

Curriculum Vitae

Name: Tumino Aurora

Nationality: Italian

Education

- Graduate university: Università di Catania, Catania, Italy (1995) - 110/110 cum laude
- Ph.D.: Università di Catania, Catania – Italy (2000) cum laude

Current Academic Position

Full Professor of Physics at the Università degli Studi di Enna “Kore”, Italy (2014-present)

Positions held

- Fellowship, by Istituto Nazionale di Fisica Nucleare - Laboratori Nazionali del Sud (1995)
- Grant by Centro Siciliano di Fisica Nucleare e Struttura della Materia (CSFNMSM) (1996)
- Post Doctoral grant by CSFNMSM (2000)
- Alexander von Humboldt Post Doctoral Fellowship (HMI–Berlin, Germany) (2000-2001)
- Lindau Alumnus selected to attend the Lindau Nobel Laureate meeting (2001)
- Research contract at the Università degli Studi di Catania, Italy (2001 – 2005)
- Research contract at the Università degli Studi di Catania, Italy (2005-2007)
- Researcher at the Università degli Studi di Enna “Kore”, Italy (2008 – 2011)
- Associate Professor at the Università degli Studi di Enna “Kore”, Italy (2011 – 2014)

Membership of Committees

University level

2008-present Member of the board of Graduate School in Engineering

2008-present Member of the OFA evaluation committee

2008-present Member of the evaluation committee for the starting knowledge assessment

2008-present Member of the teaching staff of the PhD course in "ARCHITECTURE OF SYSTEMS FOR MOBILITY"

2008-present Member of Graduate Studies Committees

2008-present Member of Degree Commissions for the Degree courses of the Faculty of Engineering and Architecture

2009-2011 Coordinator of the first level and specialization degree courses in Telematic Engineering

2011-2019 Deputy Coordinator of the degree courses in Telematic Engineering

2009-present Member and chair of many committees for PhD graduation, temporary and permanent positions and promotions.

2016-present "External Examiner" in several international Committees for PhD graduation and promotions

2011-2012 Scientific Coordinator of the Advanced Level Master in “Efficienza Energetica e Risorse Energetiche Alternative” (CIP 2007.IT.051.PO.003/IV/I2/F/9.2.14/1395, CUP n. G75I10000170009 total funding 359.566 €)

2011-2017 Member of the parithetic Committee for the Faculty of Engineering and Architecture

2019-present Member of the Ethics Committee of the University

Scientific level

- 1994-present Associated Researcher at Laboratori Nazionali del Sud – INFN
- 2011-present Member of the Program Advisory Committee (PAC) of the "Institut de Physique Nucleaire", Orsay, Paris, France
- 2011-present Member of the external review panel of STFC (Science and Technology Facilities Council) of the Ernest Rutherford Advanced Fellowships
- 2012-present Member of the external review panel of Leverhulme Early Career Fellowships
- 2014-present Research Appointment at INFN – LNS
- 2014-present Member of the external review panel of NSERC (Natural Sciences and Engineering Research Council of Canada)-Discovery Grant Division
- 2015-present Member of the external review panel of NSF (National Science Foundation)
- 2015-present Member of the Working Group 4 "Nuclear Astrophysics" of the NuPECC (Nuclear Physics European Collaboration Committee)
- 2016-present Member and chair of Selection Committees for temporary, permanent positions and promotions inside the INFN
- 2016-present Member of the reviewer pool of the Italian National Agency for the Evaluation of Universities and Research Institutes (ANVUR) for the Italian Evaluation of the Research Quality
- 2017-present Member of the Program Advisory Committee (PAC) of the "iThemba Labs", Cape Town, South Africa
- 2021-present Head of the INFN-LNS Research Division
- 2022-present Member of the Program Advisory Committee (PAC) of the GANIL laboratory, Caen, France
- 2022-present Member of the UK nuclear physics panel

Referee for Journals:

Nature
Physical Review Letters
Physics Letters B
Physical Review C
European Physical Journal A
Journal of Physics G: Nuclear and Particle Physics
European Physics Letters
Frontiers in Physics
AIP, EPJ Web of Conferences, Journal of Physics: Conference Series

Member of Editorial Boards:

2018-2020 Heliyon, Elsevier
2018-present Frontiers in Physics
2020-present European Physical Journal A (Associate Editor)
2021-present Physical Review C
2022-present Few-Body Systems

