 4. COMPUTER SERVICES 5. SUBAWARDS 6. OTHER TOTAL OTHER DIRECT COSTS			<u> </u>		1,300 0 0 0 0 900 0 0 10,344 11,244	
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS 0 TOTAL NUMBER OF PARTICIPANTS 1. MATERIALS AND SUPPLIES 2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION 3. CONSULTANT SERVICES 4. COMPUTER SERVICES 5. SUBAWARDS 6. OTHER TOTAL OTHER DIRECT COSTS H. TOTAL DIRECT COSTS (A THROUGH G)					1,300 0 0 0 0 900 0 0 0 0 0 0 0 0 0 0 0	
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PAR' G. OTHER DIRECT COSTS 1. MATERIALS AND SUPPLIES 2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION 3. CONSULTANT SERVICES 4. COMPUTER SERVICES 5. SUBAWARDS 6. OTHER TOTAL OTHER DIRECT COSTS			B		1,300 0 0 0 0 900 0 0 10,344 11,244	
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PART G. OTHER DIRECT COSTS 1. MATERIALS AND SUPPLIES 2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION 3. CONSULTANT SERVICES 4. COMPUTER SERVICES 5. SUBAWARDS 6. OTHER TOTAL OTHER DIRECT COSTS H. TOTAL DIRECT COSTS I. INDIRECT COSTS (A THROUGH G) I. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE) MTDC (exclusing tuition) (Rate: 49.5000, Base: 33527) TOTAL INDIRECT COSTS (F&A)			S		1,300 0 0 900 0 10,344 11,244 44,285 16,596	
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PARTICIPANTS (0) TOTAL PARTICIPANTS (0) TOTAL PARTICIPANTS (0) TOTAL PARTICIPANTS (0) TOTAL PARTICIPANTS (0) TOTAL PARTICIPANTS (1) TOTAL PART					1,300 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PARTICIPANTS (0) TOTAL PARTICIPANTS (0) TOTAL PARTICIPANTS (0) TOTAL PARTICIPANTS (0) TOTAL PARTICIPANTS (1) TOTAL PART					1,300 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN 2. FOREIGN 2. FOREIGN 9 2. TRAVEL 3. SUBSISTENCE 4. OTHER 0 TOTAL NUMBER OF PARTICIPANTS (0 1. MATERIALS AND SUPPLIES 2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION 3. CONSULTANT SERVICES 5. SUBAWARDS 6. OTHER TOTAL OTHER DIRECT COSTS H. TOTAL DIRECT COSTS (A THROUGH G) 1. INDIRECT COSTS (F&A) J. TOTAL DIRECT AND INDIRECT COSTS (H + I)	TICIPAN				1,300 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN 5. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 0 3. SUBSISTENCE 0 4. OTHER TOTAL NUMBER OF PARTICIPANTS 0 TOTAL NUMBER OF PARTICIPANTS 0 TOTAL PART 6. OTHER DIRECT COSTS 1. MATERIALS AND SUPPLIES 2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION 3. CONSULTANT SERVICES 4. COMPUTER SERVICES 5. SUBAWARDS 6. OTHER TOTAL DIRECT COSTS H. TOTAL DIRECT COSTS H. TOTAL DIRECT COSTS I. INDIRECT COSTS (A THROUGH G) I. INDIRECT COSTS (F&A) (SPECIFY RATE AND BASE) MTDC (exclusing tuition) (Rate: 49.5000, Base: 33527) TOTAL INDIRECT COSTS (H + I) K. RESIDUAL FUNDS L. AMOUNT OF THIS REQUEST (J) OR (J MINUS K) M. COST SHARING PROPOSED LEVEL \$ 0 AGREED LE	TICIPAN		NT \$		1,300 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN 5. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 0 3. SUBSISTENCE 0 4. OTHER TOTAL NUMBER OF PARTICIPANTS 0 1. MATERIALS AND SUPPLIES 2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION 3. CONSULTANT SERVICES 4. COMPUTER SERVICES 5. SUBAWARDS 6. OTHER TOTAL OTHER DIRECT COSTS H. TOTAL DIRECT COSTS (F&A) J. TOTAL DIRECT COSTS (F&A) J. TOTAL DIRECT AND INDIRECT COSTS (H + I) K. RESIDUAL FUNDS L. AMOUNT OF THIS REQUEST (J) OR (J MINUS K) M. COST SHARING PROPOSED LEVEL \$ 0 AGREED LE PI/PD NAME	TICIPAN		NT \$ FOR N	ISF USE	1,300 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 0 3. SUBSISTENCE 0 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PART G. OTHER DIRECT COSTS 1. MATERIALS AND SUPPLIES 2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION 3. CONSULTANT SERVICES 4. COMPUTER SERVICES 5. SUBAWARDS 6. OTHER TOTAL DIRECT COSTS H. TOTAL DIRECT COSTS H. TOTAL DIRECT COSTS I. INDIRECT COSTS (A THROUGH G) I. INDIRECT COSTS (F&A) J. TOTAL DIRECT COSTS (H + I) K. RESIDUAL FUNDS L. AMOUNT OF THIS REQUEST (J) OR (J MINUS K) M. COST SHARING PROPOSED LEVEL 0 AGREED LEVEL AGREED AGREAD AGREED AGREAD AGREED AGREED AGREAD AGREED AG			VT \$ FOR N CT COS	ISF USE	1,300 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	CATION Initials - O

