Virginia Strati
Department of Physics and Earth Sciences
University of Ferrara
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ACADEMIC CAREER

1st June 2018 – now
Assistant professor in Applied Physics (FIS/07).
Department of Physics and Earth Sciences, University of Ferrara.

March 2018 – May 2018
Post-lauream fellowship. Topic "Study of heat producing elements in the crust for modeling geoneutrino flux for geoneutrino flux estimation at JUNO detector"
Department of Physics and Earth Sciences, University of Ferrara.

January 2016 – December 2017
Post-doc position – Topic: "Study of heat producing elements in the crust for modeling geoneutrino flux"
Legnaro Laboratories (INFN)

March 2016
PhD Dissertation: University of Ferrara
Thesis: "Advanced modeling for studying antineutrinos and gamma rays coming from the Earth"

November 2012
Fellowship for PhD in Physics. Title: "Nuclear physics and technology at Legnaro National laboratori" - XXVIII cycle - University of Ferrara.

October 2012
Master's degree - Geological sciences and technologies - Centre for GeoTechnology (University of Siena)
Thesis: "Analisi del contenuto di radioattività delle principali formazioni rocciose delle aree alpine, prealpine e collinari della regione Veneto, finalizzata alla produzione di carte tematiche della distribuzione di radionuclidi naturali".
Supervisors: Prof. Luigi Carmignani - Prof. Fabio Mantovani
Final mark: **110/110 cum laude**

October 2010
Bachelor degree - Geotechnologies - Centre for GeoTechnology (University of Siena)
Thesis: "Studio della frana in loc. Campo Grande (Comune di Cavriglia) mediante integrazione di analisi diacronica e metodi geofisici".
Supervisors: Prof. Paolo Conti - Dr. Filippo Bonciani - Dr. Marilena Trotta
Final mark: **110/110 cum laude**

AWARDS

May 2017
Best Thesis of the XXVII cicle of the PhD Course of Physics of University of Ferrara, conferred by the University Institute for Higher Studies, IUSS - Ferrara 1391.

October 2016
"**Niccolò Copernico**" acknowledgement to young PhD fellows distinguished for innovative thesis in sciences and technologies.

May 2014
"**Student Outstanding Presentation Award 2014**" - Japan Geoscience Union meeting 2014, Scientific section: Solid Earth.

LANGUAGES

Italian – Mother tongue

English - Level C1

German – Level A1

SCIENTIFIC CONSULTANT

Title: contract for a research project aimed to the development of an automatic system for in situ radioactivity measurements
Company: GeoExplorer Impresa Sociale S.r.l.
Period: 2020 - 2024

Title: contract for a research project in the field of control system for advanced hydrocarbon plants
Company: Polaris S.r.l.
Period: 2020 – 2023

INVITED SPEAKER AT SCIENTIFIC CONGRESSES AND SUMMER SCHOOL

14 - 17 September 2021
40th International Symposium on Physics in Collision – Aachen (Germany)
Talk: "Geo-Neutrinos"

20 - 22 November 2019
1st International Conference on Applied Physics – Tirana (Albania)
Talk: "Nuclear physics for precision agriculture"

7-12 April 2019
European Geosciences Union General Assembly 2019 – Vienna (Austria)
Talk: "Challenges, solutions and benefits of natural radioactivity mapping"

22-25 May 2018
VI. Terrestrial Radioisotopes in Environment International Conference on Environmental Protection – Veszprém (Hungary)
Talk: "Natural radioactivity mapping via gamma ray spectroscopy: integrating different techniques and multivariate information"

8-13 April 2018
European Geosciences Union General Assembly 2018 – Vienna (Austria)
Talk: “Integrating geological, geochemical and geophysical data and uncertainties into a coherent 3D model”

13-17 February 2017
Juno Collaboration Meeting - Zhuhai (China)
Invited talk: "The radioactivity of JUNO site and geoneutrinos"

25 – 27 October 2016
International Workshop: Neutrino Research and Thermal Evolution of the Earth - Sendai (Japan)
Invited talk: "Towards a refined model for predicting geoneutrino signal at SNO+"

15 – 17 June 2015
Neutrino Geoscience 2015 Conference - Paris (France).
Invited Talk: “Local refined Earth model for JUNO geo-neutrino analysis”.

