Stanford



Dimitre Hristov

Associate Professor of Radiation Oncology (Radiation Physics), Emeritus

Radiation Oncology - Radiation Physics

NIH Biosketch available Online

CONTACT INFORMATION

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Bio

BIO

I am an Associate Professor of Radiation Oncology with the Medical Center Line at the Stanford University School of Medicine and a medical physicist certified by the Canadian College of Physicists in Medicine. The main focus of my research effort is the the development of novel imaging and image-guidance techniques for cancer related investigations and interventions. As a Medical Physics Faculty at McGill University, I conducted research on free-hand 3D ultrasound-image guidance for radiotherapy simulation and pre-treatment verification. This research resulted in technology licensed and commercialized by Resonant Medical Incorporated, Montreal, CA (currently marketed by Elekta Ltd). Later on as a Senior Physicist with the System Concepts and Innovation team at Siemens Oncology, I contributed to the development of Megavoltage Cone-Beam CT which became a commercial product. At Stanford, I have initiated and led a project on 2D/3D angiography guidance for frameless stereotactic radiosurgery of arteriovenous malformations. This project resulted in clinically used simulation and planning system. I also led a multi-disciplinary research effort (robotics, computer science and medical physics) in collaboration with Philips Ultrasound Investigations on tele-robotic 3D ultrasound for real-time soft tissue guidance concurrent with radiation beam delivery. The expertise and technology that we have developed for 4D ultrasound imaging and analysis have been instrumental in enabling the data acquisition and analysis for an ongoing NIH-R01 funded patient study and other 4D CEUS studies currently ongoing at Stanford.

ACADEMIC APPOINTMENTS

- Professor Emeritus-Hourly(UML), Radiation Oncology - Radiation Physics
- Member, Bio-X
- Member, Stanford Cancer Institute

HONORS AND AWARDS

- Member, Canadian College of Physicists in Medicine (CCPM) (2000)

PROFESSIONAL EDUCATION

- M.Sc., Bulgarian National University , Physics (1992)
- PhD, McGill University , Medical Physics (1998)

PATENTS

- Schlosser, Hristov, Salisbury. "United States Patent 10,232,194 Manipulation of imaging probe during medical procedure", Leland Stanford Junior University, Mar 19, 2019
- Maltz and Hristov. "United States Patent 7,697,662 Online verification of radiation field, collimator position and/or leakage", Siemens Medical Solution, Apr 13, 2010
- Falco, Hristov. "United States Patent 7,634,304 Method and apparatus for lesion localization, definition and verification", McGill University, Dec 9, 2009
- Hristov, Gangadharan. "United States Patent 7,551,759 Target identification using time-based data sets", Siemens Medical Solutions, Jun 23, 2009
- Hristov. "United States Patent 7,388,976 Time-based system to link periodic X-ray images", Siemens Medical Solutions, Jun 17, 2008
- Hristov. "United States Patent 7,366,336 System to link periodic X-ray images", Siemens Medical Solutions, Apr 29, 2008

LINKS

- Imaging Systems for Radiotherapeutics Group: http://hristovlab.stanford.edu/

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Development and integration of X-ray, MRI and US imaging technologies for radiation therapy guidance; Design of synergistic approaches to radiation therapy delivery; Treatment planning optimization and modeling.

CLINICAL TRIALS

- Pilot 3D Contrast-Enhanced Ultrasound Imaging to Predict Treatment Response in Liver Metastases, Not Recruiting

Teaching

COURSES

2024-25

- Medical Physics and Dosimetry: BMP 251, RADO 251 (Aut)
- Physics of Radiation Therapy: BMP 252, RADO 252 (Win)

2023-24

- Medical Physics and Dosimetry: BMP 251, RADO 251 (Aut)
- Physics of Radiation Therapy: BMP 252, RADO 252 (Win)

Publications

PUBLICATIONS

- **AI-Based Registration-Free 3T T2-Weighted MRI Synthesis Using Truefisp MRI Acquired on a 0.35T MR-Linac System**
  Gao, Y., Skinner, L., Hristov, D., Chuang, C. Y., Liu, L., Bagshaw, H. P., Buyyounouski, M. K., Xing, L.
  WILEY.2025
- **Large Scale Breast Subset Analysis of Practice Patterns Emerging from an Automated Real-Time Evaluation of a Commercial Artificial Intelligence Auto-Contouring Solution**
  Dubrowski, P., Prashad, R., Kim, M. J., Yang, Y., Hristov, D. H.
  ELSEVIER SCIENCE INC.2025
- **Preclinical Water-Mediated Ultrasound Platform Using Clinical Field of View for Molecular Targeted Contrast-Enhanced Ultrasound.** *Diagnostics (Basel, Switzerland)*
  Melemenidis, S., Kim, A. S., Vo-Phamhi, J. M., Graves, E. E., El Kaffas, A. N., Hristov, D.
  2025; 15 (17)

