

# Information for Contributors --- with Multimedia Addition

(Submission of Manuscripts via an On-Line Peer-Review System – Manuscript Central,  
Updated December 1, 2007)

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**Field of Interest:** The scope of interest of the [IEEE Ultrasonics, Ferroelectrics, and Frequency Control \(UFFC\) Society](#) shall include theory, technology, materials, and applications relating to: (1) the generation, transmission, and detection of mechanical waves and vibrations and their interactions with other phenomena; (2) medical ultrasound, including hyperthermia, bioeffects, tissue characterization and imaging; (3) ferroelectric, piezoelectric, and piezomagnetic materials, including crystals, polycrystalline solids, films, polymers, and composites; (4) frequency control, timing and time distribution, including crystal oscillators and other means of classical frequency control, and atomic, molecular and laser frequency control standards. Areas of interest range from fundamental studies to the design and/or applications of devices and systems.

Broad categories of the field of interest are summarized in the following Technical Interest Profiling System (TIPS). When submitting a manuscript, authors are requested to select **ONE** and **ONLY ONE** of the TIPS categories and subcategories (i.e., choose one category and one subcategory that belongs to the category) that best reflects the focus of their manuscript.

**I. MEDICAL ULTRASONICS:**

- (a) Medical Beamforming and Beam Steering
- (b) Biological Effects
- (c) Exosimetry
- (d) Blood Flow Measurement
- (e) Contrast Agents
- (f) Elastography
- (g) Medical Imaging
- (h) Medical Signal and Image Processing
- (i) Medical Tissue Characterization
- (j) Therapeutics, Hyperthermia, Ultrasound in Surgery
- (k) Biophysical Mechanisms
- (l) Chemical Effects and Mechanisms

**II. SENSORS, NDE, AND INDUSTRIAL APPLICATIONS:**

- (a) Acoustic Microscopy & Imaging
- (b) Acoustic Sensors
- (c) General NDE Methods

- (d) Material & Defect Characterization
- (e) Wave Propagation
- (f) Signal and Image Processing
- (g) Transducers: NDE and Industrial
- (h) Flow Techniques
- (i) High Power Ultrasound
- (j) Industrial Measurement and Control

**III. PHYSICAL ACOUSTICS:**

- (a) Bulk Wave Effects & Devices
- (b) General Physical Acoustics
- (c) Geophysical Ultrasonics
- (d) Underwater Ultrasound
- (e) Magnetic Interactions
- (f) Optical Interactions
- (g) Ultrasonic Motors & Actuators
- (h) Piezoelectric Transformers

**IV. SURFACE ACOUSTIC WAVES (SAW):**

- (a) SAW Acoustoelectric Effects & Devices
- (b) SAW Devices & Oscillators
- (c) SAW Filters & Transducers
- (d) SAW Materials & Propagation
- (e) SAW System Applications
- (f) SAW Signal Processing
- (g) SAW Thin-Films & Devices
- (h) Micromachining

**V. TRANSDUCERS & TRANSDUCER MATERIALS:**

- (a) Transducer Modeling (FEA and Analytical)
- (b) Transducer Fabrication Technology
- (c) Transducer Material Characterization and Modeling
- (d) Materials/Technology for Medical Transducers
- (e) Medical Transducers
- (f) Transducers - Air Coupled
- (g) Micromachined Ultrasound Transducers
- (h) Piezoelectric and Ferroelectric Transducer Materials

**VI. FERROELECTRICS:**

- (a) Ferroelectric Devices
- (b) Piezomagnetic materials
- (c) Ferroelectric Materials: Single Crystal, Polycrystal Thin Film, Polycrystalline Solids, Polymers, and Composite Forms
- (d) Ferroelectric Properties: Dielectric, Piezoelectric, Pyroelectric, Electro-Optic, Nonlinear Optic, and Electrostrictors
- (e) Ferroelectric Phenomena: Domains, Phase Boundaries, Switching, Poling, Fatigue, and Imprint
- (f) Ferroelectric Applications: Capacitors, Transducers, Sensors, Actuators, DRAM, Fe RAM, Long Wire IR Thermal Sensing, and Imaging
- (g) Integrated Ferroelectrics

