

Mission-Integrated Synthesis/Design Optimization of Aerospace Systems under Transient Conditions

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Thesis submitted to the Faculty of the
Virginia Polytechnic Institute and State University
in partial fulfillment of the requirements for the degree of

Master of Science

In

Mechanical Engineering

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August 8, 2012

Blacksburg, Virginia

Keywords: surrogate modeling, optimization, design of experiments, aerospace

Figure 2.1

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Effect		
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Figure 2.2, Figure 2.4, Table 2.2,
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7 messages

Peter Weise <peter.c.weise@gmail.com>
To: diego.rancruelarce@ge.com

Fri, Aug 17, 2012 at 9:14 PM

--

Peter Weise
Graduate Research Assistant
Virginia Tech
Randolph 100D
(509) 480-7171

Peter Weise <peter.c.weise@gmail.com>
To: diego.rancruelarce@ge.com

Fri, Aug 17, 2012 at 9:22 PM

Dr. Rancruel,

I am a graduate student at Virginia Tech finishing my M.S. with Dr. von Spakovsky. I would like to use the following sources in my thesis:

Rancruel, D. F., *A Decomposition Strategy Based on Thermo-economic Isolation Applied to the Optimal Synthesis/Design and Operation of an Advanced Fighter Aircraft System*, M.S. Thesis: adviser: M. R. von Spakovsky, Department of Mechanical Engineering, Virginia Polytechnic Institute and State University, Blacksburg, VA, 2003

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Peter Weise <peter.c.weise@gmail.com>
To: diego.rancruelarce@ge.com

Sun, Aug 19, 2012 at 11:12 AM

[Quoted text hidden]
Hi Dr. Rancruel,

Just wondering if you got my last email? If not, it can be seen in this email.

Thanks,

--

Peter Weise
Graduate Research Assistant
Virginia Tech
Randolph 100D
(509) 480-7171

Rancruel Arce, Diego F (GE Energy) <Diego.RancruelArce@ge.com>
To: Peter Weise <peter.c.weise@gmail.com>

Sun, Aug 19, 2012 at 9:18 PM

Peter,

What exactly are you planning to use from the thesis? You will have to clearly detail what figures, plots, text, etc. you are

requesting to use.

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From: Peter Weise [mailto:peter.c.weise@gmail.com]
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Subject: Re: Virginia Tech Copyright Permission

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Peter Weise <peter.c.weise@gmail.com>
To: "Rancruel Arce, Diego F (GE Energy)" <Diego.RancruelArce@ge.com>

Sun, Aug 19, 2012 at 10:11 PM

Dr. Rancruel,

I plan to use Figures 6.1, 6.9, and 6.17 in my literature review. My work is in mission-integrated optimization of aerospace systems and, thus, I plan to describe pertinent work performed at VT during the last 15 years.

Thanks,

Peter Weise
[Quoted text hidden]
100D Randolph Hall
(509) 480-7171

Peter Weise <peter.c.weise@gmail.com>
To: "Rancruel Arce, Diego F (GE Energy)" <Diego.RancruelArce@ge.com>

Mon, Aug 20, 2012 at 5:12 PM

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Rancruel Arce, Diego F (GE Energy) <Diego.RancruelArce@ge.com>
To: Peter Weise <peter.c.weise@gmail.com>

Tue, Aug 21, 2012 at 10:26 AM

Peter,

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Also, please reference this sources if they are used in any paper or other publication.

Best regards.

Diego

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On Fri, Aug 17, 2012 at 11:29 PM, Peter Weise <peter.c.weise@gmail.com> wrote:

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Thanks,

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Figure 2.3, Table 2.1

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character of the work for example, fact or fiction worthy of (extensive) protection?	<input checked="" type="checkbox"/> Published work	Unpublished work
	<input checked="" type="checkbox"/> Factual or non-fiction based	Highly creative work (art, music, novels, films, plays)
	<input checked="" type="checkbox"/> Important to favored educational objectives	Fiction
Amount and Substantiality		
use only what's necessary quantity and quality in relation to the whole work	<input checked="" type="checkbox"/> Small quantity of the work	Large portion or whole work used
	<input checked="" type="checkbox"/> Portion used is not central or significant to entire work	Portion used is central to work or "heart of the work"
	<input checked="" type="checkbox"/> Amount is appropriate for favored educational purpose	
Effect		
harm to potential market or value of a work after a portion has been used separately from the whole	<input checked="" type="checkbox"/> User has lawfully acquired copy of the original work	Could replace sale of copyrighted work
	<input checked="" type="checkbox"/> One or fewer copies made	Significantly impairs market or potential market for copyright work or derivative
	<input checked="" type="checkbox"/> No significant effect on the market or potential market of copyrighted work	Reasonably available licensing mechanism for use of the copyrighted work
	<input checked="" type="checkbox"/> No similar product marketed by the copyright holder	Affordable permission available for using work
	<input checked="" type="checkbox"/> Lack of licensing mechanism	Numerous copies made
		You made it accessible on Web or in other public forum
		Repeated or long term use

Figure 2.7

DRAFT Fair Use Checklist adapted from the Copyright Management Center at IUPUI <http://www.copyright.iupui.edu/checklist.htm> (accessed Oct 28, 2008). See also the University of Minnesota's "Fair Use Analysis Tool" at <http://www.lib.umn.edu/copyright/checklist.phtml>