15 – 16 January 2015
International Workshop on KamLAND Geosciences: **towards enhanced reference Earth models for geoneutrino analysis.** - Tokyo (Japan).
Invited Talk: “Geophysical 3D modeling for geoneutrino calculations”.

28 April - 2 May 2014
Japan Geoscience Union Meeting (JpGU 2014) - Pacifico Yokohama (Japan).
Invited Talk: “Towards a refined regional geological model for predicting geoneutrinos flux at Sudbury Neutrino Observatory (SNO)”.

ROLES AND RESPONSIBILITIES

May 2021 – February 2022
Special Issue “Geoscience applications of environmental radioactivity”
Journal: Advances in Geosciences
Editors: **Virginia Strati,** Xuemeng Chen, Anita Erőss, Viktor Jobbagy, Gerti Xhixha.

23 May – 27 May 2022
European Geosciences Union General Assembly 2022 - Vienna (Austria)
Session: Geoscience applications of environmental radioactivity
Convener: **Virginia Strati**
Co-conveners: Xuemeng Chen, Anita Erőss, Viktor Jobbagy, Gerti Xhixha.

June 2019 – March 2021
Special Issue “Innovative Methods for Non-invasive Monitoring of Hydrological Processes from Field to Catchment Scale”
Journal: Frontiers in Water
Editors: Heye Bogena, Clara Chew, Andreas Güntner, Martin Schrön, **Virginia Strati**

19 April – 30 April 2021
European Geosciences Union General Assembly 2021 - Vienna (Austria)
Session: Geoscience applications of environmental radioactivity
Convener: **Virginia Strati**
Co-conveners: Xuemeng Chen, Anita Erőss, Viktor Jobbagy, Gerti Xhixha.

04 May - 08 May 2020
European Geosciences Union General Assembly 2020 - Vienna (Austria)
Session: Innovative methods for non-invasive monitoring of hydrological processes from field to catchment scale
Convener: Heye Bogena
Co-conveners: Clara Chew, Andreas Güntner, Martin Schrön, **Virginia Strati**

04 May - 08 May 2020
European Geosciences Union General Assembly 2020 - Vienna (Austria)
Session: Geoscience applications of environmental radioactivity
Convener: Susana Barbosa
Co-conveners: Xuemeng Chen, Anita Erőss, **Virginia Strati**

PEER-REVIEW ACTIVITY

- International Journal of Environmental Research and Public Health
- Remote Sensing
- Sustainability
- Sensors
- Journal of Environmental Radioactivity
- Climate
- Water
- Arabian Journal of Geosciences

ABROAD RESEARCH ACTIVITY

22 May – 31 May 2016
On-field experience – Subury (Canada): rock sampling campaign finalized to the characterization of natural radionuclides content for the geoneutrino signal estimation expected at SNO+ detector.

16 November – 11 December 2015
Visiting researcher at Department of Geology - University of Maryland (College Park, Maryland, USA) in the framework of **"Bando per la mobilità internazionale – Atlante C"** a.a 2015/2016.

PROFESSIONAL COURSES

3 October 2014
Workshop: "**Geotecnologie innovative per la professione del geologo**" - Geofluid 2014 (Piacenza).
Invited Talk: "Monitoraggio airborne della radioattività".
April 2013
Professional course: "**Geostatistica Ambientale ed Esercitazioni (edizione 2013)**". Centre for GeoTechnology (University of Siena).

14 December 2012
Workshop: "**La geofisica al servizio della protezione civile**". Museo Civico di Rovereto - Rovereto (TN).

May 2012
Professional Course: "**Geostatistica Ambientale" -** Centre for GeoTechnology (University of Siena).

PROFESSIONAL ACTIVITY

November 2012
Consultation activity in the framework of a didactic project called: "Carta della radioattività del Comune di Schio - Determinazione della radioattività naturale nel comune di Schio".

December 2011 - June 2012
Internship at Laboratory of Geophysics of Centre for GeoTechnology (University of Siena).
- Seismic and geoeletrics methods: ground surveys, data elaboration and interpretation, realization of technical reports.
- Nuclear Geophysics: acquisition and interpretation of natural radioactivity measurements in rock and soil samples.

June 2011
First Certificate in English - Council of Europe Level B2 (Grade C)
University of Cambridge ESOL Examinations

November 2009 – March 2010
Internship at Svaltec s.r.l. (Firenze).
Collaboration for a Tuscany region project for the realization of an updated regional cartographic system.

