

Improvements in fluidic device evaluation using particle image velocimetry.

Jaime Melton Schmiege Raben

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

Doctor of Philosophy
In
Biomedical Engineering

Pavlos P. Vlachos, Co-Chair
Mark A. Stremler, Co-Chair
Bahareh Behkam
Rafael V. Davalos
Marissa N. Rylander

August 20th 2013
Blacksburg, VA

Keywords: particle image velocimetry, micro PIV, stent, medical device

**SPRINGER LICENSE
TERMS AND CONDITIONS**

Aug 08, 2013

This is a License Agreement between Jaime Raben ("You") and Springer ("Springer") provided by Copyright Clearance Center ("CCC"). The license consists of your order details, the terms and conditions provided by Springer, and the payment terms and conditions.

All payments must be made in full to CCC. For payment instructions, please see information listed at the bottom of this form.

License Number	3203701087507
License date	Aug 07, 2013
Licensed content publisher	Springer
Licensed content publication	Microfluids and Nanofluids
Licensed content title	Improved accuracy of time-resolved micro-Particle Image Velocimetry using phase-correlation and confocal microscopy
Licensed content author	Jaime S. Raben
Licensed content date	Jan 1, 2012
Volume number	14
Issue number	3
Type of Use	Thesis/Dissertation
Portion	Full text
Number of copies	1
Author of this Springer article	Yes and you are a contributor of the new work
Order reference number	
Title of your thesis / dissertation	Improvements in fluidic device evaluation using particle image velocimetry.
Expected completion date	Aug 2013
Estimated size(pages)	100
Total	0.00 USD
Terms and Conditions	

Introduction

The publisher for this copyrighted material is Springer Science + Business Media. By clicking "accept" in connection with completing this licensing transaction, you agree that the following terms and conditions apply to this transaction (along with the Billing and Payment

terms and conditions established by Copyright Clearance Center, Inc. ("CCC"), at the time that you opened your Rightslink account and that are available at any time at <http://myaccount.copyright.com>).

Limited License

With reference to your request to reprint in your thesis material on which Springer Science and Business Media control the copyright, permission is granted, free of charge, for the use indicated in your enquiry.

Licenses are for one-time use only with a maximum distribution equal to the number that you identified in the licensing process.

This License includes use in an electronic form, provided its password protected or on the university's intranet or repository, including UMI (according to the definition at the Sherpa website: <http://www.sherpa.ac.uk/romeo/>). For any other electronic use, please contact Springer at (permissions.dordrecht@springer.com or permissions.heidelberg@springer.com).

The material can only be used for the purpose of defending your thesis, and with a maximum of 100 extra copies in paper.

Although Springer holds copyright to the material and is entitled to negotiate on rights, this license is only valid, subject to a courtesy information to the author (address is given with the article/chapter) and provided it concerns original material which does not carry references to other sources (if material in question appears with credit to another source, authorization from that source is required as well).

Permission free of charge on this occasion does not prejudice any rights we might have to charge for reproduction of our copyrighted material in the future.

Altering/Modifying Material: Not Permitted

You may not alter or modify the material in any manner. Abbreviations, additions, deletions and/or any other alterations shall be made only with prior written authorization of the author(s) and/or Springer Science + Business Media. (Please contact Springer at (permissions.dordrecht@springer.com or permissions.heidelberg@springer.com))

Reservation of Rights

Springer Science + Business Media reserves all rights not specifically granted in the combination of (i) the license details provided by you and accepted in the course of this licensing transaction, (ii) these terms and conditions and (iii) CCC's Billing and Payment terms and conditions.

Copyright Notice:Disclaimer

You must include the following copyright and permission notice in connection with any reproduction of the licensed material: "Springer and the original publisher /journal title, volume, year of publication, page, chapter/article title, name(s) of author(s), figure number(s), original copyright notice) is given to the publication in which the material was originally published, by adding; with kind permission from Springer Science and Business

Media"

Warranties: None

Example 1: Springer Science + Business Media makes no representations or warranties with respect to the licensed material.

Example 2: Springer Science + Business Media makes no representations or warranties with respect to the licensed material and adopts on its own behalf the limitations and disclaimers established by CCC on its behalf in its Billing and Payment terms and conditions for this licensing transaction.

Indemnity

You hereby indemnify and agree to hold harmless Springer Science + Business Media and CCC, and their respective officers, directors, employees and agents, from and against any and all claims arising out of your use of the licensed material other than as specifically authorized pursuant to this license.

