

# Resource Allocation for Wireless Distributed Computing Networks

Xuetao Chen

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  
Electrical Engineering

Tamal Bose, Chair  
Jeffrey H. Reed, Co-Chair  
William H. Tranter  
Yaling Yang  
Christopher W. Zobel

April 27, 2012  
Blacksburg, Virginia

Keywords: Wireless Communications, Distributed Computing, Power Efficiency  
Copyright 2012, Xuetao Chen

**From:** n.blair-deleon@ieee.org  
**Subject:** Re: Copy right permission request  
**Date:** March 26, 2012 8:54:39 AM EDT  
**To:** Xuetao Chen <chenxt@vt.edu>

---

You are good to go, then ; - )

\*\*\*\*\*  
Contact information:

Nancy A. Blair-DeLeon  
IEEE Senior Program Manager  
Author Support & Content Discoverability  
1-732-562-3965 office telephone  
1-732-439-0813 office mobile  
n.blair-deleon@ieee.org (email address)

**From:** Xuetao Chen <chenxt@vt.edu>  
**To:** "n.blair-deleon@ieee.org" <n.blair-deleon@ieee.org>  
**Date:** 03/26/2012 07:25 AM  
**Subject:** Re: Copy right permission request

---

Dear Nancy,

Thanks for your email. I do not have any plan for formally publication.

Xuetao

On Mar 26, 2012, at 6:45 AM, [n.blair-deleon@ieee.org](mailto:n.blair-deleon@ieee.org) wrote:

If you are using IEEE copyright owned material for your thesis, there is no formal permission required. However, if this paper is later formally published, then you must come back to RightsLink for reuse permission and select whether or not it will be published commercially, through a nonprofit organization, or for academic purposes. But this is only required if you formally publish this for public consumption. If you reuse it within your organization, and that paper is not circulated through an open forum, then you are OK.

Kind regards,

Nancy  
\*\*\*\*\*  
Contact information:

Nancy A. Blair-DeLeon  
IEEE Senior Program Manager  
Author Support & Content Discoverability  
1-732-562-3965 office telephone  
1-732-439-0813 office mobile  
[n.blair-deleon@ieee.org](mailto:n.blair-deleon@ieee.org) (email address)

**From:** Xuetao Chen <[chenxt@vt.edu](mailto:chenxt@vt.edu)>  
**To:** Xuetao Chen <[xchen21@vt.edu](mailto:xchen21@vt.edu)>, "[n.blair-deleon@ieee.org](mailto:n.blair-deleon@ieee.org)" <[n.blair-deleon@ieee.org](mailto:n.blair-deleon@ieee.org)>  
**Date:** 03/23/2012 06:34 PM  
**Subject:** Re: Copy right permission request

---

Hi Nancy,

I am using all these materials for my dissertation. It is the requirement of ETD system that I should ask the permission from IEEE. Please let me whether this is OK. Thanks

Xuetao

On Mar 23, 2012, at 7:21 PM, Xuetao Chen <[xchen21@vt.edu](mailto:xchen21@vt.edu)> wrote:

>  
>  
> Thank you for contacting IEEE for reuse permission.  
>  
> The IEEE has instituted a new fee-based policy for all license requests  
> that does require you obtain your license from our RightsLink service,

> provided by the Copyright Clearance Center. This policy is in line with a  
> well established practice in the STM publishing marketing, and is in  
> keeping with other like publishers. Where a fee does apply, IEEE is hopeful  
> that you can work with your publisher on these costs.

>  
> If you are an IEEE member, a discount does apply for nonprofit and academic  
> reuse. If you are the author of the IEEE copyrighted content being reused,  
> and you are directly using it in new work, please note that the author  
> policy does not apply where content will be resold or redistributed and is  
> not for personal use. However, if you are using this for nonprofit or  
> academic purposes but through resell channels, please contact Nancy A.  
> Blair-DeLeon, for a discount code she will supply to you for use in this  
> service.

>  
> If you do not see the "request permission" link, also contact Nancy A.  
> Blair-DeLeon. We do partner with other organizations but may not have the  
> right to grant permission as the copyright may be held by a third party. In  
> which case, you will have to contact them directly.

>  
> If you are obtaining permission to reuse the content in new IEEE work, you  
> do not have to use this service.