Research Grants and Prizes

- P.I. of an AIM-CINECA project approved within the Italian PON Research and Innovation 2014 - 2020. The project provides the funding to hire a senior-type fixed-term researcher contract (197.857,80 €). (2019-present)
- European project ChETEC-INFRA funded by the EU under H2020-INFRAIA-2018-2020 (total funding 5 M€). Coordinator of the working group on “Complementarities and Comparisons Towards Standards: the Big Three for Evolved Stars”. (2020-present) (2020-present)
- "Giovan Pietro Grimaldi 2019" Prize, granted by the Grimaldi Foundation in collaboration with the Gioenia Academy for the best work in Physics carried out in the five-year period 2014-2018 in one of the Sicilian Universities or in public research centers operating in Sicily. The reference paper is “An increase in the $^{12}\text{C}+^{12}\text{C}$ fusion rate from resonances at astrophysical energies”, Nature, 557, (2018) 687, DOI: 10.1038 / s41586-018-0149-4
- Ulixes Prize, Person of the Year 2020 – Città dei Mosaici

Activity for Conferences and Workshops

- 2003-2007 Member of the Local Organizing Committee of the second, third and fourth editions of the "European Summer School On Experimental Nuclear Astrophysics"
- 2007 Editor of the proceedings of the Third European Summer School on Experimental Nuclear Astrophysics, EDP Sciences, 2007
- 2012 Member of the Local Organizing Committee of the international workshop ECOS 2012: Advances and Challenges in Nuclear Physics with High Intensity Stable Beams
- 2012-present Member of the International Advisory Committee of the Cluster conferences
- 2014 Convener for the Nuclear astrophysics at the ECT* Workshop on Future Directions
- 2017 Member of the Local Organizing Committee of the international conference “Nuclear Physics in Astrophysics VIII”
- 2018 Member of the Program Committee of the 15th International Symposium on Nuclei in the Cosmos
- 2019 Convener for the Nuclear Astrophysics Sessions of the INPC2019, Glasgow, Scotland
- 2020 Convener for the IReNA FA1 workshop on underground physics, Notre Dame, Indiana
- 2020 Chairman of the Workshop “Key Reactions in Nuclear Astrophysics”, ECT* Trento
- 2021 Member of the International Advisory Committee of the ANPC21 conference
- 2021 Member of the Steering Committee of the ANPS21
- 2022 Convener for the Nuclear Astrophysics Sessions of the INPC2022, Cape Town, South Africa
- 2022 Member of the Local Organizing Committee of the IReNA and ChETEC-INFRA workshop, Rome, Italy
- 2022 Chairman of the Workshop “Key Reactions in Nuclear Astrophysics”, ECT* Trento

Teaching Activity

2004-2008 Physics, Faculty of Architecture

2007-present Physics 1 and 2 –Mechanics, Thermodynamics, Electromagnetism and Optics,
Faculty of Engineering

2011-2012 Environmental Electromagnetism, Faculty of Engineering

Research activity

My research activity is focused on topics related to Nuclear Astrophysics, in particular on the application of indirect techniques to measure the bare nucleus astrophysical $S(E)$ -factor down to zero energy. I am mainly involved in the development and application of the Trojan Horse Method (THM), which has proven to be very powerful for studying two-body reactions between charged particles. The THM has been successfully applied to several reactions of astrophysical interest involved in different scenarios in the primordial and stellar nucleosynthesis, such as d-burning, Li and light element (Be and B) depletion, the role of ^{19}F abundance in the chemical evolution of AGB stars (see short list of Publications as reference). I have been involved in more than seventy experiments, fifteen of those as spokesperson. In particular, I have been spokesperson and corresponding author of an important research on C-burning in massive stars that has been published in Nature. Recently, I have also been involved in experimental activities for in-plasma studies of nuclear cross sections and stellar opacity. The research activity is documented by more than 250 publications in international Journals, and by more than 70 invited talks/seminars to Conferences, Workshops and Schools.

