

# A flexible integer linear programming formulation for scheduling clinician on-call service in hospitals

David Landsman<sup>a, b</sup>, Huiting Ma<sup>\*a</sup>, Jesse Knight<sup>\*a, c</sup>, Kevin Gough<sup>d</sup>, and Sharmistha Mishra<sup>†a, c, d, e</sup>

<sup>a</sup>*MAP Centre for Urban Health Solutions, St. Michael's Hospital, Unity Health Toronto, Toronto, ON, Canada*

<sup>b</sup>*Department of Computer Science, University of Toronto, Toronto, ON, Canada*

<sup>c</sup>*Institute of Medical Sciences, University of Toronto, Toronto, ON, Canada*

<sup>d</sup>*Department of Medicine, Division of Infectious Disease, St. Michael's Hospital, Unity Health Toronto, Toronto, ON, Canada*

<sup>e</sup>*Institute of Health Policy, Management and Evaluation, Dalla Lana School of Public Health, University of Toronto, Toronto, ON, Canada*

---

\*Contributed equally to this work.

†Corresponding author ([sharmistha.mishra@utoronto.ca](mailto:sharmistha.mishra@utoronto.ca))