>  
> If you are obtaining permission to reuse in a thesis, formal permission is  
> NOT required through RightsLink but we would suggest you still click on  
> this choice, and read the necessary steps you will have to take when  
> referencing IEEE content.

>  
> All other uses must go through this system using the steps below.

>  
> (Embedded image moved to file: pic11478.jpg)

> (Embedded image moved to file: pic29358.jpg)

> (Embedded image moved to file: pic26962.jpg)

> \*\*\*\*\*

> Contact information:

> Nancy A. Blair-DeLeon  
> IEEE Senior Program Manager  
> Author Support & Content Discoverability  
> 1-732-562-3965 office telephone  
> 1-732-439-0813 office mobile

> [n.blair-deleon@ieee.org](mailto:n.blair-deleon@ieee.org) (email address)

> Visit [www.scitopia.org](http://www.scitopia.org)  
> Integrating Trusted Science + Technology Research

> Customer Service Request ID:  
> 000CA573

> From: Xuetao Chen To: [pubs-permissions@ieee.org](mailto:pubs-permissions@ieee.org)  
> <[xchen21@vt.edu](mailto:xchen21@vt.edu)>

> Copy To:  
> Subject: Copy right Date 03/22/2012 10:20 PM  
> permission request Received:

> Status: Date Closed:

> Claimed  
> By:

> Reference #: Name:

>  
>  
>  
> :  
>  
>  
> :  
>  
>  
>  
>  
>  
>  
>  
>  
>  
>  
>  
>  
>  
> Dear Sir/Madam,  
>  
>  
> I am completing a doctoral dissertation at Virginia Polytechnic  
> Institution and State University entitled "Resource Allocation in Wireless  
> Distributed Computing Networks." I would like your permission to reprint in  
> my dissertation all of the papers from the following:  
>  
>  
>  
> X. Chen, T. Newman, D. Datla, T. Bose and J. H. Reed, "The impact of  
> channel variations on wireless distributed computing networks" IEEE Globe  
> Communication Conference (Globecom) 2009  
> X. Chen, S.M. Hasan, T. Bose, and J. H. Reed, "Cross-layer resource  
> allocation for wireless distributed computing networks, " IEEE Radio and  
> Wireless Symposium (RWS), 2010.  
>  
> I would like your permission to reprint in my dissertation excerpts from  
> the following:  
>  
> D. Datla, X. Chen, T. Tsou, S. Raghunandan, S.M. Hasan, J. H. Reed, C. B.  
> Dietrich, T. Bose, B. Fette, J.H. Kim, "Wireless distributed computing: a  
> survey of resource challenges," IEEE Communication Magazine, Jan. 2012.  
>  
> I would like your permission to reprint in my dissertation one picture as  
> the following:  
>  
> "Figure 1. Model of the campus building with actual locations of the RF  
> portions of the nodes marked as pink." from  
> T. Newman, S.M. Hasan, D. DePoy, T. Bose, and J. H. Reed, "Designing and  
> deploying a building-wide cognitive radio network testbed." IEEE  
> Communication Magazine, Sept. 2010  
>  
> The requested permission extends to any future revisions and editions of my  
> dissertation, including non-exclusive world rights in all languages, and to  
> the prospective publication of my dissertation by UMI Company. These rights  
> will in no way restrict republication of the material in any other form by  
> you or by others authorized by you. Your signing of this letter will also  
> confirm that you own [or your company owns] the copyright to the  
> above-described material.  
>  
>  
> If these arrangements meet with your approval, please reply to this email.  
> Thank you very much.  
>  
>  
> Sincerely,  
>  
>  
> Xuetao Chen  
>  
>  
> Ph.D. Candidate,  
> Bradley Department of Electrical and Computer Engineering  
> Virginia Tech,  
> Blacksburg, VA, 24061  
>  
>  
> Notes/Comments  
>  
>  
>  
>

>  
>  
>  
> <pic11478.jpg>  
> <pic29358.jpg>  
> <pic26962.jpg>

**From:** Jeanette Brooks <jrb@inderscience.com>  
**Subject:** RE: copyright permission  
**Date:** March 23, 2012 3:56:43 AM EDT  
**To:** Xuetao Chen <xchen21@vt.edu>  
**Cc:** Jeanette Brooks <jrb@inderscience.com>

---

Dear Xuetao,

Thank you for your email. Inderscience is happy to give you permission to include your paper in your dissertation, provided that full acknowledgment of the original source of publication is made clear, and a statement included that Inderscience retains the copyright of the paper.