#### VII. FREQUENCY CONTROL:

- (a) Timing and Time Distribution
- (b) Crystal Oscillators and Filters
- (c) Atomic, Molecular, and Laser Frequency Control
- (d) Other means of classical frequency control
- (e) Frequency measurement and statistics

**Submission via Manuscript Central (MC):** To qualify for publication in the IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control (TUFFC), the submissions must be unpublished, specifically prepared for TUFFC, and not be under consideration elsewhere (see "Ethics" later in this document). However, previously published conference papers are an exception - provided that the papers have not been previously peer reviewed. An example is a paper for which only the abstract had been reviewed and where there exists no copyright conflict with the publisher of the conference paper. All the conference manuscripts will receive the same level of review as any other manuscript to ensure a consistent quality of the TUFFC. For manuscripts that have more than one author, the corresponding author must ensure that all the authors are aware that the manuscript is being submitted to the Transactions.

Manuscripts are accepted electronically **only** – through a system called Manuscript Central (MC) at the website: <http://tuffc.ieee.manuscriptcentral.com/>. Please follow the "Submission Instructions" accessible via the "Instructions and Forms" icon in the upper right.

**Benefits of Electronic Submission and Peer-Review:** The Manuscript Central is an electronic manuscript submission and peer-review system produced by a commercial company (ScholarOne: <http://www.scholarone.com/>). It is user-friendly and eliminates the need for handling paper manuscripts and correspondence. All the correspondence and reminders to both authors and reviewers can be generated automatically. All the manuscripts are automatically tracked from the moment of submission until the decisions are made, eliminating the need of a laborious separate tracking and reporting database, reducing potential errors, improving handling quality, and saving the costs of editorial offices. Authors, reviewers, Associate Editors (AEs), the Editor-in-Chief (EIC), and the Associate Editor-in-Chief (AEIC) are able to view the status of manuscripts on the web anytime at their convenience. The MC also has an interface for electronic production of journals. The new electronic peer-review system has shortened the peer-review cycle, resulting in a faster dissemination of research findings, which is an important benefit to our members, authors, and readers. The new system has removed the burden on authors from copying, packing, and mailing their manuscripts, and thus avoiding delays and potential loss of manuscripts. The reviewers can get all the necessary information from the web to review manuscripts and make comments to both the authors and AEs electronically thus increasing their efficiency. AEs can track manuscripts and the peer-review process on the web and do

not need to mail a large number of manuscripts and correspondence and thus reduce their workload.

With electronic manuscript submission and reviews, the UFFC society has reduced the time from submission to publication, and made the review process more transparent to the author by allowing electronic status checking of the review progress.

**Types of Contributions:** There are five types of contributions as follows. **PAPERS** may be of any length and must generally satisfy requirements for completeness. Manuscripts may be returned to the authors for revision in response to reviewers' recommendations. (Papers may include Special Issue papers, Review papers, and Invited papers.) **CORRESPONDENCES** are narrower in scope and shorter than Papers. Correspondences typically do not occupy more than **four** Transactions pages. Both Papers and Correspondences receive the same level of review. **LETTERS** are short, rapid communications for which timeliness is essential. Letters will be reviewed only for acceptance or rejection to speed up the process. Published Letters must occupy no more than **two** Transactions pages. **FRONT COVER IMAGES** of the IEEE Transactions on UFFC include a contributed image. When a manuscript is revised and resubmitted, authors are encouraged to submit the color version of an image in the manuscript as a front cover image. There is no publication charge to authors for front cover images. Front cover images will be subject to a peer-review process to judge their appropriateness. Images submitted independent of a manuscript will also be considered but preference will be given to those with manuscripts that are going to appear in the corresponding issue. Because there are only 12 images that can be published in the front covers each year, not all accepted images will appear on the front covers. When there is more than one image accepted for a particular issue, only one will be used for that issue. The remaining images plus others submitted independently may be used in a future issue where there is no suitable image for that issue. Recent front cover images can be found at: <http://www.ieee-uffc.org/tr/covers.htm>. **ERRATA** provide a forum for authors to make corrections to their papers published previously in the TUFFC. A recent example can be found in Vol. 47, No. 3, Nov. 2000 at <http://www.ieee-uffc.org/tr/>.