List of recent invited talks/Seminars

- 2022 Joint LIA COLL-AGAIN, COPIGAL, and POLITA Workshop, 15-18 November 2022, Orsay, France – The Trojan Horse Method
- 2022 INCT-FNA Workshop, 70-10 November, Niteroi, Brasil, Indirect methods to constrain Nuclear Astrophysics
- 2022 International conference PUMA22 Probing the Universe with Multimessenger Astrophysics, 26-30 September, 2022, Sestri Levante, Italy - Multimessenger astrophysics at LNS from a nuclear physics point of view
- 2022 108° Congresso del Società italiana di Fisica, 12-16 September, Milan - The research activities at the INFN-Laboratori Nazionali del Sud
- 2022 Solar Fusion III workshop, 26-29 July, 2022, Berkeley, USA – Summary talk on Experimental Facilities for probing nuclear reactions in the Sun
- 2022 IReNA/ChETEC meeting workshop on nuclear reaction measurements in underground laboratories, 5-8 April, 2022 - Indirect measurements for $^{12}\text{C}+^{12}\text{C}$ fusion
- 2022 “Nuclear Physics Mid Term Plan in Italy”-LNS Session, 4-5 April, 2022, Catania, Italy – Forthcoming Facilities at LNS
- 2022 Russbach school on nuclear astrophysics, Russbach, Austria, March 13-19 2022
- 2021-Workshop on Cluster Phenomena in Knockout and Astrophysical Reactions, Japan (online), October 14-15 2021
- 2021- ChETEC Meeting, Lisbon, September 7-10, 2021
- 2021-Carpathian Summer School of Physics, Sinaia August 19-27, 2021
- 2021-National Nuclear Physics Summer School, UNAM, Mexico, June 21-25, 2021
- 2021-Joint APP, HEPP and NP online Conference, Institute of Physics, April 12-15, 2021
- 2021- NUSTAR Annual Meeting, February 24-25 2021
- 2021- SNAQs virtual nuclear astrophysics schools, February 17, 2021

- 2020- 8th International conference on heavy-ion collisions at near barrier energies (FUSION20), Shizuoka, Japan, November 15-20 (postponed due to Covid19 emergency)
- 2020-international workshop on "Critical Stability" at the ICTP South American Institute for Fundamental Research, Sao Paulo, Brazil, October 12-16 (postponed due to Covid19 emergency)
- 2020- 17th International Symposium on Capture Gamma-Ray Spectroscopy and Related Topics (CGS17), Grenoble, August 31 – September 04 (postponed due to Covid19 emergency)
- 2020- IReNA FA1 workshop on underground physics, Notre Dame, Indiana July 25-29 (postponed due to Covid19 emergency)
- 2020- Carpathian Summer School of Physics 2020, Sinaia, Romania, June 28 – July 11 (postponed due to Covid19 emergency)
- 2020- Institute of Physics annual conference, Edinburgh, Scotland, April 6-9 (postponed due to Covid19 emergency)
- 2020- Russbach school on nuclear astrophysics 2020, Russbach, Austria, March 15-21 (postponed due to Covid19 emergency)
- 2020- Indirect Methods to constrain the $12\text{C}+12\text{C}$ fusion at astrophysical energies, Webinar “Angel Dacar”, Departamento de Fisica Nuclear y Aplicaciones de la Radiacion otorga el presente, May 19th.
- 2019-“The $12\text{C}+12\text{C}$ burning explored with the THM”, Decimo incontro nazionale dei gruppi italiani di astrofisica nucleare teorica e sperimentale (GIANTS-X), Genova, Italy, October 23-25
- 2019-“Indirect Methods Constraining Nuclear Capture – the Trojan Horse Method”, Nuclear Physics in Astrophysics IX, Frankfurt, Germany, September 15-20, 2019
- 2019- “Indirect Experimental Methods and the $12\text{C}+12\text{C}$ Fusion”, African Nuclear Physics Conference, Kruger Park, South Africa, July, 1-5, 2019
- 2019- “Nuclear Astrophysics with the Trojan Horse Method” Cluster of Excellence PRISMA, Johannes Guttenberg Universität, Mainz, June, 11-12 2019
- 2019-“Nuclear Physics in Stellar Lifestyles with the Trojan Horse Method”, Nuclear Structure and Dynamics 2019, Venice, Italy, May 13-17 2019
- 2019-“Nuclear Astrophysics with Indirect Methods”, Joint LIA COLL---AGAIN, COPIGAL and POLITA workshop, Warsaw, Poland, March 5-7 2019
- 2019-“Indirect Methods in Nuclear Astrophysics”, 57th International Winter Meeting on Nuclear Physics, Bormio, Italy, January 21-25, 2019
- 2018-“Resonant C-burning at astrophysical energies”, NN2018-13th International Conference on Nucleus-Nucleus Collisions, Saitama, Japan, December 4-8, 2018
- 2018-”Resonant carbon burning to reshape star evolution”, Workshop on Indirect Methods in Nuclear Astrophysics, Indirect Methods in Nuclear Astrophysics, ECT*, Trento, Italy, November 5-9, 2018
- 2018-“ Stellar carbon-burning via the Trojan Horse Method” The 6th International Conference on Collective Motion in Nuclei under Extreme Conditions (COMEX 6), Cape Town, South Africa, 29 October -2 November 2018
- 2018-“Uncovering carbon burning in stars”, 2018 European Nuclear Physics Conference, Bologna, Italy, September 2-7, 2018
- 2018 – “The resonant behaviour of the $12\text{C}+12\text{C}$ fusion cross section at astrophysical energies”, 15th International Symposium on “Nuclei in the Cosmos”, Laboratori Nazionali del Gran Sasso, Assergi, Italy, June 24-29, 2018
- 2018 - "State-of-the-art and recent $12\text{C}+12\text{C}$ results" 4th international workshop on "State of the Art in Nuclear Cluster Physics" (SOTANCP4), Galveston, Texas, May 13-18, 2018
- 2017 – “Resonant reactions in nuclear astrophysics with the Trojan Horse method”, IEA Workshop: "The Nucleus-Nucleus Interaction and Reactions with Exotic Nuclei (Sao Paulo, Brasil, April 10 – 13, 2017)
- 2017 – “Triple alpha resonances in the $6\text{Li}+6\text{Li}$ interaction at low energy and possible link to the Efimov trimers”, Workshop on Open Quantum Systems: From atomic nuclei to ultracold atoms and quantum optics, European Center for Theoretical Studies (ECT*), Trento, Italy 10-14 July 2017