Kind regards and the best of luck!

Jeanette

Jeanette R Brooks (Dr)  
Publications Director  
Email: jrb@inderscience.com

Inderscience Enterprises Limited  
World Trade Centre Building II  
29 route de Pre-Bois  
Case Postale 856  
CH-1215 Geneve 15  
Switzerland

---

**From:** Xuetao Chen [mailto:xchen21@vt.edu]  
**Sent:** 23 March 2012 02:48  
**To:** Jeanette Brooks  
**Subject:** copyright permission

Dear Sir/Madam,

I am completing a doctoral dissertation at Virginia Polytechnic Institution and State University entitled "Resource Allocation in Wireless Distributed Computing Networks." I would like your permission to reprint in my dissertation all the paper from the following:

X. Chen, S. M. Hasan, T. Bose and J. H. Reed, "Efficient detection of primary users in cognitive radio networks," Int. J. Communication Networks and Distributed Systems, vol. 8, nos 3/4, 2012

The requested permission extends to any future revisions and editions of my dissertation, including non-exclusive world rights in all languages, and to the prospective publication of my dissertation by UMI Company. These rights will in no way restrict republication of the material in any other form by you or by others authorized by you. Your signing of this letter will also confirm that you own [or your company owns] the copyright to the above-described material.

If these arrangements meet with your approval, please reply to this email. Thank you very much.

Sincerely,

Xuetao Chen

Ph.D. Candidate,  
Bradley Department of Electrical and Computer Engineering  
Virginia Tech,  
Blacksburg, VA, 24061

**From:** Lee Pucker <Lee.Pucker@wirelessinnovation.org>  
**Subject:** Fwd: Publication Permission Form Submitted  
**Date:** March 25, 2012 2:43:54 PM EDT  
**To:** xchen21@vt.edu  
**Cc:** Lee Pucker <Lee.Pucker@WirelessInnovation.org>

---

Your request is approved.

Thanks,  
Lee

[Lee Pucker, MSc. PMC](#)

Chief Executive Officer

The Wireless Innovation Forum (SDR Forum Version 2.0)

(m) [+1 \(604\) 828-9846](#) // (f) [+1 \(604\) 608-9593](#) // (Skype) LGPuckerII



Follow us:    

*Driving the future of radio communications and systems worldwide*  
[www.WirelessInnovation.org](http://www.WirelessInnovation.org)

*Confidential information may be contained in this message.  
If you are not the addressee indicated in this message  
please destroy this message and kindly notify the sender by reply email.*

----- Forwarded message -----

**From:** <[Lee.Pucker@wirelessinnovation.org](mailto:Lee.Pucker@wirelessinnovation.org)>  
**Date:** Fri, Mar 23, 2012 at 6:06 PM  
**Subject:** Publication Permission Form Submitted  
**To:** [Lee.Pucker@wirelessinnovation.org](mailto:Lee.Pucker@wirelessinnovation.org)

Carbon Copy of User Email:

---

Thank you for contacting the Forum - someone will reply to your request shortly.

**Xuetao Chen**

---

**From:** Xuetao Chen <xchen21@vt.edu>  
**Subject:** Request for copyright permission  
**Date:** March 22, 2012 10:40:59 PM EDT  
**To:** lee.pucker@wirelessinnovation.org

---

Dear Mr. Pucker,

I am completing a doctoral dissertation at Virginia Polytechnic Institution and State University entitled "Resource Allocation in Wireless Distributed Computing Networks." I would like your permission to reprint in my dissertation all of the paper from the following:

X. Chen, S. M. Hasan, T. Bose and J. H. Reed, "Software defined radio based wireless grids," Wireless Innovation Forum 2010, Washington DC. Nov. 2010

The requested permission extends to any future revisions and editions of my dissertation, including non-exclusive world rights in all languages, and to the prospective publication of my dissertation by UMI Company. These rights will in no way restrict republication of the material in any other form by you or by others authorized by you. Your signing of this letter will also confirm that you own [or your company owns] the copyright to the above-described material.

If these arrangements meet with your approval, please reply to this email. Thank you very much.

Sincerely,

Xuetao Chen

Ph.D. Candidate,  
Bradley Department of Electrical and Computer Engineering  
Virginia Tech,  
Blacksburg, VA, 24061