PEER REVIEWED SCIENTIFIC PAPERS

1. Abusleme, A., et al. [JUNO Collaboration]. *Mass testing and characterization of 20-inch PMTs for JUNO*. The European Physical Journal C, 82 (12), (2022). DOI: 10.1140/epjc/s10052-022-11002-8.

2. Abusleme, A., et al. [JUNO Collaboration]. *Prospects for detecting the diffuse supernova neutrino background with JUNO*. Journal of Cosmology and Astroparticle Physics, 10 (2022). DOI 10.1088/1475-7516/2022/10/033

3. A., et al. [JUNO Collaboration]. *Sub-percent precision measurement of neutrino oscillation parameters with JUNO*. Chinese Physics C, 46 (2022). DOI 10.1088/1674-1137/ac8bc9.

4. Maino A., M. Albéri, E. Anceschi, E. Chiarelli, L. Cicala, T. Colonna, M. De Cesare, E. Guastaldi, N. Lopane, F. Mantovani, M. Marcialis, N. Martini, M. Montuschi, S. Piccioli, K.G.C. Raptis, A. Russo, F. Semenza and **V. Strati**. *Airborne Radiometric Surveys and Machine Learning Algorithms for Revealing Soil Texture*. Remote Sensing, 14(15), 3814 (2022). DOI: 10.3390/rs14153814.

5. Raptis K.G.C., M. Albéri, S. Bisogno, I. Callegari, E. Chiarelli, L. Cicala, T. Colonna, M. De Cesare, E. Guastaldi, A. Maino, F. Mantovani, M. Montuschi, A. Motti, N. Natali, M. Ogna, F. Semenza, A. Serafini, G. Simone and **V. Strati**. *External effective dose from natural radiation for the Umbria region (Italy)*. Journal of Maps, 18 (2), 461- 471 (2022). DOI 10.1080/17445647.2022.2093659.

6. Finco, A., D. Bentivoglio, G. Chiaraluce, M. Alberi, E. Chiarelli, A. Maino, F. Mantovani, M. Montuschi, K. G. C. Raptis, F. Semenza, **V. Strati**, F. Vurro, E. Marchetti, M. Bettelli, M. Janni, E. Anceschi, C. Sportolaro and G. Bucci. *Combining Precision Viticulture Technologies and Economic Indices to Sustainable Water Use Management*. Water 14(9), 1493 (2022). DOI 10.3390/w14091493.

7. Bellini, Gianpaolo, K. Inoue, F. Mantovani, A. Serafini, **V. Strati** and H. Watanabe. *Geoneutrinos and geoscience: an intriguing joint-venture*. La Rivista del Nuovo Cimento 45, 1-105 (2022). DOI 10.1007/s40766-021-00026-7.

8. Wang, J., et al. [JUNO Collaboration]. *Damping signatures at JUNO, a medium-baseline reactor neutrino oscillation experiment*. Journal of High Energy Physics 62 (2022). DOI 10.1007/JHEP06(2022)062.

9. Abusleme, A., et al. [JUNO Collaboration]. *JUNO physics and detector*. Progress in Particle and Nuclear Physics 123, 103927 (2022). DOI 10.1016/j.ppnp.2021.103927.

10. Cabrera, A., et al. [LiquidO Consortium]. *Neutrino physics with an opaque detector*. Communications Physics 4, 273 (2021). DOI 10.1038/s42005-021-00763-5.

11. Abusleme, A., et al. [JUNO Collaboration]. *Radioactivity control strategy for the JUNO detector.* Journal of High Energy Physics, 102 (2021). DOI 10.1140/epjc/s10052-021-09544-4.

12. Abusleme, A., et al. [JUNO Collaboration]. *The design and sensitivity of JUNO's scintillator radiopurity pre-detector OSIRIS.* The European Physical Journal C., 81, 973 (2021). DOI 10.1007/JHEP11(2021)102.

13. Serafini, A., M. Albéri, M. Amoretti, S. Anconelli, E. Bucchi, S. Caselli, E. Chiarelli, L. Cicala, T. Colonna, M. De Cesare, S. Gentile, E. Guastaldi, T. Letterio, A. Maino, F. Mantovani, M. Montuschi, G. Penzotti, K. G. C. Raptis, F. Semenza, D. Solimando and **V. Strati** (2021). *Proximal Gamma-Ray Spectroscopy: An Effective Tool to Discern Rain from Irrigation*." Remote Sensing 13(20). DOI 10.3390/rs13204103.

