APPLIED COMPUTATIONAL ELECTROMAGNETICS SOCIETY (ACES)

NEWSLETTER

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NEWSLETTER ARTICLES AND VOLUNTEERS WELCOME

The ACES Newsletter is always looking for articles, letters, and short communications of interest to ACES members. All individuals are encouraged to write, suggest, or solicit articles either on a one-time or continuing basis. Please contact a Newsletter Editor.

AUTHORSHIP AND BERNE COPYRIGHT CONVENTION

The opinions, statements and facts contained in this Newsletter are solely the opinions of the authors and/or sources identified with each article. Articles with no author can be attributed to the editors or to the committee head in the case of committee reports. The United States recently became part of the Berne Copyright Convention. Under the Berne Convention, the copyright for an article in this newsletter is legally held by the author(s) of the article since no explicit copyright notice appears in the newsletter.

OFFICER'S REPORTS

President's Post
Perry Wheless, ACES President

You will receive this *ACES Newsletter* close to the December deadline for nominations of candidates for the next Director election. ACES has nine Directors, elected by the membership to three year terms. The expiration of Director terms is staggered, so that three positions are up for election each year. Please direct any nominations directly to Adalbert Konrad, Elections Committee Chair, at konrad@power.ele.utoronto.ca. You should contact your potential candidate(s) to verify they will serve if elected, they will be actively involved in advancing ACES, and that they are both willing and able to attend the annual Board of Directors business meetings held at the conference in Monterey.

In a similar vein, Pat Foster (prf@maasasl.demon.co.uk) is now serving as Awards Chair, and suggestions for award receipients may be submitted directly to Pat. At this time, ACES only has five standing awards, announced and presented annually at the conference: *ACES Journal* Outstanding Paper (for the year), Student (Conference) Best Paper, Valued Service Award, Founders Award, and the Mainstay Award. As much as ideas for award recipients, suggestions for additional award categories would be welcome. Clearly, many meritorous ACES members are not receiving the award recognition they deserve because we presently have so few awards. Please include a short description of the nature and scope of an award category you would like to see created. In addition to a motivating description, nominations for a recipient would also be well received. It may be too late too late to expand the slate of awards for the 2001 conference, but this is an action area that I wish the Board of Directors to consider in the near future.

Finally, Andy Peterson has settled into the post of ACES Publications Chair, and there likely will be some news to report regarding publications in the next *Newsletter*.

Perry Wheless
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PERMANENT STANDING COMMITTEES OF ACES INC.

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NOMINATIONS	Adalbert Konrad	University of Toronto ECE Department 10 King's College Road Toronto, ON, CANADA M5S 1A4
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MEMBERSHIP ACTIVITY COMMITTEES OF ACES INC.

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HISTORICAL	Robert Bevensee	BOMA Enterprises PO Box 812 Alamo, CA 94507-0812

COMMITTEE REPORTS

AWARDS COMMITTEE

ACES AWARDS FOR 2001

ACES has developed the custom of presenting awards to people who have done something special for ACES or for Computational Electromagnetics. These Awards acknowledge the gratitude of ACES for efforts on its behalf and on behalf of the wider CEM community and are formally presented at the banquet held in conjunction with the ACES Symposium in March of each year.

Suggestions are solicited from ACES members for the names of persons who might be so honoured. If you have such a suggestion, please contact the email address below and send a short paragraph of recommendation.

Pat Foster, Awards Chair, email prf@maasasl.demon.co.uk

NOMINATIONS COMMITTEE

In the very near future, ACES members will be asked to vote for three board members. For uniformity, each candidate will be asked to provide a short statement that addresses:

(1)   GENERAL BACKGROUND (e.g., professional experience, degrees, employment, etc.).

(2)   PAST SERVICE TO ACES (e.g., service on ACES committees, or other contributions).

(3)   CANDIDATES' STATEMENT (e.g., short statement of the candidates views of major issues relevant to ACES). Candidates' statements will be no more than 500 words, unless otherwise directed by the board.

(4)   OTHER UNIQUE QUALIFICATIONS (An additional but optional statement).

It is hoped that these areas will provide data on each candidate that might otherwise be obscured in a general, unstructured statement. When the time comes, please take a few minutes to study the candidates' statements and vote.

DIRECTORS-AT-LARGE

Bruce Archambeault	2001	Allen W. Glisson	2002	Masanori Koshiba	2003
Anthony Brown	2001	Guiseppe Pelosi	2002	Osama Mohammed	2003
Eric Michielssen	2001	Perry Wheless, Jr.	2002	Tapan Sarkar	2003

Adalbert Konrad, Nominations Chair

A *MATLAB* PHYSICAL OPTICS RCS PREDICTION CODE

Elmo E. Garrido, Jr. and David C. Jenn
Naval Postgraduate School
Monterey, CA 93943

SUMMARY

POFACETS is an implementation of the physical optics approximation for predicting the radar cross section (RCS) of complex objects. It utilizes the scientific computational features of MATLAB and its Graphical User Interface (GUI) functions to provide an error-free encoding of input parameters and efficient calculation. *POFACETS* provides a convenient tool for a "first cut" at the RCS of complex shapes by representing its constituent parts by triangular facets. The software calculates the monostatic or bistatic RCS of the object for the parameters specified by the user and displays plots for the model geometry and its RCS. There is a limited capability to include shadowing, and resistive surfaces can also be modeled. The simplicity of the GUI design does not require the user to have a detailed understanding of the various steps involved in the RCS calculation. The software is available free of charge on the ACES web site.

