U.S. NUCLEAR REGULATORY COMMISSION
NOTICE OF GRANT/ASSISTANCE AWARD

1. GRANT/AGREEMENT NO.	2. MODIFICATION NO.	3. PERIOD OF PERFORMANCE	4. AUTHORITY
NRC-04-08-150	M003	FROM: 10/1/2008 TO: 10/31/2010	Pursuant to Section 31b and 141b of the Atomic Energy Act of 1954, as amended

5. TYPE OF AWARD	6. ORGANIZATION TYPE	7. RECIPIENT NAME, ADDRESS, and EMAIL ADDRESS
☐ GRANT ☒ COOPERATIVE AGREEMENT	State Hi-Ed Institution DUNS: 001425592	MASSACHUSETTS INSTITUTE OF TECHNOLOGY 77 MASSACHUSETTS AVE CAMBRIDGE MA 021394301

8. PROJECT TITLE:
"Advance Methods for Probabalistic Risk Assessment"

9. PROJECT WILL BE CONDUCTED	10. TECHNICAL REPORTS ARE REQUIRED	11. PRINCIPAL INVESTIGATOR(S) NAME, ADDRESS and EMAIL ADDRESS
PER GOVERNMENT'S/RECIPIENT'S PROPOSAL(S) DATED September 2008 AND APPENDIX A-PROJECT GRANT PROVISIONS	☒ PROGRESS AND FINAL ☐ FINAL ONLY ☐ OTHER (Conference Proceedings)	Professor Jacopo Buongiorno Massachusetts Institute of Technology Cambridge, MA 02139-4307

12. NRC PROGRAM OFFICE (NAME and ADDRESS)	13. ACCOUNTING and APPROPRIATION DATA		14. METHOD OF PAYMENT
Office of Nuclear Reactor Research Attn: Donald Helton MS: T10-K8 Rockville, MD 20555 301-415-7558	APPN. NO:	31X0200.960	☐ ADVANCE BY TREASURY CHECK ☐ REIMBURSEMENT BY TREASURY CHECK ☐ LETTER OF CREDIT ☒ OTHER (SPECIFY) Electronic ASAP.gov (See Remarks in Item #20 "Payment Information")
	B&R NO:	060-15-111-203	
	JOB CODE:	G6728	
	BOC NO:	4110	
	OFFICE ID NO:	04FSS:RESC10660	

15. NRC OBLIGATION FUNDS		16. TOTAL FUNDING AGREEMENT		
THIS ACTION	$0.0	NRC	$290,141.00	This action provides funds for Fiscal Year in the amount of N/A
PREVIOUS OBLIGATION	$142,697.00	RECIPIENT		
TOTAL	$290,141.00	TOTAL	$290,141.00	

17. NRC ISSUING OFFICE (NAME, ADDRESS and EMAIL ADDRESS)

U.S. Nuclear Regulatory Commission
Div. of Contracts
Attn: Sheila Bumpass
Mail Stop: TWB-01-B10M
Rockville MD 20555

18.	19. NRC CONTRACTING OFFICER
Signature Not Required	(Signature) Sheila Bumpass 3/23/10 (Date) NAME (TYPED) Sheila Bumpass TITLE Contracting Officer TELEPHONE NO. 301-492-3484

20. PAYMENT INFORMATION

Payment will be made through the Automated Standard Application for Payment (ASAP.gov) unless the recipient has failed to comply with the program objectives, award conditions, Federal reporting requirements or other conditions specified in 2 CFR 215 (OMB Circular A110).

21. Attached is a copy of the "NRC General Provisions for Grants and Cooperative Agreements Awarded to Non-Government Recipients. Acceptance of these terms and conditions is acknowledged when Federal funds are used on this project.

22. ORDER OF PRECEDENCE
In the event of a conflict between the recipient's proposal and this award, the terms of the Award shall prevail.

23. By this award, the Recipient certifies that payment of any audit-related debt will not reduce the level of performance of any Federal Program.

TEMPLATE - ADM001 SUNSI REVIEW COMPLETE MAR 24 2011 ADM002

The purpose of this modification is to:

1. Change the Principal Investigator from George Apostolakis to Jacopo Buongiorno.

2. Change the Cooperative Agreement end-date from September 30, 2012 to October 31, 2010.

3. As a result of the period of performance reduction, the Cooperative Agreement funding for FY 2010 ($152,365) and FY 2011 ($157,494) is eliminated by a total of $309,859; thus reducing the total agreement funding amount to $290,141.

4. As a result of the period of performance reduction, the work descriptions for Years 3 and 4 is hereby removed the Cooperative Agreement.

5. The work description for Year 2 is hereby revised to reflect the following program description change:

    1. Production of an enhanced version of the Year 1 report suitable for NUREG/CR Publication.
    2. Travel to, and presentation of the Year 1 report at, a June 2010 conference
    3. Travel is authorized to support the NRC-related aspects of the fire PRA work primarily supported by the US Navy.

All other terms and conditions remain the same.