- 2017 – “The Trojan Horse Method in nuclear astrophysics”, The 9th European Summer School on Experimental Nuclear Astrophysics St. Tecla (Catania), 17-24 September 2017
- 2017 – “Bare nucleus cross-sections for nuclear astrophysics studies with the THM”, International Symposium on Physics of Unstable Nuclei, 24-30 September, Halong City, Vietnam 2017
- 2017 – Efimov physics in nuclei: the case of the $6\text{Li}+6\text{Li}$ interaction at low energy, Conference on Critically Stable Quantum Systems (Dresden, Italy 16-20 October 2017);
- 2016 – “Trojan horse Method for resonant reactions in nuclear astrophysics including recent results”, ENSAR2-NUSPRASEN Workshop, (ISOLDE - CERN, Geneva, Switzerland, December, 6, 2016)
- 2016 – “Strutture a cluster in reazioni tra nuclei leggeri”, Terzo Incontro Nazionale di Fisica Nucleare INFN2016, (Frascati, Italy, November, 14-16, 2016)
- 2016 – “Nuclear Astrophysics”, Tastes of Nuclear Physics School, Stellenbosch University, (Stellenbosch, South Africa, November, 1-3, 2016)
- 2016 – “Recent results for nuclear astrophysics with the Trojan horse Method applied to stable and radioactive nuclei”, Workshop on Three-body Systems in Reactions with rare isotopes, ECT*, (Trento, Italy, 3-8 October 2016)
- 2016 – “Clusterization of Light Nuclei and the Trojan Horse Method”, 11th International Conference on Clustering Aspects of Nuclear Structure and Dynamics (23-27 May 2016, Naples)
- 2016 – “The $^{12}\text{C}(^{12}\text{C},\alpha)^{20}\text{Ne}$ and $^{12}\text{C}(^{12}\text{C},p)^{23}\text{N}$ reactions at the Gamow peak”, Carpathian Summer School of Physics 2016, (26 June – 9 July, Sinaia, Romania)
- 2015 – “Future challenges in nuclear astrophysics with high intensity stable ion beams ”ECOS-LINCE Workshop , (Huelva, Spain, July 8-10, 2015)
- 2015 – “Carbon-burning at sub-barrier energies” Humboldt Kolleg ”Interfacing structure and reaction dynamics in the synthesis of heavy nuclei”, (ECT, Trento, September 1-4 2015)
- 2015 – “The $^{12}\text{C}(^{12}\text{C},\alpha)^{20}\text{Ne}$ and $^{12}\text{C}(^{12}\text{C},p)^{23}\text{Na}$ reactions at the Gamow peak via the Trojan Horse Method”, 12th International Conference on Nucleus Nucleus Collisions (Catania, Italy, June 21-26, 2015)
- 2014 - “Nuclear Astrophysics and Nuclear Reactions”, Workshop on "Future Directions in the Physics of Nuclei at Low Energies", (ECT, Trento, May 21-23, 2014)
- 2014 - “Unscreened cross-sections for nuclear astrophysics via the Trojan Horse Method”, 3rd international workshop on "State of the Art in Nuclear Cluster Physics" (SOTANCP3), (Yokohama, Japan, May 26-30, 2014)
- 2013 - “Direct Nuclear Reactions and Astrophysics”, ECOS-LINCE Workshop: Perspectives Of High Intensity Beams At The Lince Facility In Spain, (Huelva, Spain, October 30-31, 2013)
- 2013- “The Trojan Horse Method for Nuclear Astrophysics: Recent Results for Direct Reactions” VII European Summer School on Experimental Nuclear Astrophysics(S.Tecla,Italy,15-27 September 2013)
- 2013 - ”From Nuclei to Stars with a Trojan Horse” XXXIII Mazurian Lakes Conference on Physics -Frontiers in Nuclear Physics (Piaski, Poland, September 1-7, 2013)
- 2013-“Nuclear Astrophysics with the Trojan Horse Method”, Nuclear Physics in Astrophysics VI, (Lisbon, Portugal May 19-24 2013)
- 2013- “The Trojan Horse Method in Nuclear Astrophysics”, 2nd Workshop on the physics at the TANDEM-ALTO facility, (Orsay, Paris, France, May 13-15 2013)
- 2013 - " $^2\text{H}(d,p)^3\text{H}$ and $^2\text{H}(d,n)^3\text{He}$ reaction rates at astrophysical energies", International Workshop XLI on Gross Properties of Nuclei and Nuclear Excitations, (Hirschegg, Kleinwalsertal, Austria, gennaio 26 - February 1, 2013);

