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# Reproducibility of graph metrics of human brain structural networks

Jeffrey T. Duda 1,\*, Philip A. Cook 1 and James C. Gee 1

<sup>1</sup>Penn Image Computing and Science Laboratory, University of Pennsylvania, Department of Radiology, Philadelphia, PA, USA

Correspondence\*:

Jeffrey T. Duda

Penn İmage Computing and Science Laboratory, University of Pennsylvania, Department of Radiolog, 3600 Market Street, Suite 370, Philadelphia, PA, USA, jtduda@seas.upenn.edu

**Neuroinformatics with the Insight ToolKit** 

#### 2 ABSTRACT

- 3 Recent interest in the human connectome has led to the application of graph theoretical analysis
- 4 to human brain structural networks, in particular white matter connectivity inferred from diffusion
- 5 imaging and fiber tractography. While these methods have been used to study a variety of
- 6 patient populations, there has been less examination of the reproducibility of these methods.
- 7 These graph metrics typically derive from fiber tractography, however a number of tractography
- 8 algorithms exist and many of these are known to be sensitive to user-selected parameters. We
- 9 examine how these algorithm and parameter choices influence the reproducibility of proposed
- 10 graph metrics.
- 11 Keywords: Text Text Text Text Text Text Text

#### 1 INTRODUCTION

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#### 2 MATERIAL & METHODS

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Image Type	Description	Format	Color Mode	Resolution
Line Art	An image composed of lines and text, which does not contain tonal or shaded areas.	TIFF, EPS, JPEG	RGB, Bitmap	900 - 1200 dpi
Halftone Combination	A continuous tone photograph, which contains no text. Image contains halftone + text or line art elements.		RGB, Grayscale RGB, Grayscale	300 dpi 600 - 900 dpi

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- Introduction: Succinct, with no subheadings.
  - Materials and Methods: This section may be divided by subheadings. This section should contain sufficient detail so that when read in conjunction with cited references, all procedures can be repeated.
  - Results: This section may be divided by subheadings. Footnotes should not be used and have to be transferred into the main text.
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- Concluding Remarks
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**Table1** shows the resolution requirements for the figures. The figures must be legible:

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- 3. Image areas are not pixelated or stair stepped. 55
- 56 4. Text is legible and of high quality.
- 5. Any lines in the graphic are no smaller than 2 points width. 57
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#### DISCUSSION

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- Text Text Text. Additional Requirements:

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- committee approving the experiments and must also include a statement confirming that informed consent 77
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- 90 cleavages, etc.
- 91 Authors should provide as supplementary material information used to identify proteins and/or peptides.
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- 93 matched mass, peptide/protein scores, peptide modification, miscleavages, peptide sequence, match rank,
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#### **ACKNOWLEDGEMENT**

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#### SUPPLEMENTAL DATA

- 115 Text Text Text Text Text.