INTRODUCTION

The Physical Optics (PO) approximation is one of the most convenient RCS prediction methods for an arbitrary three-dimensional target. The induced currents are integrated over the illuminated portions of the target surface to obtain the scattered far field, while setting the current to zero over the shadowed portions. Thus, the current is approximated as

$$\vec{J}_s \approx \begin{cases} 2\hat{n} \times \vec{H}_i, & \text{for the illuminated portion} \\ 0, & \text{for the shadowed portion} \end{cases}$$

where $\vec{H}_i$ is the incident magnetic field intensity at the surface and $\hat{n}$ is the local surface normal unit vector. The current is then used in the radiation integrals to compute the scattered far field from the target. PO is a high-frequency approximation method that gives best results for electrically large bodies ($L \geq 10\lambda$) and is most accurate in the specular directions. However, because PO abruptly sets the current to zero at a shadow boundary, the computed field values at wide angles and in the shadow regions are inaccurate.

One approach to high frequency prediction calculations is to estimate a complex model with an array of simple shapes, such as triangular flat plates. The RCS is obtained by computing the scattered field of the collection of these simple shapes to obtain the total RCS of the target. *POFACETS* computes the scattering from each triangle as if it is isolated in free space. Multiple reflections, diffraction and surface waves are not included. There is a limited capability to include shadowing. For example, if a particular

triangle is part of a closed structure, then the software can be instructed to ignore the scattering from the triangle if the incident wave direction is from the back of the plate. Resistive surfaces can also be modeled. The capabilities include the following:

- Matlab Graphical Users Interface (GUI)
- Limited shadowing option
- Surface resistivity
- Bistatic or monostatic RCS calculation
- One dimensional RCS cuts or surface contours in direction cosine space
- θ or ϕ incident polarization
- Cross polarized RCS can be computed
- Approximate diffuse RCS component can be computed
- Open code architecture allows the user to tailor the code to specific needs
- Help functions and error checking are included for all windows
- Several model files are included
- A user's manual with theory, references, and examples is available

THE POFACETS GRAPHICAL USER INTERFACE

POFACETS approximates scattering objects by arrays of triangles (facets) and uses superposition is used to compute the total RCS of the object. The GUI consists of three modules: Design Model, Calculate Monostatic RCS, and Calculate Bistatic RCS as shown in Figure 1. The program allows creation of a model comprised of triangular facets with options for approximating the roughness of the surface. It also calculates the monostatic or bistatic radar cross sections of designed models given certain computational parameters.
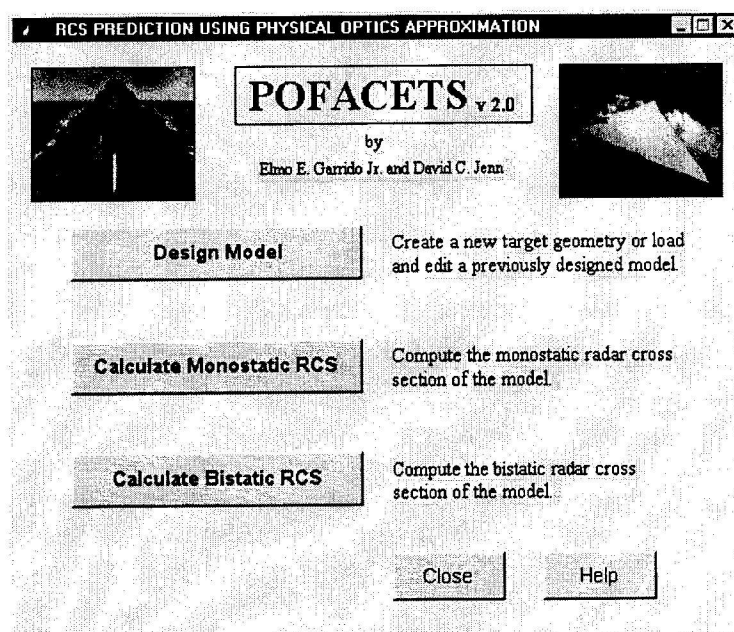

Figure 1. POFACETS main GUI.

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Designing and Editing a Model

The *Design Model* module provides a convenient way of modeling a complex object or to load and edit or scale a previously designed and saved model. The geometry of the model is defined using two sets of data: *coordinates.mat* and *facet.mat*. The first data set defines the x,y,z coordinates of the vertices. The second set specifies the nodes of the component triangular facets and their illumination and resistivity characteristics. Examples of the two files are shown in Figure 2.

