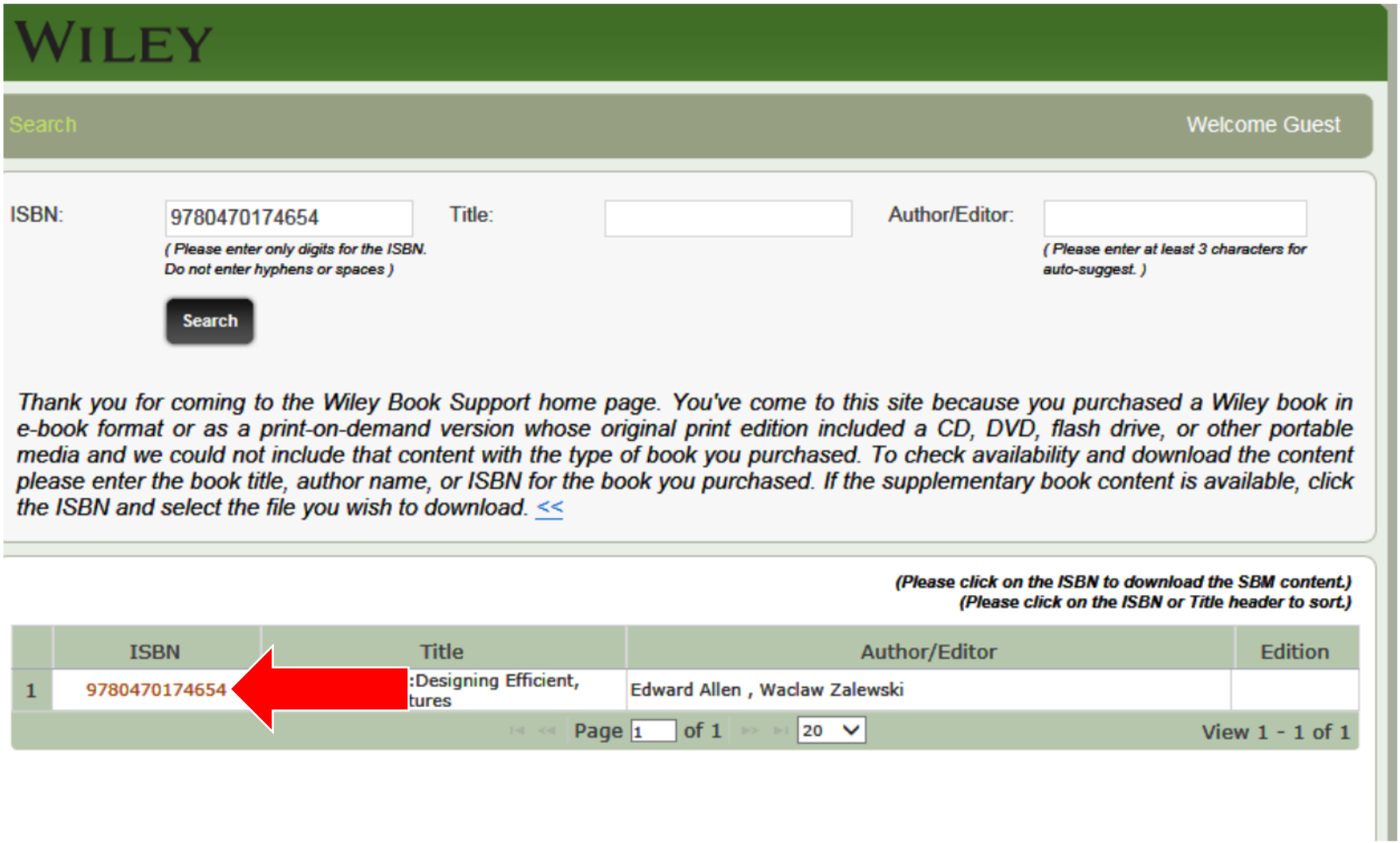
How to access the Student Companion Site?

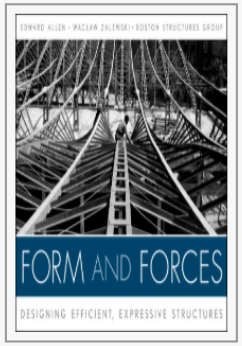
- Active Statics
- Form & Forces Graphical Techniques
- Worksheets
- Statics Pad

Go to https://wiley.mpstechnologies.com/wiley/BOBContent/searchLPBobContent.do
Enter ISBN **9780470174654**



Click on the ZIP icon or Download button to download the zip folder.