1 *ELECTRONIC SIGNATURES REQUIRED FOR REVISED BUDGET

SUMMARY YEAR PROPOSAL BUDGET FOR NSF USE ONLY ORGANIZATION PROPOSAL NO. **DURATION** (months) University of South Florida Proposed Granted PRINCIPAL INVESTIGATOR / PROJECT DIRECTOR AWARD NO. **Charles Connor** Funds Requested By proposer Funds granted by NSF (if different) A. SENIOR PERSONNEL: PI/PD, Co-PI's, Faculty and Other Senior Associates NSF Funded Person-months (List each separately with title, A.7. show number in brackets) ACAD SUMR CAL 1. 0.00 0.00 0.00 2. 3. 4 5. **()**) OTHERS (LIST INDIVIDUALLY ON BUDGET JUSTIFICATION PAGE) 6. (0.00 0.00 0.00 0 7. (1) TOTAL SENIOR PERSONNEL (1 - 6) 0 0.00 0.00 0.00 B. OTHER PERSONNEL (SHOW NUMBERS IN BRACKETS) 1. (0) POST DOCTORAL SCHOLARS 0.00 0.00 0.00 0 **()**) OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.) 0 2. (0.00 0.00 0.00 **1**) GRADUATE STUDENTS 21,000 3. (2) UNDERGRADUATE STUDENTS 9,600 4. (5. (0) SECRETARIAL - CLERICAL (IF CHARGED DIRECTLY) 0 6. (**0**) OTHER 0 TOTAL SALARIES AND WAGES (A + B) 30,600 C. FRINGE BENEFITS (IF CHARGED AS DIRECT COSTS) 2,230 TOTAL SALARIES, WAGES AND FRINGE BENEFITS (A + B + C) 32,830 D. EQUIPMENT (LIST ITEM AND DOLLAR AMOUNT FOR EACH ITEM EXCEEDING \$5,000.) TOTAL EQUIPMENT 0 E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSESSIONS) 3,400 2. FOREIGN 0 F. PARTICIPANT SUPPORT COSTS 0 1. STIPENDS \$ 0 2. TRAVEL 0 3 SUBSISTENCE 0 4. OTHER TOTAL NUMBER OF PARTICIPANTS 0) TOTAL PARTICIPANT COSTS 0 G. OTHER DIRECT COSTS 1. MATERIALS AND SUPPLIES 0 2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION 1,800 3. CONSULTANT SERVICES 0 4. COMPUTER SERVICES 0 5. SUBAWARDS 0 6. OTHER 10,344 TOTAL OTHER DIRECT COSTS 12,144 H. TOTAL DIRECT COSTS (A THROUGH G) 48,374 I. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE) MTDC (exclusing tuition) (Rate: 49.5000, Base: 37616) 18,620 TOTAL INDIRECT COSTS (F&A) J. TOTAL DIRECT AND INDIRECT COSTS (H + I) 66,994 K. RESIDUAL FUNDS 0 L. AMOUNT OF THIS REQUEST (J) OR (J MINUS K) 66.994 M. COST SHARING PROPOSED LEVEL \$ AGREED LEVEL IF DIFFERENT \$ 0 PI/PD NAME FOR NSF USE ONLY **Charles Connor** INDIRECT COST RATE VERIFICATION ORG. REP. NAME* Date Checked Date Of Rate Sheet Initials - ORG Heather Morr