Bibliometric indicators:

Publications: >500, from WoS (Oct 2021): articles 280, h-index 41, citations 3858

Scientific Dissemination Activity

2002-present Plenary talks to students and general public during the “Settimana della Cultura Scientifica” organized every year at the INFN-Laboratori Nazionali del Sud
2018 - public talk within the SHARPER activities during the “Notte dei Ricercatori”
2018 dissemination paper on Stars and C-burning published in GIANTS – Notiziario di Astrofisica Nucleare – n.4 Dec-. 2018

List of recent Publications

- Pizzone, R. G.; Spitaleri, C.; Bertulani, C.A., Mukhamedzhanov, AM; Blokhintsev, L; La Cognata, M; Lamia, L; Rinollo, A; Sparta, R; **Tumino, A**; *Updated evidence of the Trojan horse particle invariance for the $^2\text{H}(d,p)^3\text{H}$ reaction*, **Physical Review C**, 87 (2013) 025805.
- **Tumino, A.**; Spitaleri, C.; Cherubini, S, Gulino, M; La Cognata, M; Lamia, L; Pizzone, RG; Puglia, SMR; Rapisarda, GG; Romano, S; Sergi, ML; Sparta, R, *New Advances in the Trojan Horse Method as an Indirect Approach to Nuclear Astrophysics*, **Few-Body Syst.**, 54 (2013) 745.
- Lamia, L.; Spitaleri, C.; Pizzone, R.G., Tognelli, E; **Tumino, A**; Degl'Innocenti, S; Moroni, PGP; La Cognata, M; Pappalardo; Sergi, ML, *An Updated $^6\text{Li}(p,\alpha)^3\text{He}$ He Reaction Rate at Astrophysical Energies with the Trojan Horse Method*, **Astrophysical Journal** 768 (2013) 65.
- **A. Tumino**, C. Spitaleri, C. Bertulani, A. M. Mukhamedzhanov, *Nuclear Astrophysics from View Point of Few-Body Problems*, **Few-Body Systems** 54 (2013) 869, DOI 10.1007/s00601-013-0690-5.
- **A. Tumino**, R. Spartà, C. Spitaleri, A.M. Mukhamedzhanov, S. Typel, R.G. Pizzone, E. Tognelli, S. Degl'Innocenti, V. Burjan, V. Kroha, Z. Hons, M. La Cognata, L. Lamia, J. Mrazek, S. Piskor, P.G. Prada Moroni, G.G. Rapisarda, S. Romano, M.L. Sergi, R. Sparta, *New determination of the $^2\text{H}(d,p)^3\text{H}$ and $^2\text{H}(d,n)^3\text{He}$ reaction rates at astrophysical energies*, **Astrophysical Journal** 785 (2014) 96.
- R.G. Pizzone, R. Spartà, C.A. Bertulani, C. Spitaleri, M. La Cognata, J. Lalmansingh, L. Lamia, AM Mukhamedzhanov, and **A. Tumino**, *Big Bang Nucleosynthesis revisited via Trojan Horse Method Measurements*, **Astrophysical Journal** 786 (2014) 112.
- C. Spitaleri, **A. Tumino**, M. Lattuada, R.G. Pizzone, S. Tudisco, Dj. Miljanic, S. Tudisco and N. Soic, *Quasifree mechanism in the $^6\text{Li} + ^6\text{Li} \rightarrow 3\alpha$ reaction at low energy*, **Physical Review C**, 91 (2015) 024612.
- I. Lombardo, D. Dell'Aquila, A. Di Leva, I. Indelicato, M. La Cognata, M. La Commara, A. Ordine, V. Rigato, M. Romoli, E. Rosato, G. Spadaccini, C. Spitaleri, **A. Tumino**, M. Vigilante, **Physics Letters B**, 748 (2015) 178.
- **A. Tumino**, A. Bonasera, G. Giuliani, M. Lattuada, M. Milin, R.G. Pizzone, C. Spitaleri, S. Tudisco, *Triple α resonances in the $^6\text{Li}+^6\text{Li} \rightarrow 3\alpha$ reaction at low energy*, **Phys. Lett. B** 750 (2015)59.
- Caciolli, R. Depalo, C. Broggin, M. La Cognata, L. Lamia, R. Menegazzo, L. Mou, SMR Puglia, V. Rigato, S. Romano, C. Rossi Alvarez, ML Sergi, C. Spitaleri, **A Tumino**, *A new study of $^{10}\text{B}(p,\alpha)^7\text{Be}$ reaction at low energies*, **EpJ A**, 52 (2016) .