14. Abusleme, A., et al. [JUNO Collaboration]. *JUNO sensitivity to low energy atmospheric neutrino spectra.* The European Physical Journal C., 81, 887 (2021). DOI 10.1140/epjc/s10052-021-09565-z.

15. Abusleme, A., et al. [JUNO Collaboration]. *Calibration strategy of the JUNO experiment.* Journal of High Energy Physics, 4. DOI 10.1007/JHEP03(2021)004

16. F. Marini, M. Bellato, A. Bergnoli, R. Brugnera, F. dal Corso, D. Corti, J. Dong, A. Garfagnini, A. Giaz, G. Gong, J. Hu, R. Isocrate, X. Jiang, I. Lippi, K. von Sturm, S. Aiello,G. Andronico, V. Antonelli, W. Bandini, D. Basilico, A. Brigatti, A. Barresi, A. Budano, R. Bruno, B. Caccianiga, A. Cammi, R. Caruso, D. Chiesa, C. Clementi, S. Costa, X. Ding, S. Dusini, A. Fabbri, M. Fargetta, R. Ford, A. Formozov, M. Giammarchi, M. Grassi, C. Landini, P. Lombardi, C. Lombardo, F. Mantovani, S. M. Mari, C. Martellini, A. Martini, E. Meroni, M. Mezzetto, L. Miramonti, P. Montini, M. Montuschi, M. Nastasi, F. Ortica, A. Paoloni, S. Parmeggiano, N. Pelliccia, E. Previtali, G. Ranucci, D. Riondino, A. C. Re, B. Ricci, A. Romani, P. Saggese, A. Serafini, C. Sirignano, M. Sisti, L. Stanco, **V. Strati**, M. Torri, C. Tuve, G. Verde, L. Votano. *FPGA Implementation of a NCO based CDR for the JUNO Front-End Electronics.* IEEE Transactions on Nuclear Science, 68(8) (2021). DOI 10.1109/TNS.2021.3084446.

17. Bogena H.R., **V. Strati**, A. Güntner, C.C. Chew and M. Schrön. *Editorial: Innovative Methods for Non-invasive Monitoring of Hydrological Processes From Field to Catchment Scale*. Frontiers in Water, 3, 641458 (2021) DOI 10.3389/frwa.2021.641458.

18. Marini, M., S. Panicacci, M. Donati, L. Fanucci, E. Fanchini, A. Pepperosa, M. Morichi, M. Albéri, E. Chiarelli, M. Montuschi, K.G.C. Raptis, A. Serafini, **V. Strati**, F. Mantovani. *An Easily Integrable Industrial System for Gamma Spectroscopic Analysis and Traceability of Stones and Building Materials*. Sensors, 21, 352 (2021). DOI 10.3390/s21020352.

19. Abusleme, A., et al. [JUNO Collaboration]. *Feasibility and physics potential of detecting ^{8}B solar neutrinos at JUNO*. Chinese Physics C 45(2) (2021) DOI 10.1088/1674-1137.

20. Abusleme, A., et al. [JUNO Collaboration]. *Optimization of the JUNO liquid scintillator composition using a Daya Bay antineutrino detector*. Nuclear Instruments and Methods in Physics Research Section A, 988, 164823 (2021). DOI 10.1016/j.nima.2020.164823.