2 *ELECTRONIC SIGNATURES REQUIRED FOR REVISED BUDGET

SUMMARY YEAR PROPOSAL BUDGET FOR NSF USE ONLY ORGANIZATION PROPOSAL NO. DURATION (months) University of South Florida Proposed Granted PRINCIPAL INVESTIGATOR / PROJECT DIRECTOR AWARD NO. **Charles Connor** Funds Requested By proposer Funds granted by NSF (if different) A. SENIOR PERSONNEL: PI/PD, Co-PI's, Faculty and Other Senior Associates NSF Funded Person-months (List each separately with title, A.7. show number in brackets) ACAD SUMR CAL 1. 0.00 0.00 0.00 2. 3. 4 5. **()**) OTHERS (LIST INDIVIDUALLY ON BUDGET JUSTIFICATION PAGE) 6. (0.00 0.00 0.00 0 7. (1) TOTAL SENIOR PERSONNEL (1 - 6) 0 0.00 0.00 0.00 B. OTHER PERSONNEL (SHOW NUMBERS IN BRACKETS) 1. (0) POST DOCTORAL SCHOLARS 0.00 0.00 0.00 0 **()**) OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.) 0 2. (0.00 0.00 0.00 **1**) GRADUATE STUDENTS 21,000 3. (2) UNDERGRADUATE STUDENTS 9,600 4. (5. (0) SECRETARIAL - CLERICAL (IF CHARGED DIRECTLY) 0 6. (**0**) OTHER 0 TOTAL SALARIES AND WAGES (A + B) 30,600 C. FRINGE BENEFITS (IF CHARGED AS DIRECT COSTS) 2,230 TOTAL SALARIES, WAGES AND FRINGE BENEFITS (A + B + C) 32,830 D. EQUIPMENT (LIST ITEM AND DOLLAR AMOUNT FOR EACH ITEM EXCEEDING \$5,000.) TOTAL EQUIPMENT 0 E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSESSIONS) 3,400 2. FOREIGN 0 F. PARTICIPANT SUPPORT COSTS O 1. STIPENDS \$ -0 2. TRAVEL 0 3 SUBSISTENCE 0 4. OTHER TOTAL NUMBER OF PARTICIPANTS 0) TOTAL PARTICIPANT COSTS 0 G. OTHER DIRECT COSTS 1. MATERIALS AND SUPPLIES 0 2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION 1,800 3. CONSULTANT SERVICES 0 4. COMPUTER SERVICES 0 5. SUBAWARDS 0 6. OTHER 10,344 TOTAL OTHER DIRECT COSTS 12,144 H. TOTAL DIRECT COSTS (A THROUGH G) 48,374 I. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE) MTDC (exclusing tuition) (Rate: 49.5000, Base: 37616) 18,620 TOTAL INDIRECT COSTS (F&A) J. TOTAL DIRECT AND INDIRECT COSTS (H + I) 66,994 K. RESIDUAL FUNDS 0 L. AMOUNT OF THIS REQUEST (J) OR (J MINUS K) 66.994 M. COST SHARING PROPOSED LEVEL \$ AGREED LEVEL IF DIFFERENT \$ 0 PI/PD NAME FOR NSF USE ONLY **Charles Connor** INDIRECT COST RATE VERIFICATION ORG. REP. NAME* Date Checked Date Of Rate Sheet Initials - ORG Heather Morr