Search>Download Welcome Guest



Book Title: Form and Forces:Designing Efficient, Expressive Structures

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Publication Date: Sep 2009

Copyright:2008

Author/Editor: Edward Allen , Waclaw Zalewski

Notes: For system requirements please see the book cover, the "About the CD/DVD" appendix at the end of the book, or the ReadMe file included in the downloadable zip file(s). This download requires WinZip. To download the Windows or Mac version licensed for your machine, please go to http://www.winzip.com/prod_down.htm

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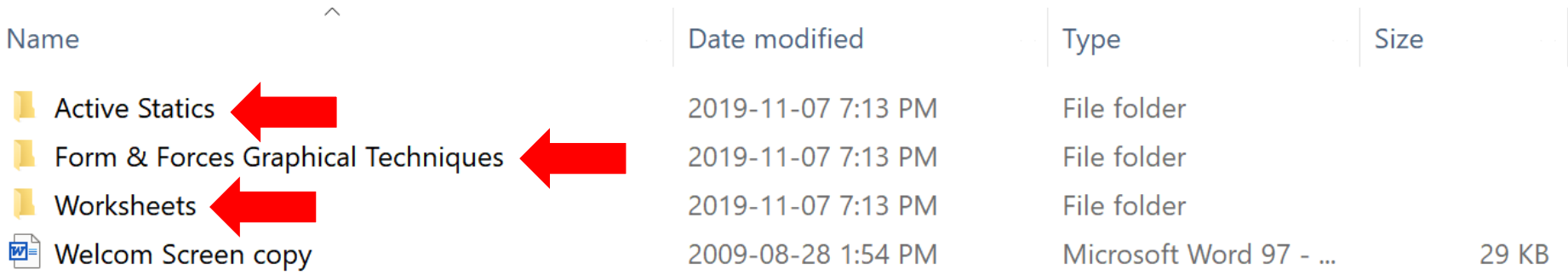
Showing 1 to 1 of 1 entries Previous 1 Next

Download

After downloading the zip folder, extract the folder using any unzip tool on your computer, and you should be able to see **Active Statics, Form & Forces Graphical Techniques** and **Worksheets** folders saved on your computer. **Statics Pad** cannot be downloaded here and will require a different link shown further.



This is the **Active Statics** folder and tool interface.

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images	2019-11-07 7:13 PM	File folder	
intro_files	2019-11-07 7:13 PM	File folder	
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beamLoadingApp	2003-02-02 9:25 AM	Chrome HTML Docu...	1 KB
bot	2009-08-28 2:13 PM	Chrome HTML Docu...	24 KB
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intro	2009-08-28 2:39 PM	Chrome HTML Docu...	28 KB
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overhangingApp	2003-02-02 9:26 AM	Chrome HTML Docu...	1 KB
simpleTruss	2003-01-25 11:31 AM	Chrome HTML Docu...	14 KB
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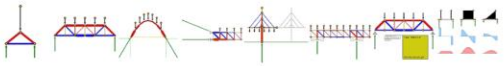
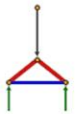
singlePanelApp	2003-02-02 9:24 AM	Chrome HTML Docu...	1 KB
styles	2003-01-14 5:24 PM	Cascading Style Shee...	1 KB
submitEmail.cgi	2003-01-28 11:15 AM	CGI File	6 KB
truss	2003-02-02 5:42 PM	ALZip JAR File	303 KB

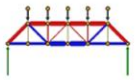
Active Statics

0. Introduction

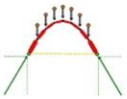




1. Single Panel Truss



2. Simple Truss



3. Hanging Cable /Arch

Introduction

The purpose of these interactive demonstrations is to help you develop a thorough understanding of basic principles of structural behavior, and to provide you with tools and knowledge that will help you to design structures that are efficient and elegant.

Before you begin, you should have some familiarity with the rudiments of graphic statics. These can be learned from Zalewski and Allen, *Form and Forces* (New York, John Wiley & Sons, 2010, ISBN 978-0-470-17465-4), and the Graphical Techniques download on this Web site, created by Joseph Iano.

