ANTONELLA STRAVATO

EDUCATION

Specialization School in Medical Physics (vote 70/70 cum laude)
Physics Department, Sapienza Università di Roma
Thesis Title: "Dosimetric and Physical properties of Helical Tomotherapy: experimental and simulation studies"

PhD in Complex Industrial Systems
Industrial & Mechanical Engineering Dept., Università degli Studi di Roma Tre
Thesis Title: Nanodiamonds in Polymer composites, Fibers and Coatings.

Master's Degree in Physics (vote 110/110)
Physics Department, Sapienza Università di Roma
Thesis title: Proteine in solventi organici: proprietà strutturali del lisozima in miscele acqua/glicol etilenico.

WORKING EXPERIENCE

Azienda Ospedaliera Complesso Ospedaliero San Giovanni – Addolorata (Roma)
since March 1st, 2020 Medical Physicist, Dep. Of Medical Physics
Humanitas Research Hospital, Dep. of Radiotherapy and Radiosurgery, Rozzano (MI)
2013-2020 Medical Physicist
ENEA-INMRI, Istituto Nazionale di Metrologia delle Radiazioni Ionizzanti (Casaccia, Roma)
2010-2013 PostDoc : "Monte Carlo simulations of detectors for the IMRT dosimetry"
Azienda Ospedaliera San Camillo Forlanini, U.O.C. Fisica Sanitaria (Roma)
2008-2009 Internship as a Medical Physicist Trainee
Sapienza Università di Roma, Dept of Chemistry and Materials Engineering
From 11-1-2008 to 2-28-2019 Research Activities
Drexel University, Department of Material Science and Engineering, Philadelphia PA, USA
2007-2008 Research Activities under supervision of Prof. Gogotsi
Sapienza Università di Roma, Dept of Physics
2002-2003 INFM(Istituto Nazionale di Fisica della Materia- National Institute of MatterPhysics)

TEACHING EXPERIENCE

Since 2020	Applied Physics Course- Nursing Course–Università la Sapienza-Roma
Since 2020	Collaboration in Trainig for emerging countries_Access to Cancer Care Project
2014-2016	Preparatory School for the Hunimed (Maths and Physics) For Medicine Humanitas University
2014	Tutor for students within the Specialization School in Medical Physics Università Statale di Milano
2010	Applied Physics Course- RT course–Università la Sapienza-Roma

SKILLS

MC codes: EGSnrc/Egs++, basic Geant4
Global Radiotherapy Experience with units from Varian (EBRT & brachytherapy), Tomotherapy, Elekta (brachytherapy &GammaKnife) with commercially available TPS, IGRT systems, tracking and QA.
Nanoscience Materials: Optical Microscopy SEM, Diffractometry X, Raman spectroscopy, Dynamic Nanoindentation, EDS analysis, Fibers and film production

INTERNATIONAL JOURNALS WITH IMPACT FACTOR

Peer-reviewedpapers:
https://pubmed.ncbi.nlm.nih.gov/?term=Stravato%2C+Antonella%5BAuthor%5D&sort=
Scopus h-index 17

Pettinato S.,Girolami M., Olivieri R., Stravato A, Caruso C,Salvatori S, *A Diamond-Based Dose-per-Pulse X-ray Detector for Radiation Therapy* Materials Sep 10;14(18):5203. doi: 10.3390/ma14185203 (2021)

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Ismail Zaed, Luca Attuati, Concezione Tommasino, Enrico Massimo Arosio, Pierina Navarria, Antonella Stravato, Giovanni Colombo, Piero Picozzi *Gamma Knife Radiosurgery for Short Unilateral Neuralgiform Headache Attacks with Conjunctival Injection and Tearing (SUNCT) Syndrome: Targeting the Trigeminal Nerve and the Sphenopalatine Ganglion. Case Report and Literature Review* World Neurosurg Jan;133:167-171. doi: 10.1016/j.wneu.2019.10.016. Epub 2019 Oct 10. (2020)

A Fogliata, L Cozzi, G Reggiori, A Stravato, F Lobefalo, C Franzese, D Franceschini, S Tomatis , M Scorsetti *RapidPlan knowledge based planning: iterative learning process and model ability to steer planning strategies* Radiat Oncol Oct 30;14(1):187. doi: 10.1186/s13014-019-1403-0. (2019)

Paganini L, Reggiori G, Stravato A, Palumbo V, Mancosu P, Lobefalo F, Gaudino A, Fogliata A, Scorsetti M, Tomatis S
MLC parameters from static fields to VMAT plans: an evaluation in a RT-dedicated MC environment (PRIMO). Radiat Oncol. Dec 2;14(1):216. doi: 10.1186/s13014-019-1421-y. (2019)