3 *ELECTRONIC SIGNATURES REQUIRED FOR REVISED BUDGET

SUMMARY PROPOSAL BUDG	ET		FOR	R NSF U	SE ONL	I	
ORGANIZATION		PRC	POSAL	NO.	DURATIO	URATION (month	
University of South Florida					Proposed	d Grante	
PRINCIPAL INVESTIGATOR / PROJECT DIRECTOR		A۱	VARD N	0.			
Charles Connor			a d				
A. SENIOR PERSONNEL: PI/PD, Co-PI's, Faculty and Other Senior Associates		NSF Fund Person-mor		Reque	inds sted By	Funds granted by N (if differen	
(List each separately with title, A.7. show number in brackets)	CAL	ACAD	SUMR			(if differen	
1. Laura Connor - Res. Assoc Comp Sci	1.00	0.00	0.00		7,405		
2.							
3.							
4.							
	0.00	0.00	0.00	-	•		
6. () OTHERS (LIST INDIVIDUALLY ON BUDGET JUSTIFICATION PAGE)	0.00		0.00		7 405		
7. (1) TOTAL SENIOR PERSONNEL (1 - 6)	1.00	0.00	0.00		7,405		
B. OTHER PERSONNEL (SHOW NUMBERS IN BRACKETS)	0.00	0.00	0.00				
1. (0) POST DOCTORAL SCHOLARS	0.00		0.00		0		
2. (0) OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.)	0.00	0.00	0.00		0		
3. (3) GRADUATE STUDENTS					63,000		
4. (4) UNDERGRADUATE STUDENTS					19,200		
5. (0) SECRETARIAL - CLERICAL (IF CHARGED DIRECTLY)					0		
6. (0) OTHER TOTAL SALARIES AND WAGES (A + B)					0 89.605		
	_						
C. FRINGE BENEFITS (IF CHARGED AS DIRECT COSTS) TOTAL SALARIES, WAGES AND FRINGE BENEFITS (A + B + C)					<u>7,796</u> 97,401		
D. EQUIPMENT (LIST ITEM AND DOLLAR AMOUNT FOR EACH ITEM EXCEED					•.,.•.		
					0		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE	SSIONS)			8,100		
	SSIONS)			•		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE	SSIONS)			8,100		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS	SSIONS)			8,100		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS	SSIONS)			8,100		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 0	SSIONS)			8,100		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 3. SUBSISTENCE 0	SSIONS)			8,100		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 3. SUBSISTENCE 4. OTHER 0	SSIONS)			<u>8,100</u> 0		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 3. SUBSISTENCE 4. OTHER 0 TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PAR			5		8,100		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PARTICIPANTS (0) TOTAL PARTICIPANTS (1) TOTAL PARTICIPANT (1) TOTAL PARTICIPANT (1) TOTAL PARTICIPANT (1) TOTAL PA			<u> </u>		8,100 0		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PARTICIPANTS (0) TOTAL PARTICIPANTS 1. MATERIALS AND SUPPLIES			3		8,100 0 0		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PARTICIPANTS (0) TOTAL PARTICIPANTS (2) TOTAL PARTICIPANTS (2) TOTAL PARTICIPANTS (3) TOTAL PARTICIPANTS (3) TOTAL PARTICIPANTS (3) TOTAL PARTICIPANTS (4) TOTAL PARTICIPANTS (5) TOTA					8,100 0 0 0 0 4,500		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 3. SUBSISTENCE 4. OTHER 0 TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PAR' G. OTHER DIRECT COSTS 1. MATERIALS AND SUPPLIES 2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION 3. CONSULTANT SERVICES			5		8,100 0 0 0 0 4,500 0		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 3. SUBSISTENCE 4. OTHER 0 TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PAR G. OTHER DIRECT COSTS 1. MATERIALS AND SUPPLIES 2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION 3. CONSULTANT SERVICES 4. COMPUTER SERVICES			5		8,100 0 0 0 4,500 0 0 0		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 3. SUBSISTENCE 4. OTHER 0 TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PAR G. OTHER DIRECT COSTS 1. MATERIALS AND SUPPLIES 2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION 3. CONSULTANT SERVICES 4. COMPUTER SERVICES 5. SUBAWARDS			3		8,100 0 0 0 4,500 0 0 0 0 0		
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C *ELECTRONIC SIGNATURES REQUIRED FOR REVISED BUDGET

Budget Justification - USF

The main costs in the USF fraction of this proposal are stipend and tuition waiver for three graduate student years, funding for 2 undergraduates in each of years 2 and 3, and funding for one month of Senior Personnel (L. Connor) during Year 1.

Funding is requested for L. Connor in Year 1 because she is the primary author of the Tephra2 and Lava2 codes. She will devote one month to rewriting these codes following the modular design outlined in the proposal and embedding flexibility to allow for code reuse and modification. This is a Year 1 activity and will be carried out in close collaboration with UB personnel (hence trips to UB are scheduled as part of the USF budget).

In Year 1 a graduate student will participate in development and implementation of the Gauss-Newton procedure with the Levenburg-Marquardt modification for inverting tephra accumulation to estimate eruption parameter distributions. Doctoral student Jeremy White will be funded for one year under this activity. Jeremy has already implemented these inversion methods in python for gravity inversion and inversion problems in hydrogeology. We think this will be completely manageable in one year, working with L. Connor who is most familiar with the Tephra2 code.

In Year 2 and 3, graduate student funding will shift to a new doctoral student (TBD) who will participate in development of new geophysical modules for the Tephra2 code, combining this activity with geophysical research on tephra deposition.