For best viewing, the screen settings on you computer should be 1024 by 768 or greater.

Single-click on any icon in the left-hand column to start that demonstration. It will take a few moments to come up. If you have a popup blocker on, you must turn it off because the demos come up in their own popup windows when clicked.

Spend time playing with each of the demonstrations. You'll often discover things that are not mentioned in this manual. You may also wish to use one or more of the demos as tools to help you design a structure that you're working on. And if you develop something of interest as a result, please tell us about it. You can reach us by e-mail at allenarch@compuserve.com.

The Origins of These Demonstrations

These interactive demonstrations were conceived and programmed by Simon Greenwold. When Simon was a graduate student in architecture at M.I.T., he took a beginning structures class in which he learned graphic statics from the textbook by Zalewski and Allen entitled *Form and Forces*. Drawing on his previous experiences as an undergraduate math major, teacher of high school geometry, and computer programmer,

This is the **Form & Forces Graphical Techniques** folder and tool interface.

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ConcArch	2009-08-05 12:05 PM	Adobe Acrobat Docu...	511 KB
contents	2009-08-05 12:07 PM	Adobe Acrobat Docu...	26 KB
effctrus	2009-08-05 12:05 PM	Adobe Acrobat Docu...	406 KB
FanStrct	2009-08-05 12:07 PM	Adobe Acrobat Docu...	448 KB
GrupForc	2009-08-05 12:06 PM	Adobe Acrobat Docu...	325 KB
help	2009-08-05 12:07 PM	Adobe Acrobat Docu...	63 KB
TrusForc	2009-08-05 12:06 PM	Adobe Acrobat Docu...	703 KB
UnifArch	2009-08-05 12:08 PM	Adobe Acrobat Docu...	487 KB

2ptFunic.pdf (SECURED) - Adobe Acrobat Reader DC

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1 / 40 78.5%

Bookmarks

- Louvre Museum
- The Problem
- Loading Diagram
- Load Line
- Trial Funicular Poly.
- Final Pole
- Final Funicular Poly.
- The Solution
- Towers & Backstays
- Arched Roof Shell

Finding a Funicular Curve Through Two Points

This is the glass pyramid at the Louvre Museum in Paris, designed by architect I.M. Pei. It is supported from beneath by steel cables.

In designing a structure such as this, it is often most useful to select a cable of a certain size and tensile strength, and then to find a shape for it that will utilize fully the given tensile strength.

In this lesson we will learn to find the form for a cable or arch that passes through any two points and experiences a designated maximum tensile or compressive force.

*To proceed with this lesson, click on the **Next** button here or at the top of any page.*

*When you are done with this lesson, click on the **Contents** button here or at the top of any page to return to the list of lessons.*

This is the **Worksheets** folder and tool interface.