**Preparation:** Manuscripts must be prepared carefully and written in a clear and concise style. The Editors emphasize the necessity of using correct English. Since the TUFFC publishes only in English, contributors for whom English is not a native language should consult a competent colleague for the purpose of editing the original manuscript.

The text of manuscripts must be prepared according to IEEE guidelines. See the IEEE publication "Information for Authors" for a complete description of formatting, notation, captioning, and bibliographic style. This publication is available at <http://www.ieee.org/web/publications/pubtoolsandpolicy/info/authorub.html#Periodicals>. Special notice should be taken of Section IV, "General Manuscript Preparation."

The font size of manuscripts should be **11** or **12** points. The margin is of **1** inch on all sides. The page size should be set to 11"x8.5" (27.9cm x 21.6cm) with the Portrait orientation in the "Page Setup" of your word processing file. The text should be double-spaced and in single-column. Each contribution must contain an abstract (not more than **200** words for Papers and **50** words for Correspondences and Letters). The abstract should indicate the scope of the manuscript and summarize the author's conclusions. This will make the abstract, by itself, a useful tool for information retrieval. Illustrations (graphics) and tables may be inserted into the text sections of a manuscript without the text wrapped around or be placed together at the end of the manuscript after separate figure and table legend pages. In any

case, all illustrations and tables should be included in the same electronic file as the manuscript text so that editors and reviewers do not need to spend a lot of time downloading a large number of individual figures and tables in addition to the manuscript text. Each figure and table should have a caption that is intelligible without requiring reference to the text. If illustrations and tables are inserted into the text sections, figure captions should be under the figures, identified with a bold “**Fig. #.**”, center justified, and with a different font (such as Helvetica or Arial) and of 1 point smaller in size than the main text. Table captions have a similar requirement, beginning with a bold “**Table #.**” placed above the table. References must be complete, in IEEE style, and appear in a **separate** reference section at the end of the contribution, double-spaced, single-column, with corresponding items in the text referred to by numerals in square brackets. Reference style for papers: Author, first initial followed by last name, title, periodical, volume, inclusive page numbers, month, year. Reference style for books: Author, title, publisher, year, chapter or page numbers.

For graphics, all lettering must be of uniform size and large enough to permit legible reduction to column width (3.5 in or 8.9 cm). Use lettering only where necessary.

This paragraph provides you with one method to produce graphics in your manuscript. The same principle to reduce file sizes is applicable to other software too. To produce a figure that can be embedded into your word processor such as Microsoft Word, you can “Save as” or “Export” your graphics to EPS (encapsulated PostScript) format after selecting the graphics you want to export from your graphic application software such as Adobe PhotoShop or Corel Draw. You can also print your graphics to a file with a PostScript driver instead of to a printer from your graphic application. Rename the filename from an extension such as “PRN (print)” to EPS. The EPS file can then be opened with the free software named GhostView (<http://www.cs.wisc.edu/%7Eghost/>) and then copy/paste into your word processing file. To avoid a large white space around your graphics, you can select “EPS Clip” in the pull-down menu “Options” of the GhostView. To produce graphics of sufficiently high quality for the peer-review process, authors should control the resolution and size with GhostView before copy/paste. (For example, in the pull-down menu “Media”, selecting “Display Settings ...”, and then setting the “Resolution” to 100 ppi (pixels per inch) will be sufficient for the peer-review process in most cases.) Strike a balance between resolution and the file size of the manuscript you can handle. For example, a 7 inch x 10 inch figure of 100 ppi resolution with 24-bit RGB color will result in an uncompressed file size of 2.1 Mega Bytes (MB). There is no need to produce a figure size that is larger than 7 inch x 10 inch because the text area of the printed Transactions is smaller. To further avoid unnecessarily large file sizes and thus a long downloading time for both editors and reviewers, in the “Depth” setting of the GhostView, selecting “8-bit” for grayscale or color images will usually result in a satisfactory quality with only 1/3 of the file size as compared to “24-bit”. For black-and-white line drawings, selecting “1-bit” is appropriate for an 8-fold reduction in file size as compared to choosing “8-bit”. The figure quality of the final PostScript file and PDF file can be verified in GhostView or in MC before the manuscript is formally submitted.