Clicking the Design Model button displays the Design Model Coordinates GUI where the *File menu* may be used to choose between creating a new model or editing an existing one. To edit an existing model, its data files are first retrieved and then displayed so that editing or scaling can be performed. Help windows and messages guide the user throughout the use of this GUI.
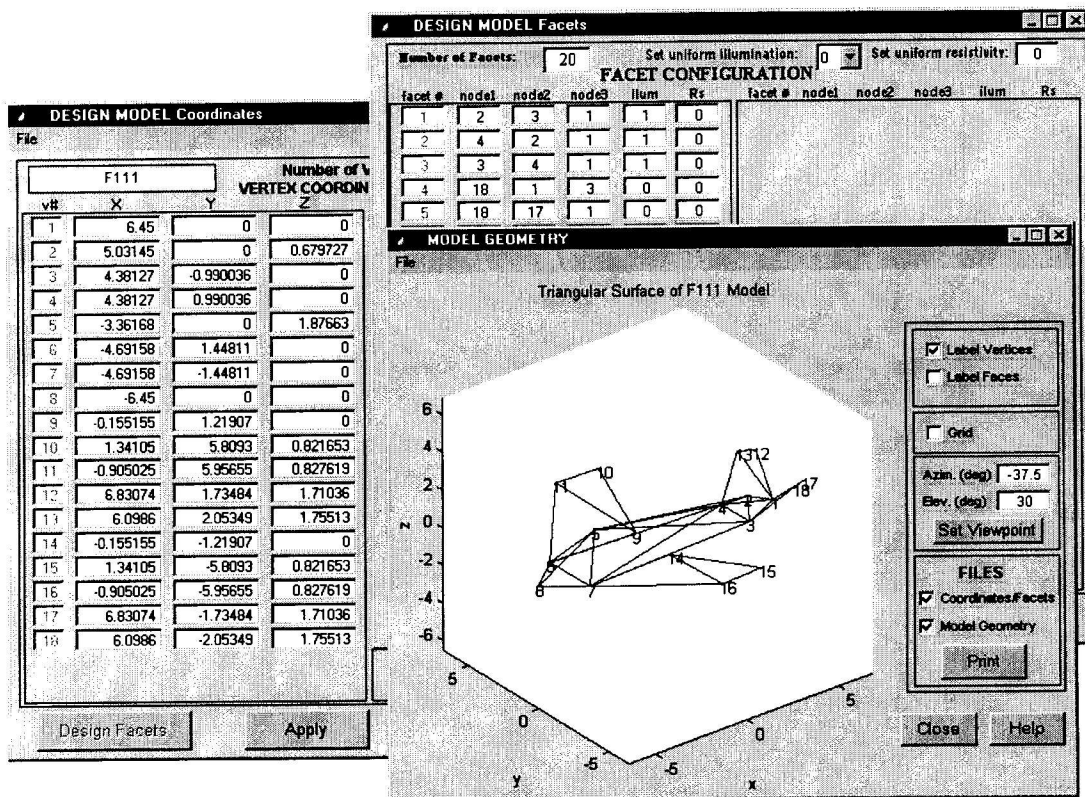

Figure 2. A display of a V-tail aircraft model using the design model GUI.

Calculating the RCS

The *Calculate Monostatic RCS* and *Calculate Bistatic RCS* modules compute the total radar cross section of the model. An example of one of the GUI windows is shown in Figure 3. A θ or ϕ cut is generated when the start and stop values one of the variables

are the same.   A contour plot in direction cosine space ($u = \sin\theta\cos\phi$ and $v = \sin\theta\sin\phi$) is generated when both of the variables take on a range of values. Examples of RCS plots are shown in Figures 4 and 5.   RCS-theta is $\sigma_{\theta\theta}$ (θ polarized incident wave; θ polarized receiver).   This is the co-polarized component when the incident wave is θ polarized. RCS-phi is $\sigma_{\phi\theta}$ (θ polarized incident wave; ϕ polarized receiver). The latter is the cross-polarized component, which in Figure 6, happens to be at a level below the specified threshold in the code. The user can change the contour levels and thresholds if desired.
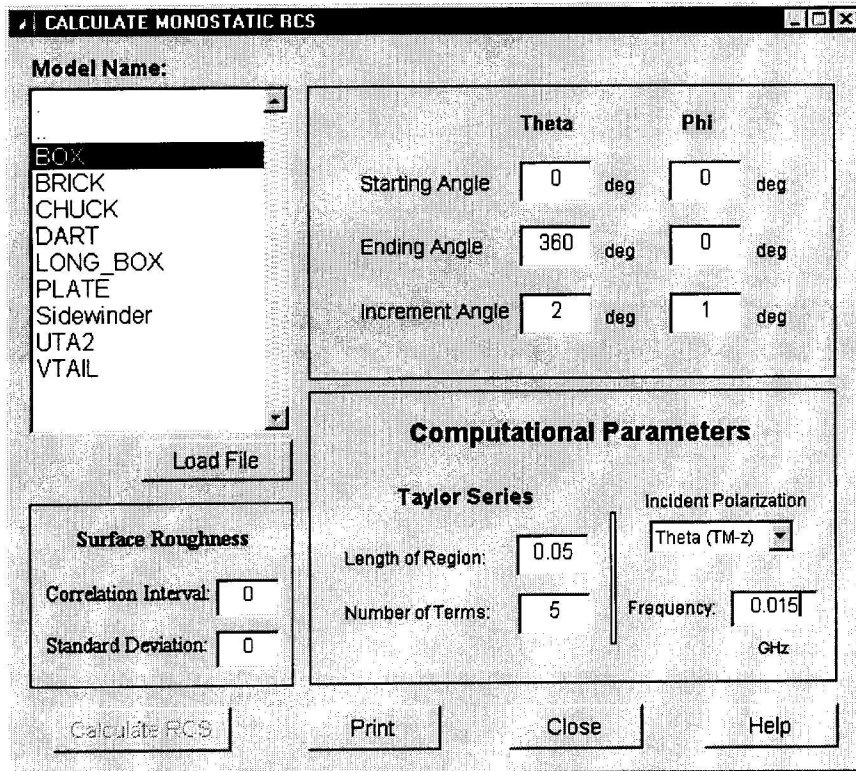