No Transfer of License

This license is personal to you and may not be sublicensed, assigned, or transferred by you to any other person without Springer Science + Business Media's written permission.

No Amendment Except in Writing

This license may not be amended except in a writing signed by both parties (or, in the case of Springer Science + Business Media, by CCC on Springer Science + Business Media's behalf).

Objection to Contrary Terms

Springer Science + Business Media hereby objects to any terms contained in any purchase order, acknowledgment, check endorsement or other writing prepared by you, which terms are inconsistent with these terms and conditions or CCC's Billing and Payment terms and conditions. These terms and conditions, together with CCC's Billing and Payment terms and conditions (which are incorporated herein), comprise the entire agreement between you and Springer Science + Business Media (and CCC) concerning this licensing transaction. In the event of any conflict between your obligations established by these terms and conditions and those established by CCC's Billing and Payment terms and conditions, these terms and conditions shall control.

Jurisdiction

All disputes that may arise in connection with this present License, or the breach thereof, shall be settled exclusively by arbitration, to be held in The Netherlands, in accordance with Dutch law, and to be conducted under the Rules of the 'Netherlands Arbitrage Instituut' (Netherlands Institute of Arbitration).**OR:**

All disputes that may arise in connection with this present License, or the breach thereof, shall be settled exclusively by arbitration, to be held in the Federal Republic of Germany, in accordance with German law.

Other terms and conditions:

v1.3

If you would like to pay for this license now, please remit this license along with your payment made payable to "COPYRIGHT CLEARANCE CENTER" otherwise you will be invoiced within 48 hours of the license date. Payment should be in the form of a check or money order referencing your account number and this invoice number RLNK501085264.

Once you receive your invoice for this order, you may pay your invoice by credit card. Please follow instructions provided at that time.

**Make Payment To:
Copyright Clearance Center
Dept 001
P.O. Box 843006
Boston, MA 02284-3006**

For suggestions or comments regarding this order, contact RightsLink Customer Support: customercare@copyright.com or +1-877-622-5543 (toll free in the US) or +1-978-646-2777.

Gratis licenses (referencing \$0 in the Total field) are free. Please retain this printable license for your reference. No payment is required.



Jaime Raben <jaime.raben@gmail.com>

disertation reprint permission

5 messages

Jaime Raben <jaime.raben@gmail.com>

To: Jonathan Posner <jposner@uw.edu>, Steve Klein <sdoklein@gmail.com>

Hi Dr. Posner and Steve,

I hope all is well with you. I am finishing up my dissertation, and would like your permission to use our publication as one of my chapters.

I am writing to ask permission to reprint our paper "Improved accuracy of time-resolved micro-particle image velocimetry using phase correlation and confocal microscopy" in my Ph.D. dissertation at Virginia Tech. I have already received permission from the publisher, however, the graduate school at VT also requires permission from each co-author.

If this alright with you, please send me an email indicating your permission.

Thanks!

Jaime

Thu, Aug 8, 2013 at 8:06 AM

Steve Klein <sdoklein@gmail.com>

To: Jaime Raben <jaime.raben@gmail.com>

Cc: Jonathan Posner <jposner@uw.edu>

Thu, Aug 8, 2013 at 11:58 AM

You have permission from me Jaime. I hope all is well with you too!

What are your plans for after graduation?

Steve

[Quoted text hidden]

Jonathan Posner <jposner@uw.edu>

To: Jaime Raben <jaime.raben@gmail.com>

Cc: Steve Klein <sdoklein@gmail.com>

Thu, Aug 8, 2013 at 12:10 PM

You have my permission.

Sent from my iPhone

[Quoted text hidden]



Jaime Raben <jaime.raben@gmail.com>

copyright for confocal publication

2 messages

Jaime Raben <jaime.raben@gmail.com>

Fri, Aug 16, 2013 at 10:03 AM

To: "Vlachos, Pavlos" <pavlos.vlachos@gmail.com>

Pavlo,

I am writing to ask permission to reprint our paper "Improved accuracy of time-resolved micro-particle image velocimetry using phase correlation and confocal microscopy" in my Ph.D. dissertation at Virginia Tech. I have already received permission from the publisher; however, the graduate school at VT also requires permission from each co-author.

If this alright with you, please send me an email indicating your permission.

Jaime

Pavlos Vlachos <pavlos.vlachos@gmail.com>

Fri, Aug 16, 2013 at 4:10 PM

To: Jaime Raben <jaime.raben@gmail.com>

Approved

Sent from my iPhone

[Quoted text hidden]