After the manuscript is prepared with a word processor, the authors can print the manuscript to a “PRN” file with a PostScript driver instead of to a printer. Then, rename the extension “PRN” to “PS” for uploading to MC. Other acceptable file formats for the manuscript are listed in the “Submission Instructions” at the MC site. (Click on the “Instructions and Forms” icon on the login or any other screen at <http://tuffc-ieee.manuscriptcentral.com/>.) Some word processing software such as Microsoft Word allows direct conversion of files to PDF if authors have a full version of Adobe Acrobat 4.0 or later

installed in their computer. For Microsoft Word files, MC can automatically convert them into PDF.

The Front Cover Images can be ultrasound images, illustrations of UFFC-related techniques, or images from modalities of UFFC-related phenomena. The image or illustration will be accompanied with a TITLE and up to fifty (50) words of ABSTRACT (text) describing the image or illustration, including noncommercial credits. Because we try to match the front cover image with the issue that contains the image, if possible, authors should include the manuscript number at the end of the title of the Front Cover Image, for example, TITLE – TUFFC-01234-2003, where “TUFFC-01234-2003” is the corresponding manuscript number produced by MC. When submitting an image, on the “Title” line in MC, provide a brief title of the image. In the “Abstract” space, type in up to 50 words description of the Front Cover Image.

**Procedures for Submission via MC:** There is a step-by-step guide on screen for submission of manuscripts via MC. Please notice that when you submit a file of a format such as Microsoft Word (with a .doc extension), MC will automatically convert it to PDF. However, MC also saves your original .doc file in the system. We encourage you to manually move the file from the folder "Original Files / Files Not For Review" to "Files For Review". This makes it easier for reviewers or an AE to add comments or changes directly to your original manuscripts.

**Copyright:** It is the policy of the IEEE to own the copyright to the technical contributions it publishes. To comply with IEEE copyright policy, authors are required to sign an IEEE Copyright Transfer Form and submit it with the manuscript. The copyright form can be obtained by clicking on the “Instructions and Forms” icon at the MC site at <http://tuffc-ieee.manuscriptcentral.com/> or downloaded from <http://www.ieee-uffc.org/tr/copyrt.pdf>. The form can be filled out electronically and printed out. After the form is signed, it can be converted to an electronic image in a web-viewable format such as “JPG” (Joint Photographic Group) using a scanner. If you have a full Adobe Acrobat software version 4 or higher, you can sign the form digitally and then upload the PDF form with your manuscripts in MC.

**Submission of Files for Production of Transactions:** When the revised manuscripts are submitted via MC, authors are also requested to submit the original revised word-processing file of the manuscript (not just the PDF file) and high-quality graphics for journal production. For each file uploaded to MC during the submission process, the authors should provide a description including computer hardware and software used (both the operating system and application versions), file type such as EPS, and figure and table numbers (such as figure1\_a and table2\_b) corresponding to the manuscript. To avoid graphics being reduced to an unacceptably small size during the production, please specify a suggested publication width (our standard width is one of the following: 21, 33, and 43 picas, where 6 picas are equal to 1 inch or 25.4 mm) for each illustration (a “Description” window will automatically popup for each file uploaded in MC). For best results, please submit your graphics in one of the three standard widths above.

**i) Graphics and Tables:** The graphics and tables in the word processing files usually do not have production quality due to, for example, the conversion during the copy/paste operation with GhostView. Therefore, in addition to the word processing file that should include a crude version of all illustrations and tables for the peer-review purpose, please submit your original high-quality graphics/illustrations artwork and tables separately via MC.

The desirable formats for the graphics files are TIFF (tagged image file format) or EPS. JPG and other lossy compression formats may

produce a smaller file size but usually result in a poorer quality, especially at a high compression rate.