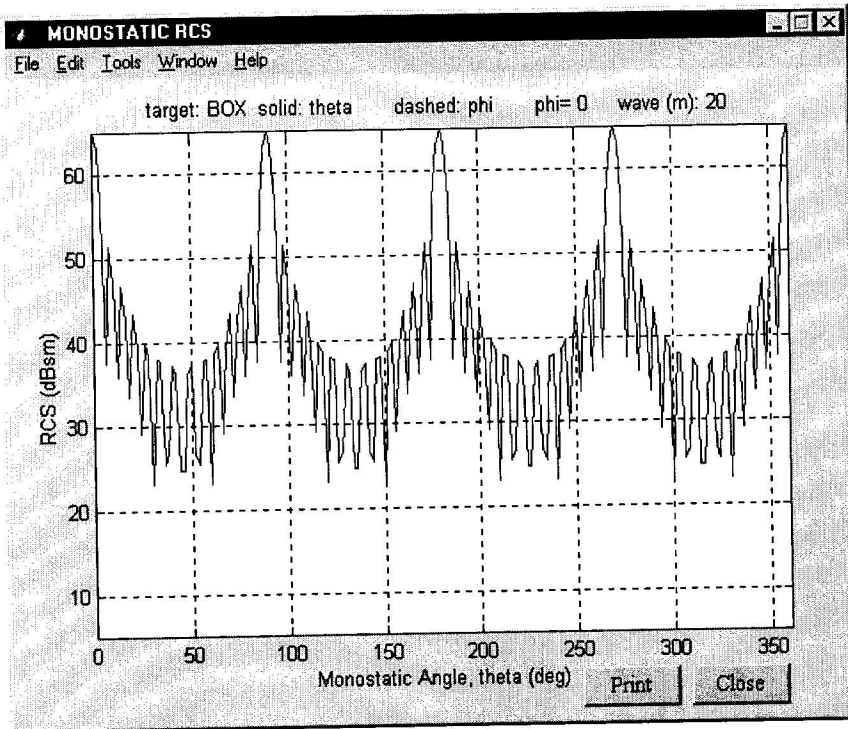Figure 3. The Calculate Monostatic RCS GUI for a smooth PEC box.

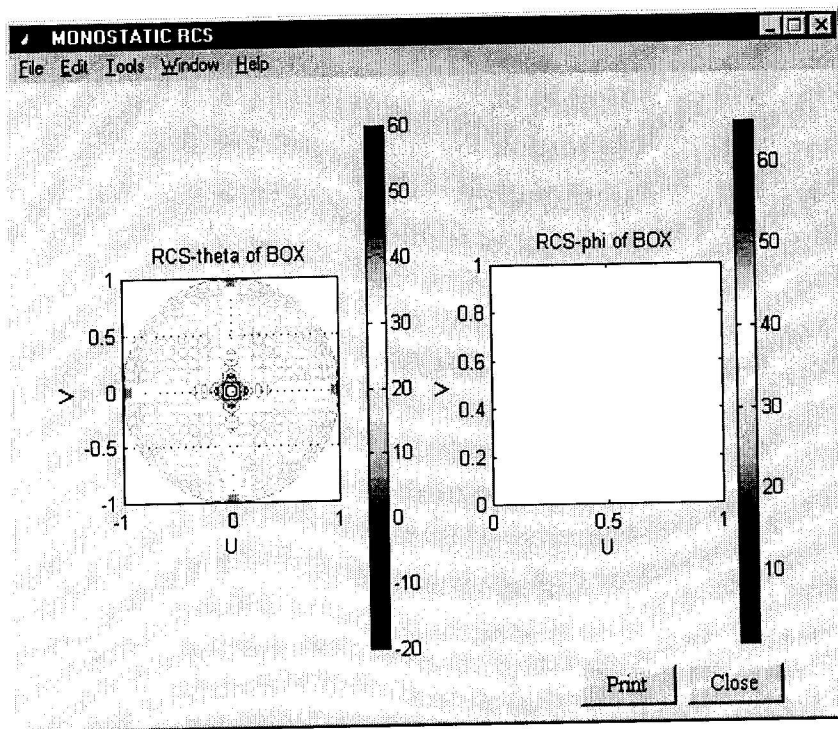Figure 4. Example of a pattern cut for the monostatic RCS of smooth PEC box.

Figure 5. Example of a RCS contour plot for a smooth PEC box.

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AVAILABILITY

POFACETS is available free of charge and can be downloaded from the ACES web site (http://aces.ee.olemiss.edu). It is also available from the author's web site (http://web.nps.navy.mil/~jenn/). Although the software runs under MATLAB it is not entirely platform independent. The GUI version available on the web sites has been tailored for Windows. A version without the GUI is provided for use on UNIX and Macintosh platforms.