- **Modeling focused kV X-ray dose kernels via 3D implicit neural functions for small animal brain radiation** *BIOMEDICAL SIGNAL PROCESSING AND CONTROL*
  Sun, L., Qiu, C., Sun, W., Xing, L., Hristov, D., Wang, A. S., Liu, W.
  2025; 107
- **Parametric response mapping of co-registered intravoxel incoherent motion magnetic resonance imaging and positron emission tomography in locally advanced cervical cancer undergoing concurrent chemoradiation therapy.** *Physics and imaging in radiation oncology*
  Capaldi, D. P., Wang, J. Y., Liu, L., Sheth, V. R., Kidd, E. A., Hristov, D. H.
  2024; 31: 100630
- **Motion correction of 3D dynamic contrast-enhanced ultrasound imaging without anatomical B-Mode images: Pilot evaluation in eight patients.** *Medical physics*
  Chen, J. S., Goubran, M., Kim, G., Kim, M. J., Willmann, J. K., Zeineh, M., Hristov, D., Kaffas, A. E.
  2024
- **Parametric Response Mapping of Co-Registered Ivim MRI and PET to Identify Radioresistant Sub-Volumes in Locally Advanced Cervical Carcinoma Undergoing CCRT.** *International journal of radiation oncology, biology, physics*
  Capaldi, D. P., Wang, J. Y., Liu, L., Sheth, V., Kidd, E. A., Hristov, D. H.
  2023; 117 (2S): e648
- **Charachterization of spatially mapped volumetric molecular ultrasound signals for predicting response to anti-vascular therapy.** *Scientific reports*
  Keller, C. A., Zarkesh, S., Zhou, J., Lutz, A. M., Hristov, D., Kamaya, A., El Kaffas, A.
  2023; 13 (1): 1686
- **Dynamic Contrast-Enhanced Ultrasound Modeling of an Analog to Pseudo-Diffusivity in Intravoxel Incoherent Motion Magnetic Resonance Imaging** *IEEE TRANSACTIONS ON MEDICAL IMAGING*
  Hristov, D., Mustonen, L., von Eyben, R., Gotschel, S., Minion, M., El Kaffas, A.
  2022; 41 (12): 3824-3834
- **Intravoxel Incoherent Motion MRI and PET in Locally Advanced Cervical Carcinoma Undergoing Concurrent Chemoradiation Therapy**
  Capaldi, D. I., Wang, J. Y., Sheth, V., Kidd, E. A., Hristov, D. H.
  ELSEVIER SCIENCE INC.2022: S115
- **Dose Prediction for Cervical Cancer Brachytherapy Using 3-D Deep Convolutional Neural Network** *IEEE TRANSACTIONS ON RADIATION AND PLASMA MEDICAL SCIENCES*
  Ma, M., Kidd, E., Fahimian, B. P., Han, B., Niedermayr, T. R., Hristov, D., Xing, L., Yang, Y.
  2022; 6 (2): 214-221
- **Evaluating dosimetric parameters predictive of hematologic toxicity in cervical cancer patients undergoing definitive pelvic chemoradiotherapy.** *Strahlentherapie und Onkologie : Organ der Deutschen Rontgengesellschaft ... [et al]*
  Rahimy, E., von Eyben, R., Lewis, J., Hristov, D., Kidd, E.
  1800
- **Human-level comparable control volume mapping with a deep unsupervised-learning model for image-guided radiation therapy.** *Computers in biology and medicine*
  Liang, X., Bassenne, M., Hristov, D. H., Islam, M. T., Zhao, W., Jia, M., Zhang, Z., Gensheimer, M., Beadle, B., Le, Q., Xing, L.
  1800; 141: 105139
- **Technical Note: Extended field-of-view (FOV) MRI distortion determination through multi-positional phantom imaging.** *Journal of applied clinical medical physics*
  Schuler, E., Mallozzi, R., Levy, J., Hristov, D.
  2020
- **Increased local tumor control through nanoparticle-mediated, radiation-triggered release of nitrite, an important precursor for reactive nitrogen species.** *Physics in medicine and biology*
  Kim, A. S., Melemenidis, S., Gustavsson, A. K., Abid, D., Wu, Y., Liu, F., Hristov, D., Schuler, E.
  2020
- **Parametric Response Mapping of Co-registered Positron Emission Tomography and Dynamic Contrast Enhanced Computed Tomography to Identify Radio-resistant Sub-volumes in Locally Advanced Cervical Cancer.** *International journal of radiation oncology, biology, physics*

