



Dante Pietro Isidoro Capaldi

Postdoctoral Research Fellow, Radiation Physics

Bio

BIO

Dante Capaldi, PhD, simultaneously completed both PhD and MClSc degrees in Medical Biophysics at the University of Western Ontario, Canada, in 2018. His PhD research, funded by the Natural Sciences and Engineering Research Council of Canada, focused on the development and application of novel image acquisition and analysis methods to measure pulmonary ventilation in patients with lung disease.

Dante joined the Stanford University Medical Physics Residency in 2018.

STANFORD ADVISORS

- Lei Xing, Postdoctoral Faculty Sponsor
- Dimitre Hristov, Postdoctoral Research Mentor

Publications

PUBLICATIONS

- **Chronic Obstructive Pulmonary Disease: Thoracic CT Texture Analysis and Machine Learning to Predict Pulmonary Ventilation.** *Radiology*
Westcott, A., Capaldi, D. P., McCormack, D. G., Ward, A. D., Fenster, A., Parraga, G.
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- **Incorporating prior knowledge via volumetric deep residual network to optimize the reconstruction of sparsely sampled MRI.** *Magnetic resonance imaging*
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2019
- **CT and Functional MRI to Evaluate Airway Mucus in Severe Asthma.** *Chest*
Svenningsen, S., Haider, E., Boylan, C., Mukherjee, M., Eddy, R. L., Capaldi, D. P., Parraga, G., Nair, P.
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- **Development and Evaluation of Pulmonary Imaging Multi-Parametric Response Maps for Deep Phenotyping of Chronic Obstructive Pulmonary Disease**
MacNeil, J. L., Capaldi, D. P., Eddy, R. L., Westcott, A., Matheson, A. M., Barker, A. L., Ong-Ly, C., McCormack, D. G., Parraga, G., Gimi, B., Krol, A.
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- **Fourier decomposition free-breathing H-1 MRI perfusion maps in asthma**
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- **Texture Analysis of Thoracic CT to Predict Hyperpolarized Gas MRI Lung Function**
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- **Hyperpolarized 3 He MRI ventilatory apparent diffusion coefficient of alpha-1 antitrypsin deficiency.** *Journal of magnetic resonance imaging : JMRI*
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- **Development of a pulmonary imaging biomarker pipeline for phenotyping of chronic lung disease.** *Journal of medical imaging (Bellingham, Wash.)*
Guo, F., Capaldi, D., Kirby, M., Sheikh, K., Svenningsen, S., McCormack, D. G., Fenster, A., Parraga, G.
2018; 5 (2): 026002
- **Free-breathing Pulmonary MR Imaging to Quantify Regional Ventilation.** *Radiology*
Capaldi, D. P., Eddy, R. L., Svenningsen, S., Guo, F., Baxter, J. S., McLeod, A. J., Nair, P., McCormack, D. G., Parraga, G.
2018; 287 (2): 693–704
- **On the Potential Role of MRI Biomarkers of COPD to Guide Bronchoscopic Lung Volume Reduction.** *Academic radiology*
Adams, C. J., Capaldi, D. P., Di Cesare, R., McCormack, D. G., Parraga, G.
2018; 25 (2): 159–68
- **Through the Looking Glass and What Was Found There: Imaging Biomarkers of Chronic Obstructive Pulmonary Disease.** *American journal of respiratory and critical care medicine*
Capaldi, D. P., Parraga, G.
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- **Free-breathing Functional Pulmonary MRI: Response to Bronchodilator and Bronchoprovocation in Severe Asthma.** *Academic radiology*
Capaldi, D. P., Sheikh, K., Eddy, R. L., Guo, F., Svenningsen, S., Nair, P., McCormack, D. G., Parraga, G.
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- **Thoracic CT-MRI coregistration for regional pulmonary structure-function measurements of obstructive lung disease.** *Medical physics*
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Dasgupta, A., Kjarsgaard, M., Capaldi, D., Radford, K., Aleman, F., Boylan, C., Altman, L. C., Wight, T. N., Parraga, G., O'Byrne, P. M., Nair, P.
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- **Regional Heterogeneity of Chronic Obstructive Pulmonary Disease Phenotypes: Pulmonary (3)He Magnetic Resonance Imaging and Computed Tomography.** *COPD*
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2016; 13 (5): 601–9
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2016; 43 (6): 2911–26
- **Pulmonary Imaging Biomarkers of Gas Trapping and Emphysema in COPD: (3)He MR Imaging and CT Parametric Response Maps.** *Radiology*
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- **Second-order Texture Measurements of (3)He Ventilation MRI: Proof-of-concept Evaluation of Asthma Bronchodilator Response.** *Academic radiology*
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- **Fourier-Based Linear Systems Description of Free-Breathing Pulmonary Magnetic Resonance Imaging**
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