ACES Online Review Process

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University, MS 38677

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Introduction

The paperless office is an idea that has been evolving since the computer became as common to the world as the pencil. Until recently, however, the supporting technology was not mature enough to enable this to become reality. With the advent of advanced web server scripting languages and portable document formats it is now possible to take what once was a very intensive paper process, that of reviewing submissions for a journal or conference article, and making it completely paperless over the internet. The push for creating an online review process has been seen all over in many different organizations. A few larger organizations with many resources have taken the path to purchasing software to do this at great expense. The ACES website staff, in our ever-ongoing effort to bring as many resources to the society as possible, took it upon ourselves to create our own system for moving the review process online at the http://aces.ee.olemiss.edu website. This paper gives a small glimpse into what happens when you submit an article for the ACES journal.

It All Begins With a Click

The first step in the whole review processes is to submit an article for possible publication. In order for it to be electronically submitted the document must be in either Adobe Acrobat PDF format (preferred), or in PostScript format. The Adobe Acrobat PDF format is the preferred method of submitting documents due to its high portability and wide availability of viewers for all type of computers. Any postscript submission will be converted by the ACES web site staff to PDF format before processing. While uploading your document to the website, it is necessary to

Figure 1. The upload page.

enter the relevant information about your submission. Items such as title, author names, keywords, and abstract are entered on the submission form to allow your document to be added to the ACES database and allow it to be searched and accessed by editors and reviewers (Fig 1). By entering this information at the submission stage, when it comes time to add this paper to the online searchable database of published articles, it simply becomes a matter of a single click.

Making The Rounds

After the manuscript has been uploaded to the ACES server, an email is dispatched to the journal editor(s) and the corresponding author alerting them to the successful submission. The editor(s) then are able to log on to the system to start the review processes and are presented a quick view (Fig 2.) of what is being submitted and any other information related to the currently active papers. Figure 2 shows items such as recently submitted papers, active papers currently in the review process, submitted reviews for the active papers, accepted papers by the editor(s), papers requiring major and minor revisions, and rejected papers. From this main page the editor(s) will have a sense of what is currently going on in the review system. At this point with a recently submitted paper, the editor(s) are able to quickly view the paper and its information. If the editor(s) decide to activate this paper and assign reviewers, a new page is opened presenting them with the option of assigning reviewers to the paper (Fig 3.). This page not only shows which reviewers have been added, but also suggests reviewers based on the keywords supplied by the authors of the paper. Also here is an option to add new reviewers to the database of reviewers in the ACES system if needed. Every time the editor assigns a reviewer to the paper, the system sends an email to that reviewer notifying him about the editor's request for reviewing a paper. When the editor(s) are finished assigning reviewers, the paper is moved to the active papers category while it is being reviewed.

To Review Or Not To Review

After logging on to the system, the reviewer is presented with a similar quick view of everything the reviewer has been requested/accepted to review (Fig. 4). The first step for a reviewer is to decide if he or she wants to review the paper. The potential reviewer can examine the basic information about the paper (title, authors, and abstract) and decide either way by simply pushing

Journal Editor View

0 - View Information About This Paper   ⊡ - Download/View This Paper   **Q** - Open Review

Just Submitted Papers

DateSubmitted:	Paper:	Title:	Author:	Email:	
⊡ 3/21/00 9:28:42 AM	200003005	Meander Line	Atef	atef@olemiss.edu	Activate

Papers Under Review (Active Papers)

	Paper # Of the Active papers	Corresponding Author	Paper Title
⊡ 0	200003003	Ahmed A. Kishk	The surface integral equations
⊡ 0	200003004	Ahmed A. Kishk	ELECTROMAGNETIC SCATTERING FROM TWO DIMENSIONAL ANISOTROPIC

Reviews For Active Papers

	Paper Title	Corresponding Author	Reviewer	Recommendation
Q 0	ELECTROMAGNETIC SCATTERING FROM TWO DIMENSIONAL ANISOTROPIC	Ahmed A. Kishk	Matt Inman	Accept

Accepted Papers

	Paper # Of the Active papers	Corresponding Author	Paper Title
⊡ 0	200003002	Allen W. Glisson	A SURFACE INTEGRAL EQUATION FORMULATION FOR LOW CONTRAST

Accepted With Revision Papers

Paper # Of the Active papers	Corresponding Author	Paper Title

Figure 2. The journal editor main page.

Making a paper active

Paper Number	Author	Email	Paper
200003003	Ahmed A. Kishk	akishk@olemiss.edu	200003003.pdf

Title: The surface integral equations

Add/Edit Reviewers

Add Reviewer

Reviewer name

Atef Elsherbeni (atef@olemiss.edu)

Submit

Current reviewers of this Paper

Reviewer Name	Reviewer Email
Atef Elsherbeni	atef@olemiss.edu
Matt Inman	mjinman@aces.ee.olemiss.edu

Suggested Reviewers

Atef Elsherbeni	atef@olemiss.edu
Brad Baker	bnbaker@olemiss.edu
Jessica	bnbaker@aces.ee.olemiss.edu
Matt Inman	mjinman@aces.ee.olemiss.edu