21. Bellato M., A. Bergnoli, A. Brugnera, S. Chen, Z. Chen, B. Clerbaux, F. dal Corso, D. Corti, J. Dong, G. Galet, A. Garfagnini, A. Giaz, G. Gong, C. Grewing, J. Hu, R. Isocrate, X. Jiang, F. Li, F. Li, I. Lippi, F. Marini, Z. Ning, A. Olshevskiy, D. Pedretti, P.A. Petitjean, M. Robens, V. Shutov, A. Stahl, J. Steinmann, Y. Sun, S. van Waasen, Y. Wang, Z. Wang, W. Wei, X. Yan, Y. Yang, A. Aiello, A. Andronico, V. Antonelli, W. Bandini, A. Brigatti, A. Barresi, A. Budano, R. Bruno, A. Cabrera, A. Cammi, R. Caruso, D. Chiesa, C. Clementi, S. Costa, X. Ding, S. Dusini, A. Fabbri, M. Fargetta, G. Fiorentini, R. Ford, A. Formozov, M. Giammarchi, M. Grassi, C. Landini, P. Lombardi, C. Lombardo, Y. Malyshkin, F. Mantovani, S.M. Mari, C. Martellini, A. Martini, E. Meroni, M. Mezzetto, L. Miramonti, P. Montini, M. Montuschi, M. Nastasi, F. Ortica, A. Paoloni, S. Parmeggiano, N. Pelliccia, E. Previtali, G. Ranucci, D. Riondino, A.C. Re, B. Ricci, A. Romani, P. Saggese, G. Salamanna, F.H. Sawy, A. Serafini, G. Settanta, C. Sirignano, M. Sisti, L. Stanco, **V. Strati**, C. Tuvé, G. Verde, L. Votano, J. Zhang. *Embedded readout electronics R&D for the large PMTs in the JUNO experiment*. Nuclear Instruments and Methods in Physics Research Section A, 985, 164600 (2021). DOI 10.1016/j.nima.2020.164600.

22. Bottardi C., M. Albéri, M. Baldoncini, E. Chiarelli, M. Montuschi, K.G.C. Raptis, A. Serafini, **V. Strati**, F. Mantovani. *Rain rate and radon daughters' activity*. Atmospheric Environment, 238, 117728 (2020). DOI 10.1016/j.atmosenv.2020.117728.

23. Agostini, M., K. Altenmüller, S. Appel, V. Atroshchenko, Z. Bagdasarian, D. Basilico, G. Bellini, J. Benziger, D. Bick, G. Bonfini, D. Bravo, B. Caccianiga, F. Calaprice, A. Caminata, L. Cappelli, P. Cavalcante, F. Cavanna, A. Chepurnov, K. Choi, D. D'Angelo, S. Davini, A. Derbin, A. Di Giacinto, V. Di Marcello, X. F. Ding, A. Di Ludovico, L. Di Noto, I. Drachnev, G. Fiorentini, A. Formozov, D. Franco, F. Gabriele, C. Galbiati, M. Gschwender, C. Ghiano, M. Giammarchi, A. Goretti, M. Gromov, D. Guffanti, C. Hagner, E. Hungerford, A. Ianni, A. Ianni, A. Jany, D. Jeschke, S. Kumaran, V. Kobychev, G. Korga, T. Lachenmaier, T. Lasserre, M. Laubenstein, E. Litvinovich, P. Lombardi, I. Lomskaya, L. Ludhova, G. Lukyanchenko, L. Lukyanchenko, I. Machulin, F. Mantovani, G. Manuzio, S. Marcocci, J. Maricic, J. Martyn, E. Meroni, M. Meyer, L. Miramonti, M. Misiaszek, M. Montuschi, V. Muratova, B. Neumair, M. Nieslony, L. Oberauer, A. Onillon, V. Orekhov, F. Ortica, M. Pallavicini, L. Papp, Ö. Penek, L. Pietrofaccia, N. Pilipenko, A. Pocar, G. Raikov, M. T. Ranalli, G. Ranucci, A. Razeto, A. Re, M. Redchuk, B. Ricci, A. Romani, N. Rossi, S. Rottenanger, S. Schönert, D. Semenov, M. Skorokhvatov, O. Smirnov, A. Sotnikov, **V. Strati**, Y. Suvorov, R. Tartaglia, G. Testera, J. Thurn, E. Unzhakov, A. Vishneva, M. Vivier, R. B. Vogelaar, F. von Feilitzsch, M. Wojcik, M. Wurm, O. Zaimidoroga, S. Zavatarelli, K. Zuber and G. Zuzel (2020). *Comprehensive geoneutrino analysis with Borexino*. Physical Review D 101(1), 012009. 10.1103/PhysRevD.101.012009.

24. **Strati, V**., S. A. Wipperfurth, M. Baldoncini, W. F. McDonough, S. Gizzi and F. Mantovani (2020). "*Geoneutrinos from the rock overburden at SNO+*." Journal of Physics: Conference Series 134, 012020. DOI: 10.1088/1742-6596/1342/1/012020.