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Worksheet_01B	2009-08-05 1:58 PM	Adobe Acrobat Docu...	213 KB
Worksheet_02A	2009-08-05 1:58 PM	Adobe Acrobat Docu...	483 KB
Worksheet_03A	2009-08-05 1:58 PM	Adobe Acrobat Docu...	145 KB
Worksheet_06A	2009-08-05 3:06 PM	Adobe Acrobat Docu...	276 KB
Worksheet_07A	2009-08-05 3:11 PM	Adobe Acrobat Docu...	157 KB
Worksheet_08a	2009-08-05 1:59 PM	Adobe Acrobat Docu...	772 KB
Worksheet_10A	2009-08-05 3:11 PM	Adobe Acrobat Docu...	34 KB
Worksheet_10B	2009-08-05 3:11 PM	Adobe Acrobat Docu...	111 KB
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Worksheet_16b	2009-08-05 3:15 PM	Adobe Acrobat Docu...	131 KB
Worksheet_17	2009-08-05 3:15 PM	Adobe Acrobat Docu...	1,089 KB
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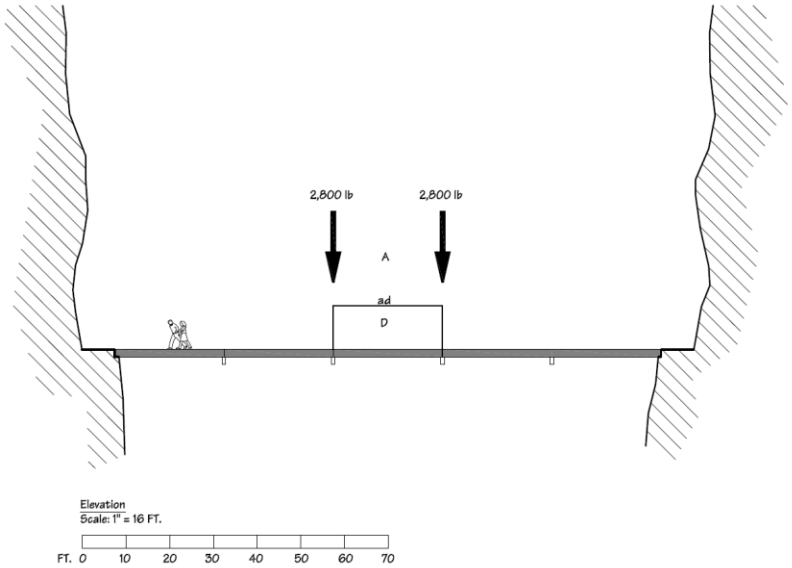
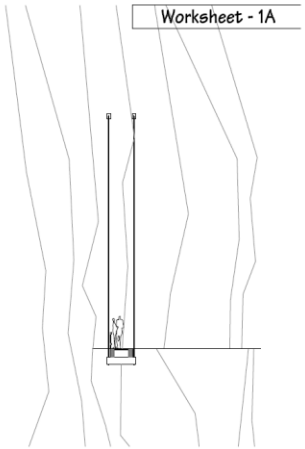
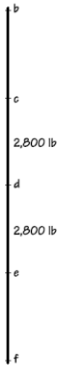




5 Bay Span

Here we are given a bridge with:
- 5 spans = 100 ft.
- Maximum force in rod = 9,600lbs
- Direction of rod segment ad

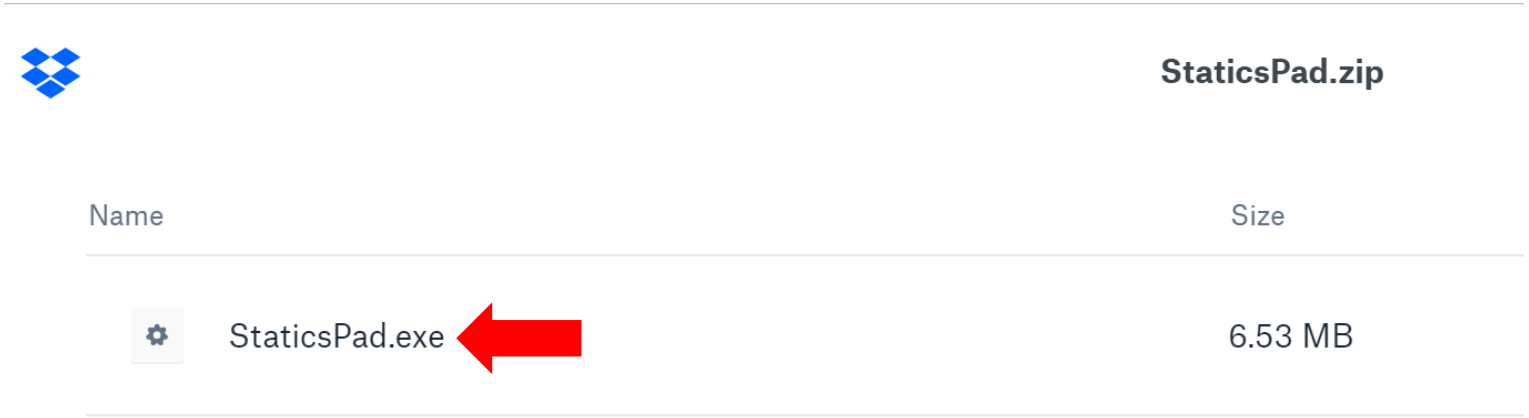
Find:
- Direction and forces in rods ab, ac, ae, af