Done

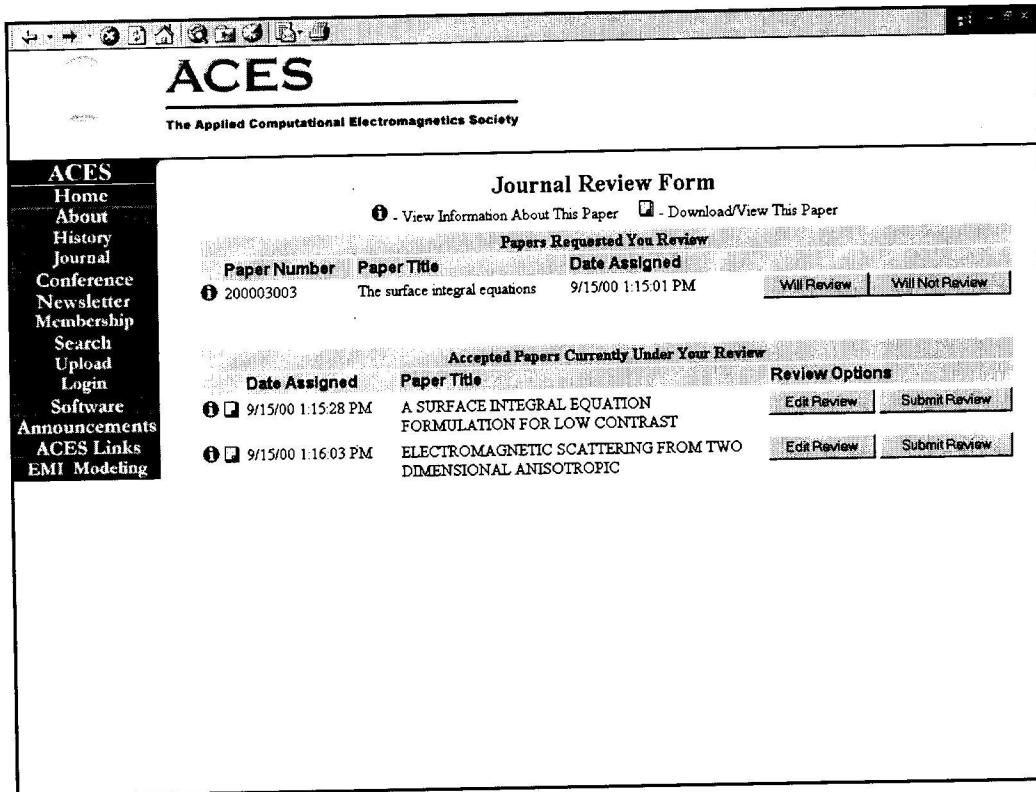Figure 3. The assignment of reviewers page.

Figure 4. The reviewers main page.

the "will review" or "will not review" button to finalize their decision. If the reviewer declines to review the paper, an email is sent alerting the editor and the paper is removed from the reviewer screen. If the reviewer decides to review the paper, the paper is moved to the active review category of the reviewer screen. Here the reviewer may examine the actual paper, and proceeds to compile and edit the review. When editing the review, the reviewer has options on rating the paper, adding comments, and suggesting the course of action for the editor to take (accept, reject, etc) (Fig 5.). The reviewer can choose to come back later and change the review as long as it has not been submitted to the editor using the Submit Review button. To make the review final and alert the editor, the reviewer simply clicks the Submit Review button and the paper is removed
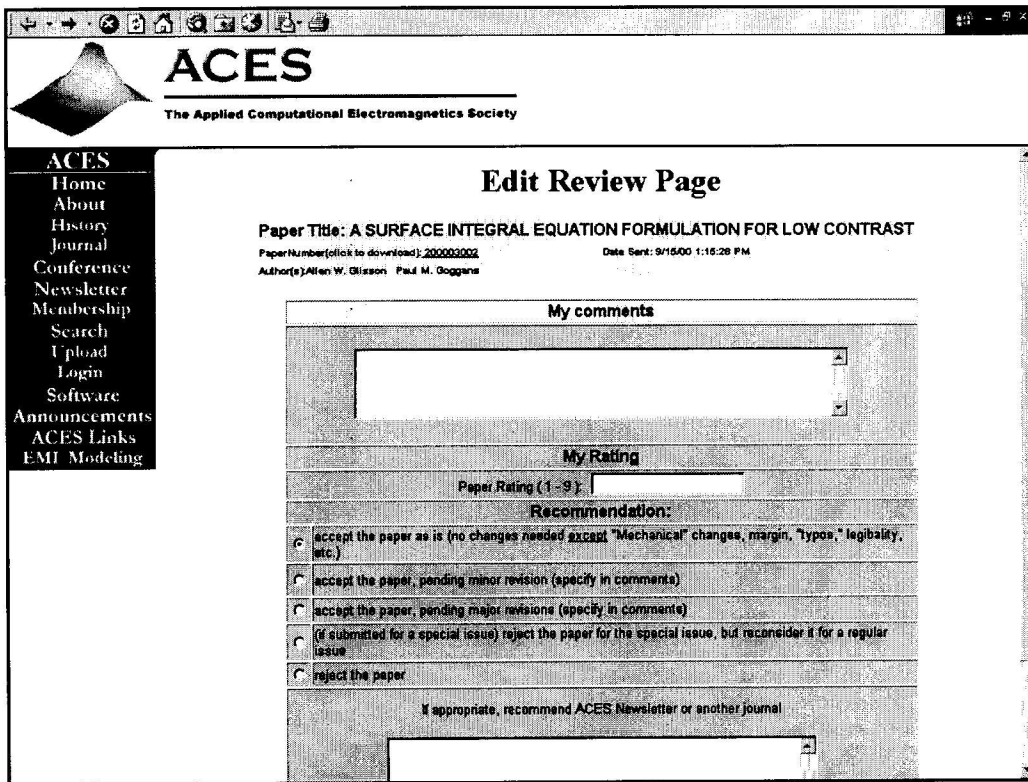
Figure 5. The reviewer's comments and rating page.

from his screen. Once submitted the review is final and no further action on the reviewer's part can be taken related to this article.