- R.G. Pizzone, G. D'Agata, M. La Cognata, I. Indelicato, C. Spitaleri, S. Blagus, S. Cherubini, P. Figuera, L. Grassi, G.L. Guardo, M. Gulino, S. Hayakawa, R. Kshetri, L. Lamia, M. Lattuada, T. Mijatovic, M. Milin, D. Miljanic, D.L. Preolec, G.G. Rapisarda, S. Romano, M.L. Sergi, N. Skukan, N. Soic, V. Tokic, **A. Tumino** and M. Uroic, *First Measurement of the $^{19}\text{F}(\alpha, p)^{22}\text{Ne}$ Reaction at Energies of Astrophysical Relevance*, **Astrophysical Journal** 836 (2017) 57.
- C. Spitaleri, S.M.R. Puglia, M. La Cognata, L. Lamia, S. Cherubini, A. Cvetinovic, G. D'Agata, M. Gulino, G. L. Guardo, I. Indelicato, R. G. Pizzone, G. G. Rapisarda, S. Romano, M.L. Sergi, R. Spartà, S. Tudisco, **A. Tumino**, M. Gimenez Del Santo, N. Carlin, M. G. Munhoz, F.A. Souza, A. Szanto de Toledo, A. Mukhamedzhanov, C. Broggin, A. Caciolli, R. Depalo, R. Menegazzo, V. Rigato, I. Lombardo and D. Dell'Aquila, *Measurement of the $^{10}\text{B}(p,\alpha)^7\text{Be}$ cross section from 5 keV to 1.5 MeV in a single experiment using the Trojan horse method*, **Physical Review C**, 95 (2017) 035801.
- Chengbo Li, Qungang Wen, **A. Tumino**, Yuanyong Fu, Jing Zhou, Shuhua Zhou, Qiuying Meng, C. Spitaleri, R. G. Pizzone, and L. Lamia, *Beam-energy dependence and updated test of the Trojan-horse nucleus invariance via a measurement of the $^2\text{H}(d,p)^3\text{H}$ reaction at low energies*, **Physical Review C**, 95 (2017) 035803.
- M. La Cognata, A. Anzalone, D. Balabanski, S. Chesnevska, V. Crucillà, D.M. Filipescu, G.L. Guardo, M. Gulino, D. Lattuada, C. Matei, R.G. Pizzone, S. Romano, C. Spitaleri, A. Taffara, O. Tesileanu, **A. Tumino** and Y. Xu, *Gamma ray beams for Nuclear Astrophysics: first results of tests and simulations of the ELISSA array*, **Journal of Instrumentation**, 12 (2017) C03079
- I. Indelicato, M. La Cognata, C. Spitaleri, V. Burjan, S. Cherubini, M. Gulino, S. Hayakawa, Z. Hons, V. Kroha, L. Lamia, M. Mazzocco, J. Mrazek, R.G. Pizzone, S. Romano, E. Strano, D. Torresi, **A. Tumino**, *New Improved Indirect Measurement of the $^{19}\text{F}(p,\alpha)^{16}\text{O}$ Reaction at Energies of Astrophysical Relevance*, **Astrophysical Journal** 845 (2017) 19