25. Filippucci, P., A. Tarpanelli, C. Massari, A. Serafini, **V. Strati**, M. Alberi, K. G. C. Raptis, F. Mantovani and L. Brocca (2020). "*Soil moisture as a potential variable for tracking and quantifying irrigation: a case study with proximal gamma-ray spectroscopy data*." Advances in Water Resources: 136, 103502 DOI 10.1016/j.advwatres.2019.103502.

26. Fabbri, B., M. Valt, C. Parretta, S. Gherardi, A. Gaiardo, C. Malagù, F. Mantovani, **V. Strati** and V. Guidi (2020). *Correlation of gaseous emissions to water stress in tomato and maize crops: From field to laboratory and back*. Sensors and Actuators B: Chemical 303, 127227 DOI 10.1016/j.snb.2019.127227.

27. Pedretti, D., Bellato, M., Isocrate, R., Bergnoli, A., Brugnera, R., Corti, D., Corso, F. D., Galet, G., Garfagnini, A., Giaz, A., Lippi, I., Marini, F., Andronico, G., Antonelli, V., Baldoncini, M., Bernieri, E., Brigatti, A., Budano, A., Buscemi, M., Bussino, S., Caruso, R., Chiesa, D., Clementi, C., Ding, X. F., Dusini, S., Fabbri, A., Ford, R., Formozov, A., Giammarchi, M., Grassi, M., Insolia, A., Lombardi, P., Mantovani, F., Mari, S. M., Martellini, C., Martini, A., Meroni, E., Miramonti, L., Monforte, S., Montini, P., Montuschi, M., Nastasi, M., Ortica, F., Paoloni, A., Previtali, E., Ranucci, G., Re, A. C., Ricci, B., Romani, A., Salamanna, G., Sawy, F. H., Settanta, G., Sisti, M., Sirignano, C., Stanco, L., **Strati, V**., Verde, G. (2019*) Nanoseconds Timing System Based on IEEE 1588 FPGA Implementation*. IEEE Transactions on Nuclear Science 2019, 66, (7), 1151-1158. DOI 10.1109/TNS.2019.2906045.

28. Reguzzoni, M., L. Rossi, M. Baldoncini, I. Callegari, P. Poli, D. Sampietro, **V. Strati**, F. Mantovani, G. Andronico, V. Antonelli, M. Bellato, E. Bernieri, A. Brigatti, R. Brugnera, A. Budano, M. Buscemi, S. Bussino, R. Caruso, D. Chiesa, D. Corti, F. Dal Corso, X. F. Ding, S. Dusini, A. Fabbri, G. Fiorentini, R. Ford, A. Formozov, G. Galet, A. Garfagnini, M. Giammarchi, A. Giaz, M. Grassi, A. Insolia, R. Isocrate, I. Lippi, F. Longhitano, D. Lo Presti, P. Lombardi, Y. Malyshkin, F. Marini, S. M. Mari, C. Martellini, E. Meroni, M. Mezzetto, L. Miramonti, S. Monforte, M. Montuschi, M. Nastasi, F. Ortica, A. Paoloni, S. Parmeggiano, D. Pedretti, N. Pelliccia, R. Pompilio, E. Previtali, G. Ranucci, A. C. Re, B. Ricci, A. Romani, P. Saggese, G. Salamanna, F. H. Sawy, G. Settanta, M. Sisti, C. Sirignano, M. Spinetti, L. Stanco, G. Verde and L. Votano (2019). *GIGJ: a crustal gravity model of the Guangdong Province for predicting the geoneutrino signal at the JUNO experiment*. Journal of Geophysical Research: Solid Earth. DOI 10.1029/2018jb016681.

29. Lombardi, P., M. Montuschi, A. Formozov, A. Brigatti, S. Parmeggiano, R. Pompilio, W. Depnering, S. Franke, R. Gaigher, J. Joutsenvaara, A. Mengucci, E. Meroni, H. Steiger, F. Mantovani, G. Ranucci, G. Andronico, V. Antonelli, M. Baldoncini, M. Bellato, E. Bernier, R. Brugnera, A. Budano, M. Buscemi, S. Bussino, R. Caruso, D. Chiesa, C. Clementi, D. Corti, F. Dal Corso, X. F. Ding, S. Dusini, A. Fabbri, G. Fiorentini, R. Ford, G. Galet, A. Garfagnini, M. Giammarchi, A. Giaz, M. Grassi, A. Insolia, R. Isocrate, I. Lippi, Y. Malyshkin, S. M. Mari, F. Marini, C. Martellini, A. Martini, M. Mezzetto, L. Miramonti, S. Monforte, P. Montini, M. Nastasi, F. Ortica, A. Paoloni, D. Pedretti, N. Pelliccia, E. Previtali, A. C. Re, B. Ricci, D. Riondino, A. Romani, P. Saggese, G. Salamanna, F. H. Sawy, G. Settanta, M. Sisti, C. Sirignano, L. Stanco, **V. Strati**, G. Verde and L. Votano. *Distillation and stripping pilot plants for the JUNO neutrino detector: Design, operations and reliability*. Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment 925: 6-17 (2019). DOI 10.1016/j.nima.2019.01.071