Completing The Cycle

After all the reviews have been completed and delivered to the editor, it is time for the editor to make the decision on the final status of the paper. The editor can quickly see the summary reviews on the main page and open the full reviews by the simple link provided. To change the status of the paper, the editor simply opens up the information page about the paper in question and selects which status is appropriate and the paper is filed in that category.

It is hoped that this whole process will not only simplify the process for everyone involved, but also speed it up as well. The ACES website staff is constantly working on new features and

improvements for the ACES website. Comments and suggestions are always welcome at aces@aces.ee.olemiss.edu and will be promptly responded to.

Acknowledgements

Introducing The Authors

Atef Z. Elsherbeni received an honor B.Sc. degree in Electronics and Communications, an honor B.Sc. degree in Applied Physics, and a M.Eng. degree in Electrical Engineering, all from Cairo University, Cairo, Egypt, in 1976, 1979, and 1982, respectively, and a Ph.D. degree in Electrical Engineering from Manitoba University, Winnipeg, Manitoba, Canada, in 1987. He was a Research Assistant with the Faculty of Engineering at Cairo University from 1976 to 1982, and from 1983 to 1986 at the Electrical Engineering Department, Manitoba University. He was a part time Software and System Design Engineer from March 1980 to December 1982 at the Automated Data System Center, Cairo, Egypt. From January to August 1987, he was a Post Doctoral Fellow at Manitoba University. Dr. Elsherbeni joined the faculty at the University of Mississippi in August 1987 as an Assistant Professor of Electrical Engineering. He advanced to the rank of Associate Professor on July 1991, and to the rank of Professor on July 1997. He spent his first sabbatical term in 1996 at the Electrical Engineering Department, University of California at Los Angeles (UCLA).

His professional interests include scattering and diffraction of electrimagnetic waves, numerical techniques, antennas, remote sensing, and computer applications for electromagnetic education. He has

published 55 technical journal articles and 10 book chapters on applied electromagnetics, antenna design, and microwave subjects, and presented over 160 papers at professional conferences. Dr. Elsherbeni is a senior member of the Institute of Electrical and Electronics Engineers (IEEE). He is the electronic publishing managing editor of the Applied Computational Electromagnetic Society (ACES). He serves on the editorial board of the Book Series on Progress in Electromagnetic Research, the Electromagnetic Waves and Applications Journal, and the Computer Applications in Engineering Education Journal. He is the Chairman of the Educational Activity Committee for the IEEE Region 3 Section.

Dr. Elsherbeni's home page can be found at http://www.olemiss.edu/~atef.

Matthew J. Inman received his BSEE in 2000 from The University of Mississippi, and is currently pursuing graduate studies in electromagnetics. He has been recently involved in projects dealing with the animations and visualization of electromagnetic fields. He is the electrical engineering department visualization lab manager and is currently the head maintainer of the ACES website under the supervision of Dr. Atef Elsherbeni.

Mr. Inman's home page can be found at http://www.olemiss.edu/~mjinman
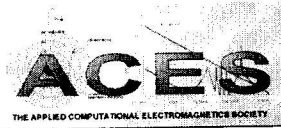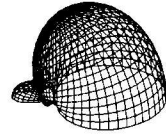
THE APPLIED COMPUTATIONAL ELECTROMAGNETICS SOCIETY

The 17th Annual Review of Progress in Applied Computational Electromagnetics
March 19 - 23, 2001
Naval Postgraduate School, Monterey, California
Share Your Knowledge and Expertise with Your Colleagues

The Annual ACES Symposium is an ideal opportunity to participate in a large gathering of EM analysis enthusiasts. The purpose of the Symposium is to bring analysts together to share information and experience about the practical application of EM analysis using computational methods. The symposium offerings include technical presentations, demonstrations, vendor booths, short courses, and hands-on workshops. All aspects of electromagnetic computational analysis are represented.

The ACES Symposium is a highly influential outlet for promoting awareness of recent technical contributions to the advancement of computational electromagnetics. Attendance and professional program paper participation from non-ACES members and from outside North America are encouraged and welcome.

EARLY REGISTRATION FEES

ACES member $310   Student/Retired/Unemployed $130 (no proceedings)
Non-member $365   Student/Retired/Unemployed $165 (includes proceedings)

$500 BEST-PAPER PRIZE

A $500 prize will be awarded to the authors of the best non-student paper accepted for the 17th Annual Review. Papers will be judged by a special ACES prize-paper Committee according to the following criteria:

1. Based on established electromagnetic (EM) theory
2. Reliable data
3. Computational EM results
4. Practical applications
5. Estimates of computational errors
6. Significant new conclusions

$300 BEST STUDENT PAPER CONTEST

Award presented to best student paper accepted for the 17th Annual Review. (Student must be the presenter on the paper chosen). Submissions will be judged by three (3) members of the ACES Board of Directors during the 17th Annual Review presentations. The prizes for the student presenter will consist of: (1) $300 cash; (2) free Annual Review registration for the following year; and (3) one free Annual Review short course for the following year.