To avoid unnecessarily large file sizes and to reduce the cost for using the MC system, each graph should not be bigger than **7** inch x **10** inch. The desired resolution of grayscale or color graphs for sufficient Transactions production quality is **300** pixels per inch (ppi). Each pixel has a depth of “1-bit”, “8-bit”, or “24-bit”. A “24-bit” graph will result in a file size 24 times larger than 1-bit. In an extreme case (7 inch x 10 inch with 24 bit depth at 300 ppi resolution), the uncompressed file size will be 18.9 MB. For monochrome bitmaps (such as black-and-white line plots), the desired production resolution is 600 pixels per inch. In this case, each pixel should be 1-bit in depth (a pixel at 1-bit depth is called a dot). “Dots per inch or dpi” is used to measure resolution in this case. For most authors who do not submit color graphs, 8-bit for grayscale and 1-bit for monochrome bitmaps are sufficient. To reduce file sizes and thus the uploading and downloading time, it is necessary to compress all files that are used for production (graphics, bitmaps, line plots, and word processing files with figures, etc) before uploading. Freeware for the compressions such as QuickZip can be downloaded at: <http://quickzip.ifroggy.com/>.

**ii) Word Processing Files:** Equations entered as graphic elements will be lost in translation during journal production, and should be avoided. Files must be self-contained; that is, there should be no pointers to your system setup. Do not create special macros. Acceptable word processing programs for the **journal production** include: Microsoft Word, Microsoft Works Windows, Word for Windows, WordPerfect Windows, WordPerfect MAC, TeX, and LaTeX. Page layout software such as Ventura, Pagemaker, and Quark are not acceptable. Please notice that the acceptable file formats of the manuscript for **peer-review** are different from those for production and are listed in the “Submission Instructions” at the MC site. (Click on the “Instructions and Forms” icon on the login or any other screen at <http://tuffc-ieee.manuscriptcentral.com/>.)

**iii) Author Photos and Biography:** Photos and biographies are required for full papers only; they are not used in correspondences and letters. Authors should submit their biographies and recent photographs (taken within the past five years) via MC. A suggested biography format consists of three paragraphs: 1) name, where and when born, degrees earned, field(s) of study, school, city, state; 2) chief employment dates, organizations, positions held, type of work, responsibilities, present position; and 3) professional society membership, offices, awards. The biography should be submitted as a separate ASCII text or word processing file. A 1.5 inch x 2 inch photo with 300 ppi at 8-bit pixel depth will have sufficient resolution for the Transactions.

**Color Illustrations:** Authors are responsible for the incremental cost of printing in color, typically between **\$1000** and **\$1500** per page. Payment of fees on color reproduction in the print version of the Transactions is not negotiable or voluntary, and the author's agreement to publish the manuscript in the Transactions is considered acceptance of this requirement.

**Voluntary Page Charges:** After a manuscript has been accepted for publication, the author's company or institution will be requested to pay a charge of **\$115** per printed page to cover part of the cost of publication. Page charges for the Transactions are not obligatory nor are their payment a prerequisite for publication. The author will receive 100 free offprints without covers if the page charge is honored. Detailed instructions will accompany the page proof.

**Mandatory Page Charges:** Mandatory Page Charges of **\$175** per page is required for contributions longer than **eight (8)** Transactions

pages. The Publisher holds the right to withhold publication of the current submission or any future submissions from the author(s) if this charge is not honored. If only the mandatory overlength page charge is paid, no free reprints will be sent. Only the Editor can waive the mandatory overlength page charge under extenuating circumstances.

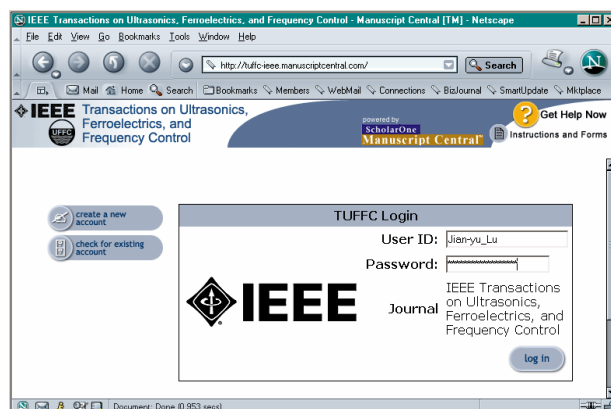
**Estimating number of Transactions pages:** To estimate the number of Transactions pages, the following guidelines are provided. They are based on approximately 250 words per submitted, double-spaced manuscript page. Estimated number of Transactions pages = (number of submitted pages)/3 + (number of figures and tables)/4 + (number of references)/50.