F De Rose, A Fogliata, D Franceschini, S Cozzi, C Iftode, A Stravato, S Tomatis, G Masci, R Torrisi, A Testori, C Tinterri, A V E Lisa, L Maione, V Vinci, M Klinger, A Santoro, M Scorsetti
Postmastectomy radiation therapy using VMAT technique for breast cancer patients with expander reconstruction Med Oncol Apr 25;36(6):48. doi: 10.1007/s12032-019-1275-z. (2019)

L Cozzi, T Comito, A Fogliata, C Franzese, D Franceschini, C Bonifacio, A Tozzi, L Di Brina, E Clerici, S Tomatis, G Reggiori, F Lobefalo, A Stravato, P Mancosu, A Zerbi, M Sollini, M Kirienko, A Chiti, M Scorsetti *Computed tomography based radiomic signature as predictive of survival and local control after stereotactic body radiation therapy in pancreatic carcinoma* PLoS One Jan 18;14(1):e0210758. doi: 10.1371/journal.pone.0210758. (2019)

Fogliata A, Stravato A, Reggiori G, Tomatis S, Würfel J, Scorsetti M, Cozzi L. *Collimator scatter factor: Monte Carlo and in-air measurements approaches.* Radiat Oncol. Jul 11;13(1):126. doi: 10.1186/s13014-018-1070-6. (2018)

G Reggiori, A Stravato, P Mancosu, F Lobefalo, L Paganini, F Zucconi, V Palumbo, A Gaudino, M Scorsetti, S Tomatis
Small field characterization of a Nanochamber prototype under flattening filter free photon beams Phys Med. May;49:139-146. doi: 10.1016/j.ejmp.2017.08.007. (2018)

A Fogliata, S Thompson , A Stravato, S Tomatis, M Scorsetti, L Cozzi *On the gEUD biological optimization objective for organs at risk in Photon Optimizer of Eclipse treatment planning system*
J Appl Clin Med Phys Jan;19(1):106-114. doi: 10.1002/acm2.12224. Epub 2017 Nov 20. (2018)

A Fogliata, F De Rose A Stravato, G Reggiori , S Tomatis , M Scorsetti , L Cozzi
Evaluation of target dose inhomogeneity in breast cancer treatment due to tissue elemental differences
Radiat Oncol May 15;13(1):92. doi: 10.1186/s13014-018-1022-1.(2018)

A Fogliata, F De Rose, D Franceschini, A Stravato J Seppälä , M Scorsetti , L Cozzi *Critical Appraisal of the Risk of Secondary Cancer Induction From Breast Radiation Therapy With Volumetric Modulated Arc Therapy Relative to 3D Conformal Therapy*
Int J Radiat Oncol Biol Phys Mar 1;100(3):785-793. doi: 10.1016/j.ijrobp.2017.10.040 (2018)

G. Reggiori, A. Stravato, M.Pimpinella, F. Lobefalo,. V, De Coste, A.Fogliata, P.Mancosu, F.De Rose, V.Palumbo, M. Scorsetti, S.Tomatis *Use ot PTW-MicroDiamond for relative dosimetry of unflattened photon beams* accepted to Physica Medica (2017)

A. Fogliata, G. Reggiori, A. Stravato, F. Lobefalo, C. Franzese, D. Franceschini, S. Tomatis, P. Mancosu, M. Scorsetti and L. Cozzi *RapidPlan head and neck model: the objectives and possible clinical benefit* Radiation Oncology DOI 10.1186/s13014-017-0808 (2017)

F. De Rose, D. Franceschini, G. Reggiori, A. Stravato, P. Navarria, A.M. Ascolese, S. Tomatis, P. Mancosu, M. Scorsetti *Organs at risks in lung SBRT* Physica Medica http://dx.doi.org/10.1016/j.ejmp.2017.04.010 (2017)

Fogliata, A., Lobefalo, F., Reggiori, G., Stravato, A., Tomatis, S., Scorsetti, M., Cozzi, L. *Evaluation of the dose calculation accuracy for small fields defined by jaw or MLC for AAA and Acuros XB algorithms* Medical Physics, 43 (10), pp. 5685-5694 (2016)

Navarria, P., Pessina, F., Cozzi, L., Ascolese, A.M., Lobefalo, F., Stravato, A., D'Agostino, G., Franzese, C., Caroli, M., Bello, L., Scorsetti, M. *Can advanced new radiation therapy technologies improve outcome of high grade glioma (HGG) patients? Analysis of 3D-conformal radiotherapy (3DCRT) versus volumetric-modulated arc therapy (VMAT) in patients treated with surgery, concomitant and adjuvant chemo-radiotherapy* BMC Cancer, 16 (1), art. no. 362 (2016)