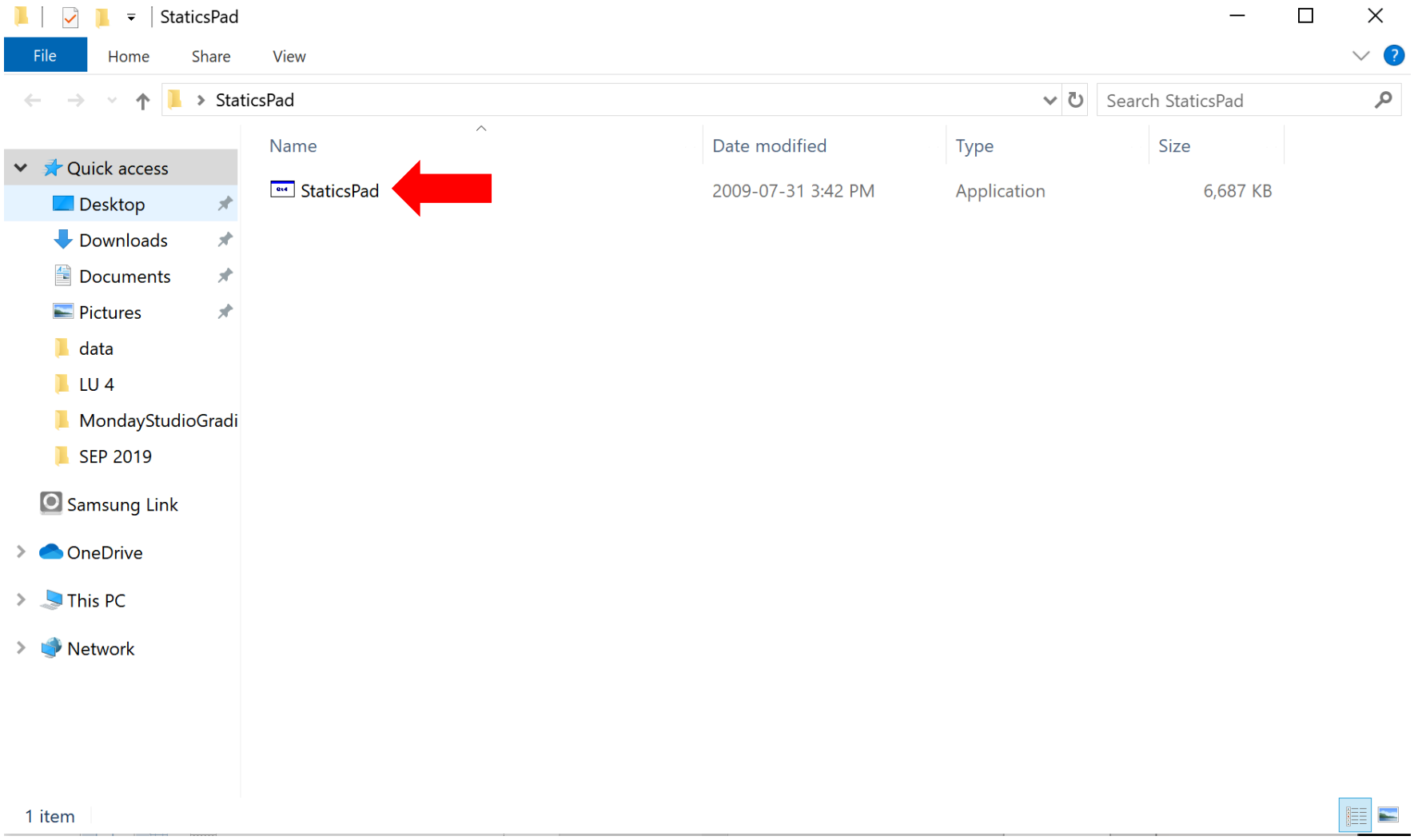
To download the **Statics Pad** software, go to the following Dropbox link provided by the publisher:
https://www.dropbox.com/s/696sd15ln1jdx1p/StaticsPad.zip?dl=0

If you have a Dropbox account, you will be required to sign in. If you do not have a dropbox account, you will be asked to register an account with your e-mail for free.

Click the **StaticsPad.exe** file icon.
Click Download > Direct Download.



Extract the zip folder saved on your computer and click the StaticsPad.exe application file. Follow the prompts to install the software.



There you go. Now you have **Statics Pad** installed on your computer. Enjoy!