Capaldi, D. P., Hristov, D. H., Kidd, E. A.
2020

- **Spatial Characterization of Tumor Perfusion Properties from 3D DCE-US Perfusion Maps are Early Predictors of Cancer Treatment Response.** *Scientific reports*
  El Kaffas, A. n., Hoogi, A. n., Zhou, J. n., Durot, I. n., Wang, H. n., Rosenberg, J. n., Tseng, A. n., Sagreiya, H. n., Akhbardeh, A. n., Rubin, D. L., Kamaya, A. n., Hristov, D. n., Willmann, et al
  2020; 10 (1): 6996

- **Feasibility of Image Registration for Ultrasound-Guided Prostate Radiotherapy Based on Similarity Measurement by a Convolutional Neural Network.** *Technology in cancer research & treatment*
  Zhu, N., Najafi, M., Han, B., Hancock, S., Hristov, D.
  2019; 18: 1533033818821964

- **Evaluation of transperineal ultrasound imaging as a potential solution for target tracking during hypofractionated radiotherapy for prostate cancer.** *Radiation oncology (London, England)*
  Han, B., Najafi, M., Cooper, D. T., Lachaine, M., von Eyben, R., Hancock, S., Hristov, D.
  2018; 13 (1): 151

- **Pilot study of combined FDG-PET and dynamic contrast-enhanced CT of locally advanced cervical carcinoma before and during concurrent chemoradiotherapy suggests association between changes in tumor blood volume and treatment response.** *Cancer medicine*
  Banks, T. I., von Eyben, R., Hristov, D., Kidd, E. A.
  2018

- **Early prediction of tumor response to bevacizumab treatment in murine colon cancer models using three-dimensional dynamic contrast-enhanced ultrasound imaging** *ANGIOGENESIS*
  Zhou, J., Zhang, H., Wang, H., Lutz, A. M., El Kaffas, A., Tian, L., Hristov, D., Willmann, J. K.
  2017; 20 (4): 547–55

- **X-Ray responsive nanoparticles with triggered release of nitrite, a precursor of reactive nitrogen species, for enhanced cancer radiosensitization** *NANOSCALE*
  Liu, F., Lou, J., Hristov, D.
  2017; 9 (38): 14627–34

- **Molecular Contrast-Enhanced Ultrasound Imaging of Radiation-Induced P-Selectin Expression in Healthy Mice Colon.** *International journal of radiation oncology, biology, physics*
  El Kaffas, A., Smith, K., Pradhan, P., Machtaler, S., Wang, H., von Eyben, R., Willmann, J. K., Hristov, D.
  2017; 97 (3): 581-585

- **Intra-Animal Comparison between Three-dimensional Molecularly Targeted US and Three-dimensional Dynamic Contrast-enhanced US for Early Antiangiogenic Treatment Assessment in Colon Cancer.** *Radiology*
  Wang, H., Lutz, A. M., Hristov, D., Tian, L., Willmann, J. K.
  2017; 282 (2): 443-452

- **Intrafractional Tracking Accuracy of a Transperineal Ultrasound Image Guidance System for Prostate Radiotherapy** *Technology in Cancer Research & Treatment*
  Yu, A. S., Najafi, M., Hristov, D. H., Phillips, T.
  2017; 16 (6): 1067-1078

- **Quantitative Three-Dimensional Dynamic Contrast-Enhanced Ultrasound Imaging: First-In-Human Pilot Study in Patients with Liver Metastases** *THERANOSTICS*
  El Kaffas, A., Sigrist, R., Fisher, G., Bachawal, S., Liau, J., Wang, H., Karanany, A., Durot, I., Rosenberg, J., Hristov, D., Willmann, J. K.
  2017; 7 (15): 3745–58

- **Robotic intrafractional US guidance for liver SABR: System design, beam avoidance, and clinical imaging.** *Medical physics*
  Schlosser, J., Gong, R. H., Bruder, R., Schweikard, A., Jang, S., Henrie, J., Kamaya, A., Koong, A., Chang, D. T., Hristov, D.
  2016; 43 (11): 5951-?