30. Albéri, M.; Baldoncini, M.; Bottardi, C.; Chiarelli, E.; Landsberger, S.; Raptis, K.G.C.; Serafini, A.; **Strati, V**.; Mantovani, F. *Training Future Engineers to Be Ghostbusters: Hunting for the Spectral Environmental Radioactivity*. Educ. Sci., 9, 15 (2019). DOI 10.3390/educsci9010015

31. Baldoncini, M., M. Albéri, C. Bottardi, E. Chiarelli, K. G. C. Raptis, **V. Strati**, and F. Mantovani. *Biomass water content effect on soil moisture assessment via proximal gamma-ray spectroscopy*. Geoderma, 335, 69-77 (2019). DOI 10.1016/j.geoderma.2018.08.01.

32. Baldoncini, M., M. Albéri, C. Bottardi, E. Chiarelli, K. G. C. Raptis, **V. Strati**, and F. Mantovani, *Investigating the potentialities of Monte Carlo simulation for assessing soil water content via proximal gamma-ray spectroscopy*, Journal of Environmental Radioactivity, 192, 105-116 (2018). DOI: 10.1016/j.jenvrad.2018.06.001.

33. **Strati, V**., Albéri M., Anconelli S., Baldoncini M., Bittelli M., Bottardi C., Chiarelli E., Fabbri B., Guidi V., Raptis K.G.C., Solimando D., Tomei F., Villani G. and Mantovani F. *Modelling Soil Water Content in a Tomato Field:*

Proximal Gamma Ray Spectroscopy and Soil–Crop System Models. Agriculture, 8(4), 60 (2018). DOI: 10.3390/agriculture8040060.

34. Baldoncini M., Albéri M., Bottardi C., Raptis K.G.C., Minty B., **Strati V.** and F. Mantovani. *Airborne gamma-ray spectroscopy for modeling cosmic radiation and effective dose in the lower atmosphere*. IEEE Transactions on Geoscience and Remote Sensing 56(2) 823 - 834 (2017) DOI: 10.1109/TGRS.2017.2755466.

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TEACHING

A.A. 2022 - 2023

- Experimental Physics (BsC - Geological Sciences - University of Ferrara) - 24 hours - 3 CFU
- Mathematics (BsC - Geological Sciences - University of Ferrara) - 24 hours - 3 CFU
- Physics (Ms – Chemistry and pharmaceutical technologies) – 48 hours – 6 CFU
- Physics (BsC – Medical biotechnologies) – 8 hours – 1 CFU

A.A. 2021 - 2022

- Electromagnetism (BsC - Geological Sciences - University of Ferrara) - 48 hours - 6 CFU
- Applied Physics (BsC - Nursery – University of Ferrara) – 8 hours – 1 CFU

- Medical Physics (Ms - Medicine and Surgery)– 12 hours – 1 CFU
- Experimental Physics (BsC - Geological Sciences - University of Ferrara) - 24 hours - 3 CFU
- Mathematics (BsC - Geological Sciences - University of Ferrara) - 24 hours - 3 CFU

A.A. 2020 - 2021
- Electromagnetism (BsC - Geological Sciences - University of Ferrara) - 48 hours - 6 CFU
- Applied Physics (BsC -Nursery – University of Ferrara) – 8 hours – 1 CFU
- Medical Physics (Ms - Medicine and Surgery)– 12 hours – 1 CFU

3 September 2020
Summer School "OLIFIS Emilia Romagna-Marche" – Argenta (FE)
Talk: "Alla scoperta della radioattività che ci circonda"

