

## Biographical Sketch for Filomena Nunes

Associate Professor of Physics                      Phone: (517) 333-6471  
Department of Physics and Astronomy              Fax: (517) 353-5967  
Michigan State University                              Email: nunes@nscl.msu.edu  
1 Cyclotron Laboratory                                www.nscl.msu.edu/~nunes  
E. Lansing, MI 48824-1321

### a. Education

Instituto Superior Técnico	Physics Engineering	1987/88-1991/92
University of Surrey	PhD in Theoretical Nuclear Physics	1992/93-1994/95

### b. Professional Experience

2009-	Associate Professor, Department of Physics and Astronomy and National Superconducting Cyclotron Laboratory, MSU.
2003-2009	Assistant Professor, Department of Physics and Astronomy and National Superconducting Cyclotron Laboratory, MSU.
1999-2004	Assistant Professor, Physics Department, Instituto Superior Técnico (IST).
1998-2003	Associate Professor, Universidade Fernando Pessoa, Portugal.
1996-1998	Research fellow, CENTRA (Centre for Astrophysics), Instituto Superior Técnico, Portugal.
1995-1996	Research fellow, University of Surrey, England.

### c. Publications most closely related to project

1. *Nuclear Reactions for Astrophysics*, I.J. Thompson and F.M. Nunes, Cambridge University Press (July 2009)
2. *Benchmark on neutron capture extracted from (d,p) reactions* A.M. Mukhamedzhanov, F.M. Nunes and P. Mohr; Phys. Rev. C 77 (2008) 051601.
3. *Three-body description of direct nuclear reactions: comparison with CDCC* A. Deltuva, A.M. Moro, E. Cravo, F.M. Nunes and A.C. Fonseca; Phys. Rev. C 76 (2007) 064602.
4. *FaCE: a tool for three body Faddeev calculations with core excitation* I.J. Thompson, F.M. Nunes, B.V. Danilin; Comp. Phys. Comm. 161 (2004) 87-107.
5. *Are spectroscopic factors from transfer reactions consistent with asymptotic normalisation coefficients?*, D.Y. Pang, F.M. Nunes and A.M. Mukhamedzhanov; Phys. Rev. C 75, 024601 (2007).
6. *Combined method to extract spectroscopic information*, A. M. Mukhamedzhanov and F. M. Nunes; Phys. Rev. C 72, 017602 (2005)
7. *Coupling and higher-order effects in the  $^{12}\text{C}(d,p)^{13}\text{C}$  and  $^{13}\text{C}(p,d)^{12}\text{C}$  reactions*, F. Delaunay, F. M. Nunes, W. G. Lynch, and M. B. Tsang; Phys. Rev. C 72, 014610 (2005)

8. *Extended continuum discretized coupled channels method: Core excitation in the breakup of exotic nuclei*, N. C. Summers, F. M. Nunes, and I. J. Thompson Phys. Rev. C 74, 014606 (2006)
9. *Reaction models to probe the structure of light exotic nuclei*, J.S. Alhalili and F.M. Nunes; J. Phys. G 29 (2003) R89 *Topical Review*.
10. *Transfer/Breakup Modes in the  ${}^6\text{He} + {}^{209}\text{Bi}$  Near and Below the Coulomb Barrier*, E. F. Aguilera, J. J. Kolata, F. M. Nunes, F. D. Becchetti, P. A. DeYoung, M. Goupell, V. Guimaraes, B. Hughey, M. Y. Lee, D. Lizcano, E. Martinez-Quiroz, A. Nowlin, T. W. O'Donnell, G. F. Peaslee, D. Peterson, P. Santi, and R. White-Stevens; Phys. Rev. Lett. **84** (2000) 5058.

#### **d. Synergistic Activities**

- Division Associate Editor of Phys. Rev. Lett. (2007- ).
- Executive committee of the RIA Theory Group (2005-2007).
- Assisting researchers with FRESKO (general reaction code) and FACE (three body Faddeev with core excitation code) that are available for download on the web.
- Organizing conferences: one day meeting of the RIA theory group (Chicago, October 2004), the RIA theory workshop on 'Reaction mechanisms for Rare Isotope Beams' (MSU, March 2005) and the workshop Direct Reactions with Exotic Beams (MSU, June 2005) at MSU (the fourth in a series).
- Peer reviewer for Physical Review Letters, Physical Review C, Nuclear Physics A, Europhysics Letters, and Journal of Physics G.

#### **e. Potential Conflicts**

##### *(i) Collaborators:*

I. Brida (NSCL Michigan); P. Capel (Université Libre de Bruxelles); A.M. Moro (Seville); A.M. Mukhamedzhanov (Texas A&M); D.Y Pang (Beijing University); N.C. Summers (NSCL Michigan); I.J. Thompson (Univ. Surrey).

*(ii) Graduate and Postdoc Advisors:* R.C. Johnson (university of Surrey), I.J. Thompson (LLNL)

*(iii) Sponsored Postgraduate-Scholar:* A.M. Moro (IST-Lisbon), N. C. Summers (LLNL), I. Brida (ANL)