- **Radiolucent 4D Ultrasound Imaging: System Design and Application to Radiotherapy Guidance** *IEEE TRANSACTIONS ON MEDICAL IMAGING*
  Schlosser, J., Hristov, D.

2016; 35 (10): 2292-2300

- **VEGFR2-Targeted Three-Dimensional Ultrasound Imaging Can Predict Responses to Antiangiogenic Therapy in Preclinical Models of Colon Cancer.** *Cancer research*
  Zhou, J., Wang, H., Zhang, H., Lutz, A. M., Tian, L., Hristov, D., Willmann, J. K.
  2016; 76 (14): 4081-4089
- **Three-dimensional Dynamic Contrast-enhanced US Imaging for Early Antiangiogenic Treatment Assessment in a Mouse Colon Cancer Model** *RADIOLOGY*
  Wang, H., Hristov, D., Qin, J., Tian, L., Willmann, J. K.
  2015; 277 (2): 424-434
- **Three-dimensional Dynamic Contrast-enhanced US Imaging for Early Antiangiogenic Treatment Assessment in a Mouse Colon Cancer Model.** *Radiology*
  Wang, H., Hristov, D., Qin, J., Tian, L., Willmann, J. K.
  2015; 277 (2): 424-34
- **Monte Carlo modeling of ultrasound probes for image guided radiotherapy.** *Medical physics*
  Bazalova-Carter, M., Schlosser, J., Chen, J., Hristov, D.
  2015; 42 (10): 5745-?
- **Trajectory Modulated Arc Therapy: A Fully Dynamic Delivery With Synchronized Couch and Gantry Motion Significantly Improves Dosimetric Indices Correlated With Poor Cosmesis in Accelerated Partial Breast Irradiation** *INTERNATIONAL JOURNAL OF RADIATION ONCOLOGY BIOLOGY PHYSICS*
  Liang, J., Atwood, T., von Eyben, R., Fahimian, B., Chin, E., Horst, K., Otto, K., Hristov, D.
  2015; 92 (5): 1148-1156
- **Ultrasound Imaging in Radiation Therapy: From Interfractional to Intrafractional Guidance.** *Cureus*
  Western, C., Hristov, D., Schlosser, J.
  2015; 7 (6)
- **Three-dimensional ultrasound molecular imaging of angiogenesis in colon cancer using a clinical matrix array ultrasound transducer.** *Investigative radiology*
  Wang, H., Kaneko, O. F., Tian, L., Hristov, D., Willmann, J. K.
  2015; 50 (5): 322-329
- **Clinical evaluation of the iterative metal artifact reduction algorithm for CT simulation in radiotherapy.** *Medical physics*
  Axente, M., Paidi, A., von Eyben, R., Zeng, C., Bani-Hashemi, A., Krauss, A., Hristov, D.
  2015; 42 (3): 1170-?
- **Quality control procedures for dynamic treatment delivery techniques involving couch motion** *MEDICAL PHYSICS*
  Yu, V. Y., Fahinnian, B. R., Xing, L., Hristov, D. H.
  2014; 41 (8): 164-170
- **Imaging dose in variable pitch body perfusion CT scans: An analysis using TG111 formalism.** *Medical physics*
  Axente, M., Hristov, D.
  2014; 41 (6): 061912-?
- **Interactive focus plus context medical data exploration and editing** *COMPUTER ANIMATION AND VIRTUAL WORLDS*
  Kirmizibayrak, C., Wakid, M., Yim, Y., Hristov, D., Hahn, J. K.
  2014; 25 (2): 129-141
- **Trajectory modulated prone breast irradiation: A LINAC-based technique combining intensity modulated delivery and motion of the couch** *RADIOTHERAPY AND ONCOLOGY*
  Fahimian, B., Yu, V., Horst, K., Xing, L., Hristov, D.
  2013; 109 (3): 475-481
- **Automatic 3D ultrasound calibration for image guided therapy using intramodality image registration.** *Physics in medicine and biology*
  Schlosser, J., Kirmizibayrak, C., Shamdasani, V., Metz, S., Hristov, D.
  2013; 58 (21): 7481-7496

- **Count-Based Listmode Respiratory Motion Detection for Quantitative PET** *60th IEEE Nuclear Science Symposium (NSS) / Medical Imaging Conference (MIC) / 20th International Workshop on Room-Temperature Semiconductor X-ray and Gamma-ray Detectors*
  Lee, K. S., Hristov, D. H.
  IEEE.2013