- Cvetinović, A., Spitaleri, C., Spartà, R., Rapisarda, G. G., Puglia, S. M. R., La Cognata, M., Cherubini, S., Guardo, G. L., Gulino, M., Lamia, L., Pizzone, R. G., Romano, S., Sergi, M. L., **Tumino, A.** (2018). Trojan horse measurement of the $\text{B}10(p,\alpha)\text{Be}7$ cross section in the energy range from 3 keV to 2.2 MeV. **Physical Review C**, vol. 97, ISSN: 2469-9985, doi: 10.1103/PhysRevC.97.065801
- **Tumino, A.**, Bonasera, A, Giuliani, G., Lattuada, M., Milin, M., Pizzone, R. G., Spitaleri, C., Tudisco, S. (2018). Triple alpha Resonances and Possible Link to the Efimov Trimers. **Few-Body Systems**, vol. 59, ISSN: 0177-7963, doi: 10.1007/s00601-018-1374-y
- D'Agata, G., Pizzone, R. G., Cognata, M. La, Indelicato, I., Spitaleri, C., Palmerini, S., Trippella, O., Vescovi, D., Blagus, S., Cherubini, S., Figuera, P., Grassi, L., Guardo, G. L., Gulino, M., Hayakawa, S., Kshetri, R., Lamia, L., Lattuada, M., Mijatovic, T., Milin, M., Miljanic, D., Preolec, L., Rapisarda, G. G., Romano, S., Sergi, M. L., Skukan, N., Soic, N., Tokic, V., **Tumino, A.**, Uroic, M. (2018). The $^{19}\text{F}(\alpha, p)^{22}\text{Ne}$ Reaction at Energies of Astrophysical Relevance by Means of the Trojan Horse Method and Its Implications in AGB Stars. **The Astrophysical Journal**, vol. 860, ISSN: 1538-4357, doi: 10.3847/1538-4357/aac207
- **Tumino, A.**, Spitaleri, C, La Cognata, M, Cherubini, S, Guardo, G L, Gulino, M, Hayakawa, S, Indelicato, I, Lamia, L, Petrascu, H, Pizzone, R G, Puglia, S M R, Rapisarda, G G, Romano, S, Sergi, M L, Spartà, R, Trache, L (2018). An increase in the $^{12}\text{C} + ^{12}\text{C}$ fusion rate from resonances at astrophysical energies. **Nature**, vol. 557, p. 687, DOI: 10.1038/s41586-018-0149-4

- H. Y. Lan, Y. Xu, W. Luo, D. L. Balabanski, S. Goriely, M. La Cognata, C. Matei, A. Anzalone, S. Chesnevskaya, G. L. Guardo, D. Lattuada, R. G. Pizzone, S. Romano, C. Spitaleri, A. Taffara, **A. Tumino**, and Z. C. Zhu (2018). Determination of the photodisintegration reaction rates involving charged particles: Systematic calculations and proposed measurements based on the facility for Extreme Light Infrastructure–Nuclear Physics. **Phys. Rev. C** 98, 054601.
- G. G. Rapisarda, C. Spitaleri, A. Cvetinović, R. Spartà, S. Cherubini, G.L. Guardo, M. Gulino, M. La Cognata, L. Lamia, R.G. Pizzone, S. Romano, M.L. Sergi, **A. Tumino**. (2018) Study of the $^{10}\text{B}(p,\alpha_1)^7\text{Be}$ reaction by means of the Trojan Horse Method, **Eur. Phys. Journ. A** 54: 189.
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