A.A. 2019 - 2020
- Electromagnetism (BsC - Geological Sciences - University of Ferrara) - 48 hours - 6 CFU
- Applied Physics (BsC -Nursery – University of Ferrara) – 12 hours – 1 CFU
- Medical Physics (Ms - Medicine and Surgery)– 12 hours – 1 CFU
- Applied Physics (Ms - Dentistry and Dental Prosthetics – University of Ferrara) – 10 hours – 1 CFU

A.A. 2018-2019
- Electromagnetism (BsC - Geological Sciences - University of Ferrara) - 48 hours - 6 CFU
- Applied Physics (BsC -Nursery – University of Ferrara) – 12 hours – 1 CFU

2-12 July 2018
Tutor at **Summer School ISAPP** "**Using Particle Physics to Understand and Image the Earth**" – University of Ferrara - Institute for Higher Studies, IUSS - Ferrara 1391 (Italy)

A.A 2017/2018
Contract. Assistant professor for the **Fisica II** course (Corso di Laurea Triennale in Scienze Geologiche – Università di Ferrara).

11-21 July 2016
Tutor. Summer School: "**Using Particle Physics to Understand and Image the Earth**" - Gran Sasso Scientific Institute - L'Aquila - Italy

26 May - 25 June 2016
Tutor. Summer School: "**Physics and Nuclear Technologies**" Physics and Earth Sciences Department - University of Ferrara - Ferrara - Italy

January 2013 – April 2016
Didactic project "**A scuola con la radioattività - Attivamente**" - Fondazione Cassa di Risparmio di Padova e Rovigo.

March 2015
Tutor: **Stage Tirocinio Scientifico**, Laboratories activity for high school student at Department of Physics and Earth Sciences, University of Ferrara.

June 2014
Tutor: **Stage ai Laboratori Nazionali di Legnaro** (INFN) for high school students - Edition 2014.
Theme: "La radioattività che ci circonda".

March 2014
Tutor: **Stage Tirocinio Scientifico**, Laboratories activity for high school student at Department of Physics and Earth Sciences, University of Ferrara.

June 2013
Tutor: **Stage ai Laboratori Nazionali di Legnaro** (INFN) for high school students - Edition 2013.
Theme: "La radioattività che ci circonda".

October 2012
Tutor for the didactic project "**La carta della radioattività del Comune di Schio**" at ITIS "De Pretto" of Schio (VI).

THESIS SUPERVISOR

A.A. 2020-2021 – Master's Degree in Geological Sciences (University of Ferrara)
Relazioni tra la tessitura dei terreni agricoli e la radioattività naturale misurata tramite rilievi aerei di spettroscopia gamma nella Valle del Mezzano (Ferrara)
Student: Filippo Semenza
Supervisor: Virginia Strati - Assistant supervisor: Costanza Bonadiman

A.A. 2019-2020 – Bachelor's Degree in Physics (University of Ferrara)
Tecniche di spettroscopia gamma e di telerilevamento di dati SAR Sentinel-1 per la stima del contenuto d'acqua del suolo in agricoltura di precisione
Student: Martina Natali
Supervisor: Fabio Mantovani - Assistant supervisor: Virginia Strati

A.A. 2017-2018 – Master's degree in Physics (University of Ferrara)
Geoneutrinos from Potassium in the Earth
Student: Andrea Serafini
Supervisor: Fabio Mantovani
Assistant supervisors: Marica Baldoncini - Virginia Strati

A.A. 2016-2017 – Bachelor's Degree in Geological Sciences (University of Ferrara)
Modellazione dei geoneutrini prodotti dalla crosta superiore nell'intorno del detector SNO+ (Canada)
Student: Sara Gizzi
Supervisor: Fabio Mantovani
Assistant supervisor: Virginia Strati

A.A. 2016-2017 – Bachelor's Degree in Geological Sciences (University of Ferrara)
Studio del contenuto di radionuclidi naturali e del calore radiogenico delle rocce del complesso plutonico Carbonifero-Permiano sardo
Student: Nicola Tescaro
Supervisor: Fabio Mantovani
Assistant supervisor: Virginia Strati

A.A. 2015-2016 – Bachelor's Degree in Physics (University of Ferrara)
Esposizione della popolazione della regione Umbria ai raggi cosmici: modelli e distribuzioni spaziali.
Student: Kassandra Giulia Cristina Raptis
Supervisor: Fabio Mantovani
Assistant supervisor: Virginia Strati