**Ethics:** It is the responsibility of authors to obtain all necessary approval and to follow ethics when treating human subjects and animals. A footnote should appear in the manuscripts to indicate such approval.

It is unethical for authors to submit a manuscript to multiple journals simultaneously for review. **Plagiarism** in any form is strictly prohibited and **punishments** are listed in the Section 8.2 of the IEEE Publication Services and Products Board (PSPB) Operation Manual accessible from: <http://www.ieee.org/web/publications/rights/>. The IEEE Code of Ethics can be found at: <http://www.ieee.org/portal/pages/iportals/aboutus/ethics/code.html>.

**IEEE Author Information:** Information for IEEE Transactions and Journal Authors is available on request from IEEE Operations Center, Transactions/Journal Department, 445 Hoes Lane, P.O. Box 1331, Piscataway, NJ 08855-1331, by email to “[trans@ieee.org](mailto:trans@ieee.org)”, by fax at 908-562-0545 or by the World Wide Web at “<http://www.ieee.org>”. The complete IEEE “Information for Authors” can be downloaded at <http://www.ieee.org/web/publications/pubtoolsandpolicyinfo/authorub.html#Periodicals>.

**Your MC Login Window:** You can login to the MC system by providing your User ID and Password and then clicking on the “Log In” icon. (For UFFC members, please notice that the MC account is neither the IEEE Web Account nor the UFFC account.) If you forget your User ID and/or Password, you can click on the icon “Check for Existing Account” and you will receive your account information via email. If you don't have an account, please click on the icon “Create a New Account”.



## Multimedia Addition

**Starting Date:** On **August 1, 2003**, IEEE Transactions on UFFC started to accept multimedia manuscripts via its Manuscript Central website: <http://tuffc-ieee.manuscriptcentral.com/>.

**Multimedia Files:** For Transactions publication purposes, multimedia files are defined as the following three categories: (1) color figures corresponding to grayscale figures in print, (2) sound only, and (3) movies or animations with or without sound. These files can be accessed online via links through the three types of multimedia icons below:



Icon for color figures.



Icon for sound only.



Icon for movies or animations with or without sound.

Starting **October 2006** issue, in addition to the access through the color figures icon above, which allows viewing details from the files submitted directly by authors, color figures will replace the grayscale figures online for **multimedia manuscripts** without additional charges to the authors. (If the authors also wish to publish their color figures in the print, they should pay a mandatory charge of about **\$1,500** per page. Please see the instructions in an earlier paragraph.) The icon will also appear in the print to indicate that a color version is available online. Because of the file sizes of color figures (they can be three times as large as corresponding grayscale figures) and the additional editorial work such as making two sets of PostScript files in which they remain identical after replacing grayscale with color, authors should request color figures online only when it is necessary.

**Preparation of Multimedia Files:** There are multiple ways to produce multimedia files. This paragraph provides you with some methods as examples. **Color figures** can be produced easily by modern software. To prepare for **sound** files, the current standard compressed file type is MP3 (Motion Picture Level 3). Authors may record their voices or the sounds of a phenomenon such as ultrasound cavitation with software such as Microsoft Sound Recorder (comes standard with Microsoft Windows Operating System) and save them as “.wav” files. Then, use free software from the internet (for example, searching <http://www.google.com> with key words “MP3 freeware”) or purchase a shareware and convert “.wav” files to MP3 files. When selecting the quality of MP3 files during conversion, select 96kbs (kilobits per second) for radio quality sound. This reduces the file size from that of the uncompressed “.wav” files by about a factor of 20. For making a **movie** (such as a beating fetus heart), you may record the video output of your camcorder or an imaging system directly into “.avi” (AVI - Audio Video Interleaved) files or “.mpg” (MPEG - Motion Picture Expert Group) files with software such as Microsoft Windows Movie Maker that is standard with Microsoft Windows such as XP or Pinnacle Studio from Pinnacle System, Inc. The “.avi” files may result in a huge file size (could be 4MB or larger for every second of movie if the resolution of the movie is high). For this reason, the preferred non-interlaced resolution of movie files is **320X240** or **less** (a lower resolution such as 160X120 may further reduce the file size by 4 folds and thus is desirable if it is adequate for your illustration). In addition, keep the movie as short as possible (for example, less than **10** seconds) and make the compression level high (i.e., choose the smallest video stream rate for your illustration purpose). For example, a highly compressed video allows readers to view it via a fast modem (e.g., 56 kb/s) without dropping frames. The compressed file type acceptable is “.mpg”. The completed movie files or MP3 files can be viewed or