- **Tumor Volume-Adapted Dosing in Stereotactic Ablative Radiotherapy of Lung Tumors** *INTERNATIONAL JOURNAL OF RADIATION ONCOLOGY BIOLOGY PHYSICS*
  Trakul, N., Chang, C. N., Harris, J., Chapman, C., Rao, A., Shen, J., Quinlan-Davidson, S., Filion, E. J., Wakelee, H. A., Colevas, A. D., Whyte, R. I., Dieterich, S., Maxim, et al
  2012; 84 (1): 231-237

- **Online Image-based Monitoring of Soft-tissue Displacements for Radiation Therapy of the Prostate** *INTERNATIONAL JOURNAL OF RADIATION ONCOLOGY BIOLOGY PHYSICS*
  Schlosser, J., Salisbury, K., Hristov, D.
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- **SU-D-213CD-01: 4D Ultrasound Calibration for Radiotherapy Guidance Using Automatic Intramodality Image Registration.** *Medical physics*
  Schlosser, J., Kirmizibayrak, C., Shamdasani, V., Metz, S., Hristov, D.
  2012; 39 (6): 3617-?

- **Feasibility of low-dose single-view 3D fiducial tracking concurrent with external beam delivery** *MEDICAL PHYSICS*
  Speidel, M. A., Wilfley, B. P., Hsu, A., Hristov, D.
  2012; 39 (4): 2163-2169

- **Evaluation of a metal artifact reduction technique in tonsillar cancer delineation.** *Practical radiation oncology*
  Abelson, J. A., Murphy, J. D., Wiegner, E. A., Abelson, D., Sandman, D. N., Boas, F. E., Hristov, D., Fleischmann, D., Daly, M. E., Chang, D. T., Loo, B. W., Hara, W., Le, et al
  2012; 2 (1): 27-34

- **Multiparametric Imaging of Tumor Oxygenation, Redox Status, and Anatomical Structure Using Overhauser-Enhanced MRI-Prepolarized MRI System** *MAGNETIC RESONANCE IN MEDICINE*
  Ahn, K., Scott, G., Stang, P., Conolly, S., Hristov, D.
  2011; 65 (5): 1416-1422

- **TECHNIQUE FOR TARGETING ARTERIOVENOUS MALFORMATIONS USING FRAMELESS IMAGE-GUIDED ROBOTIC RADIOSURGERY** *INTERNATIONAL JOURNAL OF RADIATION ONCOLOGY BIOLOGY PHYSICS*
  Hristov, D., Liu, L., Adler, J. R., Gibbs, I. C., Moore, T., Sarmiento, M., Chang, S. D., Dodd, R., Marks, M., Do, H. M.
  2011; 79 (4): 1232-1240

- **Telerobotic system concept for real-time soft-tissue imaging during radiotherapy beam delivery** *MEDICAL PHYSICS*
  Schlosser, J., Salisbury, K., Hristov, D.
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- **Frameless image guided robotic radiosurgery of arteriovenous malformation localized on spatially correlated digital subtraction and C-arm CT angiography images** *JOURNAL OF NEUROINTERVENTIONAL SURGERY*
  Hristov, D., Adler, J. R., Gibbs, I. C., Dodd, R., Marks, M., Chang, S. D., Do, H. M.
  2010; 2 (3): 252-254

- **MRI GUIDANCE FOR ACCELERATED PARTIAL BREAST IRRADIATION IN PRONE POSITION: IMAGING PROTOCOL DESIGN AND EVALUATION** *50th Annual Meeting of the American-Society-for-Therapeutic-Radiology-and-Oncology (ASTRO)*
  Ahn, K., Hargreaves, B. A., Alley, M. T., Horst, K. C., Luxton, G., Daniel, B. L., Hristov, D.
  ELSEVIER SCIENCE INC.2009: 285–93

- **Algorithm for X-ray Scatter, Beam-Hardening, and Beam Profile Correction in Diagnostic (Kilovoltage) and Treatment (Megavoltage) Cone Beam CT** *IEEE TRANSACTIONS ON MEDICAL IMAGING*
  Maltz, J. S., Gangadharan, B., Bose, S., Hristov, D. H., Faddegon, B. A., Paidi, A., Bani-Hashemi, A. R.
  2008; 27 (12): 1791-1810

- **A calculation model for primary intensity distributions from cylindrically symmetric x-ray lenses** *PHYSICS IN MEDICINE AND BIOLOGY*
  Hristov, D., Maltz, J.
  2008; 53 (3): 515-527