As a test of fair use in ETDs at Virginia Tech: *von Spakowsky, M.B., 2011, Ch. 10 - MIS/DO Applied to High Performance Aerospace Vehicles* - test of

Fair Use Factor	In Favor of Fair Use	In Favor of Copyright Holder (not fair use)
Purpose and Character of Use		
commercial or educational use for profit or not degree of transformation; value added for criticism, commentary, news reporting, teaching, scholarship, research	<input checked="" type="checkbox"/> Research	Commercial activity
	<input checked="" type="checkbox"/> Scholarship	Profit (monetarily) from use
	<input checked="" type="checkbox"/> Nonprofit university	Entertainment
	<input checked="" type="checkbox"/> Criticism	Bad-faith behavior
	<input checked="" type="checkbox"/> Comment	Denying credit to original author
	<input checked="" type="checkbox"/> Transformative: changes the original work for new purpose	
	<input checked="" type="checkbox"/> Parody	
Nature of the Copyrighted Work		
character of the work for example, fact or fiction worthy of (extensive) protection?	<input checked="" type="checkbox"/> Published work	Unpublished work
	<input checked="" type="checkbox"/> Factual or non-fiction based	Highly creative work (art, music, novels, films, plays)
	<input checked="" type="checkbox"/> Important to favored educational objectives	Fiction
Amount and Substantiality		
use only what's necessary quantity and quality in relation to the whole work	<input checked="" type="checkbox"/> Small quantity of the work	Large portion or whole work used
	<input checked="" type="checkbox"/> Portion used is not central or significant to entire work	Portion used is central to work or "heart of the work"
	<input checked="" type="checkbox"/> Amount is appropriate for favored educational purpose	
Effect		
harm to potential market or value of a work after a portion has been used separately from the whole	<input checked="" type="checkbox"/> User has lawfully acquired copy of the original work	Could replace sale of copyrighted work
	<input checked="" type="checkbox"/> One or fewer copies made	Significantly impairs market or potential market for copyright work or derivative
	<input checked="" type="checkbox"/> No significant effect on the market or potential market of copyrighted work	Reasonably available licensing mechanism for use of the copyrighted work
	<input checked="" type="checkbox"/> No similar product marketed by the copyright holder	Affordable permission available for using work
	<input checked="" type="checkbox"/> Lack of licensing mechanism	Numerous copies made
		You made it accessible on Web or in other public forum
	Repeated or long term use	

Figure 2.15

DRAFT Fair Use Checklist adapted from the Copyright Management Center at IUPUI
<http://www.copyright.iupui.edu/checklist.htm> (accessed Oct 28, 2008). See also the University of Minnesota's "Fair Use Analysis Tool" at <http://www.lib.umn.edu/copyright/checklist.phtml>

As a test of fair use in ETDs at Virginia Tech: Riggins D., Moorhouse, Camberos,
test of
Energy Analysis and Design Optimization for Aerospace Vehicles and Subsystems

Fair Use Factor	In Favor of Fair Use	In Favor of Copyright Holder (not fair use)
Purpose and Character of Use		
commercial or educational use for profit or not degree of transformation; value added for criticism, commentary, news reporting, teaching, scholarship, research	Research	Commercial activity
	Scholarship	Profit (monetarily) from use
	Nonprofit university	Entertainment
	Criticism	Bad-faith behavior
	Comment	Denying credit to original author
	Transformative: changes the original work for new purpose	
	Parody	
Nature of the Copyrighted Work		
character of the work for example, fact or fiction worthy of (extensive) protection?	Published work	Unpublished work
	Factual or non-fiction based	Highly creative work (art, music, novels, films, plays)
	Important to favored educational objectives	Fiction
Amount and Substantiality		
use only what's necessary quantity and quality in relation to the whole work	Small quantity of the work	Large portion or whole work used
	Portion used is not central or significant to entire work	Portion used is central to work or "heart of the work"
	Amount is appropriate for favored educational purpose	
Effect		
harm to potential market or value of a work after a portion has been used separately from the whole	User has lawfully acquired copy of the original work	Could replace sale of copyrighted work
	One or fewer copies made	Significantly impairs market or potential market for copyright work or derivative
	No significant effect on the market or potential market of copyrighted work	Reasonably available licensing mechanism for use of the copyrighted work
	No similar product marketed by the copyright holder	Affordable permission available for using work
	Lack of licensing mechanism	Numerous copies made
		You made it accessible on Web or in other public forum
		Repeated or long term use

Figure 2.19, Figure 2.20, Figure 2.21, Figure 2.22

Subject: Re: Copyright permissions
From: Scott Eastbourn <seastbourn@gmail.com>
Date: 8/17/2012 3:40 PM
To: Peter Weise <peter.c.weise@gmail.com>

Hey Peter,

Yes you have permission. Last name is spelled Eastbourn though :)

Hope all is well.

Scott

On Wed, Aug 15, 2012 at 2:13 PM, Peter Weise <peter.c.weise@gmail.com> wrote:

Hi Scott,

I am going through my references and ensuring that I have secured appropriate copyright permissions.

Do I have permission to use your thesis:

Eastborn, S. M., *Modeling and Simulation of a Dynamic Turbofan Engine Using Matlab/Simulink*, M.S. Thesis, adviser: R. Roberts, Department of Engineering, Wright State University, Dayton, Ohio, 2012.

Thanks,

--

Peter Weise
Graduate Research Assistant
Virginia Tech
Randolph 100D
[\(509\) 480-7171](tel:(509)480-7171)