2001 ACES Symposium Sponsored by: ACES, NPS, PSU, MSU, SWRI
In cooperation with: The IEEE Antennas and Propagation Society,
The IEEE Electromagnetic Compatibility Society and USNC/URSI

STUDENT BEST PAPER CONTEST

This will be for the "Best Paper"

submitted for publication in the 2001,

17th Annual Review of Progress.

(Student must be presenter on the paper chosen).

Submissions will be judged by three (3)

members of the ACES BoD during the 17th

Annual Review presentations.

The prizes for the Student presenter will

consist of: (1) $300 cash; (2) free Annual

Review registration for the following year;

and (3) one free Annual Review short

course for the following year.

THE APPLIED COMPUTATIONAL ELECTROMAGNETICS SOCIETY
17TH ANNUAL REVIEW OF PROGRESS IN
APPLIED COMPUTATIONAL ELECTROMAGNETICS

March 19-23, 2001 - Naval Postgraduate School, Monterey, CA

I. CONFERENCE PRE-REGISTRATION FORM

Please print (Black ink)　　　　　(NOTE: CONFERENCE REGISTRATION FEE DOES NOT INCLUDE ACES MEMBERSHIP FEE OR SHORT COURSE FEE)

Last Name　　　　　　　First Name　　　　　　　Middle Initial

Company/Organization/University　　　　　　　Department - Mail Station

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City　　　　　Province/State　　　　　Country　　　　　Zip/Postal Code

Telephone　　　　　Fax　　　　　E-mail　　　　　Amateur Radio Call Sign

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Short Course information is not available at this time. (1) If you desire Short Course information, **contact John Shaeffer**, Marietta Scientific, email: John@mariettascientific.com; Phone: 770-425-9760; (2) If you plan to attend conference, are **not an author presenting** a paper, please **complete and return this form to Richard W. Adler,** ECE Dept/Code EC/AB, Naval Postgraduate School, 833 Dyer Rd, Rm. 437, Monterey, CA 93943-5121, email: rwa@attglobal.net (3) **If you are an author** on a paper, **fill out the banquet area only, if interested. Authors should receive an "Authors Pack" from the Conference Chair. See ACES Web site, page 3, for available short courses.**

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NO LODGING HAS BEEN CONTRACTED AT THIS TIME!

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When you book a room, mention that you are attending the "ACES" Conference, at NPS, and ask for either Government, or Conference rates.

There is NO Conference PARKING at the Naval Postgraduate School or on nearby streets, so we advise you to book a room within walking distance, or plan to use a taxi.

Third Street Gate is the closest gate to the Conference Registration location. IT MAY NOT BE OPEN DURING CONFERENCE DUE TO INCREASED SECURITY. The Ninth Street gate is always open.

AIRLINE INFORMATION

The following airlines make connections from Los Angeles and San Francisco, CA. to Monterey, CA: American & United. Delta/Sky West serves from SFO only and US Air/Express serves from LAX only. There is no airline connection directly from San Jose, CA to Monterey, CA. You can fly to San Jose, but then you must rent a car.

THINGS TO DO AND SEE IN THE MONTEREY BAY AREA

There are many activities for children and adults not attending the Conference. The colorful blue Monterey Bay is a vision of historic Monterey, rich with natural beauty and many attractions from Fisherman's Wharf, (be sure to try the seafood cocktails), to Cannery Row, the Monterey Adobes and city parks, the Monterey Bay Aquarium, Maritime Museum of Monterey, and Pacific Grove Museum of Natural History. The "Artichoke Capital of the World" is only 15 miles from Monterey, in Castroville.

Other things to do include: driving the17-Mile Drive in Pebble Beach; Whale watching, bicycle riding, roller blading, surfing, ocean kyaking, in Pacific Grove; taking a stroll on the white sandy beach in Carmel, a visit to Mission San Carlos Borromeo Del Rio Carmelo, in Carmel, etc. The Monterey Peninsula has 20 Golf Courses. Carmel has many Art Galleries. Wine tasting tours might be available. For more information, call the Monterey Peninsula Chamber of Commerce, Visitors and Convention Bureau at (831) 649-1770.

Call for Papers

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The Applied Computational Electromagnetics Society is pleased to announce the publication of a Special Issue of the ACES Journal on advances in methods and applications that address issues that improve accuracy, resolution and/or convergence in solving present day computational electromagnetic problems. The objectives of this special issue are to present such advances, reviews and/or comparisons of methods. Prospective authors are encouraged to submit papers that address these objectives and other suggested topics listed below.

Suggested Topics:
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- ❖ Use of non-uniform interval selection for:
    - ➤ Collocation
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- ❖ Convergence Acceleration Methods
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DEADLINE FOR PAPERS IS MAY 1, 2001

Potential contributors wishing to discuss the suitability of their contribution may contact either of the Guest Editors listed below. The review process will commence as either editor receives papers. Notification of accepted papers will be made as papers are reviewed. Please send manuscripts to either Guest Editor:

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