heard with software such as Microsoft Windows Media Player (standard with Microsoft Windows such as XP). For **animation**, you may use software such as Microsoft Power Point to produce slides. Then, save all the slides with the “Save As” function into individual “.gif” (GIF - Graphics Interchange Format) or “.jpg” files that can be combined into a single GIF animation file with software such as Adobe ImageReady. Software such as Microsoft Picture and Fax Viewer that is standard with Microsoft Windows can be used to view the GIF animation file in a slide show without having to have Microsoft Power Point installed. Alternatively, you may record your animation via video output of your computer (most laptop computers have video output) into your digital camcorder and then transfer it back using software such as Microsoft Windows Movie Maker or Pinnacle Studio.

**Acceptable Multimedia File Types and Total File Size:** For color figures, the file types must be JPEG (.jpg) or GIF (.gif). For sound, the only acceptable file type is MP3 (.mp3). The file type for movies or animations should be MPEG (.mpg) or GIF (.gif). (For the compatibility with older versions of movie viewing software and thus to smooth the peer-review process and avoid difficulties to readers, the desirable MPEG format is MPEG1.) For each manuscript, the **TOTAL** size of all multimedia files to be linked should be less than or equal to **10MB**. This is important to avoid overloading TUFFC internet server and to reduce costs. For a manuscript with more than 10MB multimedia contents and/or incorrect file types, authors may be asked to reduce the file sizes and/or correct the file types before the manuscript is reviewed (**the manuscript may be withdrawn administratively and authors may resubmit after the required modifications**). Manuscripts containing file types other than those listed in this paragraph may increase their difficulty in peer review, production, and/or distribution. (An example of multimedia document to help you control the total file size can be found at: <http://www.ieee-uffc.org/tr/mexample.pdf>.)

**Submission:** When you submit your multimedia manuscript, you should use a **red color** and **bold typeface** with the following words to indicate where to insert links to your corresponding multimedia files: “Media-Color 1, 2, ...” for color pictures, “Media-Sound 1, 2, ...” for sound, and “Media-Movie 1, 2, ...” for both movies and animations. Your multimedia files should be named accordingly and uploaded to MC one-by-one. Otherwise, your manuscript may be treated as a regular manuscript without multimedia content during peer-review and journal production. The multimedia icons above will be used in your manuscripts as links to multimedia files during journal production. (The icon files are also downloadable from [http://www.ieee-uffc.org/tr/mexample\\_icons.zip](http://www.ieee-uffc.org/tr/mexample_icons.zip) for inclusion into your manuscripts if you wish.) A text file named “**Multimedia-index**” could be generated **independent of your manuscript** to add additional instructions on your multimedia files to facilitate the peer-review and journal production process if necessary.

**Multimedia Example:** For your convenience, an example of multimedia document is provided on the web at: <http://www.ieee-uffc.org/tr/mexample.pdf>. This example contains details of various multimedia files and may help you to control the total size of the multimedia files in your manuscripts. If you don't have a fast internet connection, or you want to avoid difficulties due to complicated layers of internet security settings, you may download the following zip-compressed file to your computer for a smooth playback of multimedia contents. After you unzip the file, a folder (directory) “mexample” that contains all relevant multimedia files is produced. In this folder, please open the file, mexample.pdf, and then click on icons in the file for your multimedia experiences. The zip-compressed multimedia example is downloadable from: <http://www.ieee-uffc.org/tr/mexample.zip>.