Undergraduate participation (as hourly, OPS work) is requested for Years 2 and 3. These undergraduates (4 total over two years) will participate in developing alternative modules for the Lava2 code, working under the direction L. Connor and C. Connor and working toward senior honors' theses. We regard this activity as essential for gaining the broader impacts in education and outreach outlined in the proposal description.

No salary is requested for C. Connor, who is currently on a 12 month appointment. Nevertheless, C. Connor has a 30% research assignment and sufficient time will be available to participate in all aspects of the project (estimated to be a one month per calender year commitment). L. Connor will continue to participate after Year 1 by mentoring undergraduate and graduate students participating in the project and interfacing with UB faculty and Staff, all part of her on-going assignment as a Research Associate in the Department of Geology.

In addition, limited domestic travel funds (for travel to UB and to make presentations at AGU) and publication costs are requested.

No USF funding is required during Year 4 of the project because our role in code development and deployment will be finished.

YEAR 1

- Senior personnel. We are requesting zero salary support for the project PI, who is on 12 month salary. One month salary is requested for Laura Connor, to modify the Tephra2 and Lava2 codes, on which she is primary author.
- **Other personnel.** Support for one graduate student in Year 1 is requested to cover stipend. This graduate student will implement inversion algorithms.
- **Fringe benefits.** Fringe benefits for L. Connor (Research Associate) is 15.59% based on current USF guidelines. Fringe benefit rate for the graduate student support is 0.5% plut health insurance of \$2078 annual.

- **Domestic travel.** Domestic travel is requested for one trip by C and L. Connor to U Buffalo to collaborate with Abani Patra and colleagues.
- **Other Direct.** Tuition is requested for the graduate student, totaling \$10344 for 24 hours. Publication costs are associated with one paper in Year 1, to cover the cost of publishing a paper on modularization of Tephra2 with inversion algorithms.
- Indirect. USF institutional indirect costs for this time frame is 49.5%, not including graduate student tuition.

YEAR 2

Senior personnel. We are requesting zero salary for the PI and for Other Senior Personnel.

- **Other personnel.** Support for one graduate student in Year 2 is requested to cover stipend. This graduate student will conduct research on implementing alternative physical models in Tephra2, using the revised modular structure of the code. Funding is requested for two undergraduates to participate in research in Year 2. These students will work on alternative modules for the Lava2 code: 2 students, 400 hours each, \$12 per hour:\$9600.
- **Fringe Benefit** . Fringe benefit rate for the graduate student support is 0.5% plus health insurance of \$2078 annual. Undergraduate fringe benefit rate is 0.5%.
- **Domestic travel.** Funding is requested for domestic travel for one trip to U Buffalo by the graduate student and two trips to Fall American Geophysical Union meeting to present (a) the modular version of Tephra2 and (b) results of undergraduate research on Lava2.
- **Other Direct.** Tuition is requested for the graduate student, totaling \$10344 for 24 hours. Publication costs are associated with two papers in Year 2, to cover the cost of publishing two papers on modularization of Tephra2 with inversion algorithms using new physical models and applications to specific deposits.
- Indirect. USF institutional indirect costs for this time frame is 49.5%, not including graduate student tuition.

YEAR 3

Senior personnel. We are requesting zero salary for he PI and Other Senior Personnel.

- **Other personnel.** Support for one graduate student in Year 3 is requested to cover stipend. This graduate student will conduct research on implementing alternative physical models in Tephra2, using the revised modular structure of the code. Funding is requested for two undergraduates to participate in research in Year 3. These students will continue to work on alternative modules for the Lava2 code: 2 students, 400 hours each, \$12 per hour:\$9600.
- **Fringe Benefit** . Fringe benefit rate for the graduate student support is 0.5% plus health insurance of \$2078 annual. Undergraduate fringe benefit rate is 0.5%.

- **Domestic travel.** As in Year 2, funding is requested for domestic travel for one trip to U Buffalo by the graduate student and two trips to Fall American Geophysical Union meeting to present (a) the modular version of Tephra2 and (b) results of undergraduate research on Lava2.
- **Other Direct.** Tuition is requested for the graduate student, totaling \$10344 for 24 hours. Publication costs are associated with two papers in Year 3, to cover the cost of publishing two papers.
- Indirect. USF institutional indirect costs for this time frame is 49.5%, not including graduate student tuition.

YEAR 4

No USF funding is required in Year 4.