Mancosu, P., Fogliata, A., Stravato, A., Tomatis, S., Cozzi, L., Scorsetti, M. *Accuracy evaluation of the optical surface monitoring system on EDGE linear accelerator in a phantom study* Medical Dosimetry, 41 (2), pp. 173-179 (2016)

Reggiori, G., Mancosu, P., Suchowerska, N., Lobefalo, F., Stravato, A., Tomatis, S., Scorsetti, M. *Characterization of a new unshielded diode for small field dosimetry under flattening filter free beams* Physica Medica, 32 (2), pp. 408-413 (2016)

Fogliata, A., Fleckenstein, J., Schneider, F., Pachoud, M., Ghandour, S., Krauss, H., Reggiori, G., Stravato, A., Lohr, F., Scorsetti, M., Cozzi, L. *Flattening filter free beams from TrueBeam and Versa HD units: Evaluation of the parameters for quality assurance* Medical Physics, 43 (1), pp. 205-212 (2016)

Mancosu, P., Navarria, P., Castagna, L., Reggiori, G., Stravato, A., Gaudino, A., Sarina, B., Tomatis, S., Scorsetti, M. *Plan robustness in field junction region from arcs with different patient orientation in total marrow irradiation with VMAT* Physica Medica, 31 (7), pp. 677-682 (2015)

Mancosu, P., Reggiori, G., Stravato, A., Gaudino, A., Lobefalo, F., Palumbo, V., Navarria, P., Ascolese, A., Picozzi, P., Marinelli, M., Verona-Rinati, G., Tomatis, S., Scorsetti, M. *Evaluation of a synthetic single-crystal diamond detector for relative dosimetry on the Leksell Gamma Knife Perfexion radiosurgery system* Medical Physics, 42 (9), pp. 5035-5041 (2015)

Mancosu, P., Navarria, P., Reggiori, G., Cozzi, L., Fogliata, A., Gaudino, A., Lobefalo, F., Paganini, L., Palumbo, V., Sarina, B., Stravato, A., Castagna, L., Tomatis, S., Scorsetti, M. *In-vivo dosimetry with Gafchromic films for multi-isocentric VMAT irradiation of total marrow lymph-nodes: A feasibility study* Radiation Oncology, 10 (1), art. no. 86 (2015)

Mancosu, P., Reggiori, G., Gaudino, A., Lobefalo, F., Paganini, L., Palumbo, V., Stravato, A., Tomatis, S., Scorsetti, M. *Are pitch and roll compensations required in all pathologies? A data analysis of 2945 fractions* British Journal of Radiology, 88 (1055) (2015)

Pimpinella, M., Caporali, C., Stravato, A., Guerra, A.S., D'Arienzo, M. *Monte Carlo calculation of correction factors for dosimetry in radiotherapy using the correlated sampling method* Romanian Reports in Physics, 66 (1), pp. 109-119 (2014)

Mancosu, P., Reggiori, G., Alongi, F., Cozzi, L., Fogliata, A., Lobefalo, F., Navarria, P., Stravato, A., Tomatis, S., Scorsetti, M. *Total monitor units influence on plan quality parameters in volumetric modulated arc therapy for breast case* Physica Medica, 30 (3), pp. 296-300 (2014)

M. Pimpinella, I. Ciancaglioni, R. Consorti, C. Di Venanzio, A. S. Guerra, A. Petrucci, A. Stravato, G. Verona-Rinati *A synthetic diamond detector as transfer dosimeter for D_w measurements in photon beams with small field sizes* Metrologia 49 S207-S202 (2012)

M. Pimpinella, Anton M., Rouijaa M., Stravato A. *Comparison of D_w measurements by alanine and synthetic diamond dosimeters in photon beams with 1 cm x 1 cm field size* Metrologia 49 S211-S214 (2012)

K. Behler, A. Stravato, V. Mochalin, G. Yushin, G. Korneva and Y. Gogotsi *Nanodiamond-Polymer Composite Fibers and Coatings*, *ACS Nano*, Vol.*3*, No.2, pp 363–369 (2009)

Stravato, A., Knight, R., Mochalin, V., Picardi, S.C. *HVOF-sprayed nylon-11 + nanodiamond composite coatings: Production & characterization* Journal of Thermal Spray Technology, 17 (5-6), pp. 812-817 (2008)

Bonincontro, A., Cinelli, S., Onori, G., Stravato, A. *Dielectric Behavior of Lysozyme and Ferricytochrome-c in Water/Ethylene-Glycol Solutions* Biophysical Journal, 86 (2), pp. 1118-1123 (2004)

PATENT

US Patent 12/478,051. Titolo: Nanodiamond Manufacture and Process for making thereof.
Inventori: R. Knight, A. Stravato, D. Doss, C.Picardi

LANGUAGES

English (professional), Italian (Mothertongue)

ANTONELLA STRAVATO **Rome, November 11th, 2023**