ALI AJDARI

Postdoctoral Fellow
Harvard Medical School
Massachusetts General Hospital
Boston, MA

Address: 125 Nashua Street, Suit 320
Boston, MA 02114
E-mail: aajdari@mgh.harvard.edu
Phone: +1 (206) 604-5689

EDUCATION

Ph.D. in Industrial and Systems Engineering University of Washington, Seattle, WA.	*01/2014-12/2017*
M.Sc. in Industrial and Systems Engineering Sharif University of Technology, Tehran, Iran.	*09/2009-01/2012*
B.Sc. in Industrial and Systems Engineering Isfahan University of Technology, Isfahan, Iran.	*09/2004-02/2009*

RESEARCH INTEREST

Convex Optimization	Dynamic Programming	Stochastic Optimization
Statistical Machine Learning	Healthcare Analytics	Robust Optimization

GENERAL SOFTWARE EXPERTISE

MATLAB	ARENA/SIMIO	C++
CPLEX/GAMS/LINGO	R	Python

ACADEMIC POSITIONS

Postdoctoral research fellow	*02/2018 - Present*
Department of Radiation Oncology Division of Radiation Biophysics Harvard Medical School & Massachusetts General Hospital, Boston, MA.	
Graduate Research Assistant II	*09/2015-12/2017*
Stochastic and Dynamic Optimization Lab University of Washington, Seattle, WA.	
Research Intern Department of Radiation Oncology Mayo Clinic, Phoenix, AZ	*06/2015-09/2015*
Graduate Research Assistant I	*01/2014-09/2016*
Human Factors and Statistical Modeling Lab University of Washington, Seattle, WA.	
Teaching Assistant University of Washington, Seattle, WA. Course: Linear and Network Programming	*09/2014-12/2014*
Course: Probability and Statistics for Engineers	*01/2014-03/2014*

PUBLICATIONS

I. **Published/Accepted Peer-Reviewed Journal Articles**

1. **Ajdari, A**, Niyazi, M., Nicolay, N et al (2019). Towards optimal stopping in radiation therapy. Radiotherapy and Oncology, May 2019, vol. 134, 96–100.
2. **Ajdari, A,** Saberian, F, Ghate, A. (2018). A theoretical framework for learning tumor dose-response uncertainty in individualized spatiobiologically integrated radiotherapy, INFORMS Journal on Computing (*accepted for publication*).
3. **Ajdari, A**, Ghate, A, Kim, M. (2018). Adaptive treatment-length optimization in spatiobiologically integrated radiotherapy, Physics in Medicine & Biology 63(7):075009.
4. **Ajdari,** A, Boyle, L.N., Kannan, N et al. (2017). Simulation of the Emergency Department Care Process for Pediatric Traumatic Brain Injury. Journal for Healthcare Quality 40(2):110-118.

5. **Ajdari, A**, Boyle, L.N., Kannan, N et al. (2017). Examining Emergency Department Treatment Processes in Severe Pediatric Traumatic Brain Injury. Journal for Healthcare Quality 39(6):334-344.
6. **Ajdari, A.**, Ghate, A. (2016). Robust spatiotemporally integrated fractionation in radiotherapy. *Operations Research Letter*. 44(4): 544-549.
7. **Ajdari, A.,** Mahlooji, H. (2014). An adaptive exploration-exploitation algorithm for constructing metamodels in random simulation using a novel sequential experimental design. Communication in Statistics: Simulation and Computations. 43(5): 943-968.

II. **Published Peer-Reviewed Conference Proceedings**
1. **Ajdari, A**, Shusharina N, Liao, Z, Mohan, R, Bortfeld, T. A novel machine learning-Bayesian network model for prediction of radiation pneumonitis: Importance of mid-treatment information. *International Conference on the Use of Computers in Radiation Therapy*. Montreal, Canada, June 17-21, 2019.
2. **Ajdari, A.** Ghate**,** A. (2016). A model predictive control approach for discovering nonstationary fluence-maps in radiotherapy, Winter Simulation Conference, Washington D.C. 2065-2075.

III. **Manuscripts under review**
1. Eikelder, SCM**, Ajdari, A**, Bortfeld, T, den Hertog, D. (2019). Adjustable robust treatment-length optimization in radiation therapy. INFORMS Journal on Computing.
2. Hall, D, McNamara, A, Shusharina, N, Liu, A, Wei, X, **Ajdari, A**, Mohan, R, Liao, Z, Paganetti, H. (2019). Perspectives on the model-based approach to proton therapy trials: a retrospective study of a lung cancer trial. Radiation Therapy and Oncology.

INVITED TALKS

2019 INFORMS Annual Conference, Seattle, WA (*to be held*)	*October 2019*
2019 ASTRO Annual Conference, Chicago, IL (*to be held*)	*September 2019*
2019 INFORMS Healthcare, MIT, Cambridge, MA	*July 2019*
2019 AAPM Annual Conference, San Antonio, TX	*July 2019*
2019 ICCR Conference, Montreal, Canada	*June 2019*
2018 INFORMS Annual Meeting, Phoenix, AZ	*November 2018*
2017 Pediatric Trauma Society Annual Meeting, Charleston, SC.	*November 2017*
2016 INFORMS Annual Meeting, Houston, TX.	*November 2016*
2016 Winter Simulation Conference, Washington, D.C.	*December 2016*
2015 INFORMS Annual Meeting, Philadelphia, PA.	*November 2015*
2015 International Symposium on Mathematical Programming, Pittsburgh, PA.	*August 2015*

HONORS & AWARDS

Winner of the most innovative research idea, Physics Fair, Department of Radiation Oncology, MGH, Boston, MA.

Winner of the 2016 best paper awards, Winter Simulation Conference, Washington, DC.

Winner of the 2012 outstanding graduate thesis award, Department of Industrial Engineering, Sharif University of Technology, Iran.

REFERENCES

Dr. Archis Ghate, PhD. (Thesis chair)
Associate Chair and Professor
CoE Professorship in Healthcare Operations Research
University of Washington, Seattle, WA.
 E-mail: archis@uw.edu

Dr. Thomas Bortfeld, PhD. (Postdoc mentor)
Chief of Biophysics Division and Professor
Department of Radiation Oncology,
Harvard Medical School
Massachusetts General Hospital, Boston, MA.
 E-mail: tbortfeld@mgh.harvard.edu

Dr. Dick den Hertog, PhD. (Collaborator, Optimization)
Professor
Department of Econometrics and Operations Research
Tilburg School of Economics and Management
Tilburg, Netherlands
 E-mail: D.denHertog@uvt.nl

Dr. Karl-Heinz Kufer, PhD. (Collaborator, Optimization)
Director and Professor
Division of Optimization
Fraunhofer-Institut für Techno- und Wirtschaftsmathematik ITWM,
Kaiserslautern, Germany
E-mail: kuefer@itwm.fraunhofer.de

Dr. Maximillian Niyazi, MD. (Collaborator, Medical)
Vice chair and Professor
Department of Radiation Oncology
Ludwig Maximilian University Hospital
Munich, Germany
 E-mail: Maximilian.Niyazi@med.uni-muenchen.de

Dr. Nils Nicolay, MD. (Collaborator, Medical)
Department of Radiation Oncology
University of Freiburg | Albert-Ludwigs-University
Freiburg, Germany
E-mail: nils.nicolay@uniklinik-freiburg.de