- **Design of magnetic resonance imaging protocol for accelerated partial breast irradiation in prone position and estimation of treatment margin** *50th Annual Meeting of the American-Society-for-Therapeutic-Radiology-and-Oncology (ASTRO)*
  Ahn, K., Hargreaves, B. A., Alley, M. T., Horst, K. C., Daniel, B. L., Hristov, D.
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- **Adapting radiotherapy to hypoxic tumours** *PHYSICS IN MEDICINE AND BIOLOGY*
  Malinen, E., Sovik, A., Hristov, D., Bruland, O. S., Olsen, D. R.
  2006; 51 (19): 4903-4921

- **A multi-platform approach to image guided radiation therapy (IGRT)** *MEDICAL DOSIMETRY*
  Amies, C., Bani-Hashemi, A., Celi, J. C., Grousset, G., Ghelmansarai, F., Hristov, D., Lane, D., Mitschke, M., Singh, A., Shukla, H., Stein, J., Wofford, M.
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- **Dosimetric and microdosimetric study of contrast-enhanced radiotherapy with kilovolt x-rays** *PHYSICS IN MEDICINE AND BIOLOGY*
  Verhaegen, F., Reniers, B., Deblois, F. O., Devic, S., Seuntjens, J., Hristov, D.
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- **Monte Carlo based modulated electron beam treatment planning using a few-leaf electron collimator - feasibility study** *International Workshop on Current Topics in Monte Carlo Treatment Planning*
  Al-Yahya, K., Hristov, D., Verhaegen, F., Seuntjens, J.
  IOP PUBLISHING LTD.2005: 847–57

- **Low-dose megavoltage cone-beam CT for radiation therapy** *INTERNATIONAL JOURNAL OF RADIATION ONCOLOGY BIOLOGY PHYSICS*
  Pouliot, J., Bani-Hashemi, A., Chen, J., Svatos, M., Ghelmansarai, F., Mitschke, M., Aubin, M., Xia, P., Morin, O., Bucci, K., Roach, M., Hernandez, P., Zheng, et al
  2005; 61 (2): 552-560

- **Cone beam X-ray scatter removal via image frequency modulation and filtering** *27th Annual International Conference of the IEEE-Engineering-in-Medicine-and-Biology-Society*
  Maltz, J. S., Blanz, W., Hristov, D., Bani-Hashemi, A.
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- **Inverse treatment planning by physically constrained minimization of a biological objective function** *MEDICAL PHYSICS*
  Stavrev, P., Hristov, D., Warkentin, B., Sham, E., Stavreva, N., Fallone, B. G.
  2003; 30 (11): 2948-2958

- **On the selection of optimization parameters for an inverse treatment planning replacement of a forward planning technique for prostate cancer.** *Journal of applied clinical medical physics*
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- **On the implementation of dose-volume objectives in gradient algorithms for inverse treatment planning** *MEDICAL PHYSICS*
  Hristov, D., Stavrev, P., Sham, E., Fallone, B. G.
  2002; 29 (5): 848-856

- **On the consistent use of organ definitions and radiobiological models for the evaluation of complication probabilities of "tubular" organs** *INTERNATIONAL JOURNAL OF RADIATION ONCOLOGY BIOLOGY PHYSICS*
  Stavrev, P. V., Hristov, D. H., Seuntjens, J. P.
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- **Intensity modulated radiation therapy for thyroid malignancies** *22nd Annual International Conference of the IEEE-Engineering-in-Medicine-and-Biology-Society*
  Parker, W., Hristov, D., Moftah, B. A., Vuong, T., Tsien, C., Podgorsak, E. B.
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- **Three-dimensional anatomy setup verification by correlation of orthogonal portal images and digitally reconstructed radiographs** *MEDICAL PHYSICS*
  Sirois, L. M., Hristov, D. H., Fallone, B. G.
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- **A continuous penalty function method for inverse treatment planning** *MEDICAL PHYSICS*
  Hristov, D. H., Fallone, B. G.
  1998; 25 (2): 208-223
- **An active set algorithm for treatment planning optimization** *MEDICAL PHYSICS*
  Hristov, D. H., Fallone, B. G.
  1997; 24 (9): 1455-1464
- **A grey-level image alignment algorithm for registration of portal images and digitally reconstructed radiographs** *MEDICAL PHYSICS*
  Hristov, D. H., Fallone, B. G.
  1996; 23 (1): 75-84