Ivar Stakgold and his books PhL 4.30.11

Ivar is alive and well. I think he was 77 in 2002 (based on some bridge playing data) so he must be 86 in 2011. His 3rd edition preface is dated 2010 so he was certainly around then! (I have now emailed him, and he is living in San Diego 12.8.11 !)

Stakgold book in general:

I was able just now to download a certain 1979 Stakgold book which is a compressed version of the two-volume set which has this title

Green's Functions and Boundary Value Problems (1st Ed)

Here is what Stak has to say about it in his preface

As a result of graduate-level adoptions of my earlier two-volume book, *Boundary Value Problems of Mathematical Physics*, I received many constructive suggestions from users. One frequent recommendation was to consolidate and reorganize the topics into a single volume that could be covered in a one-year course. Another was to place additional emphasis on modeling and to choose examples from a wider variety of physical applications, particularly some emerging ones. In the meantime my own research interests had turned to nonlinear problems, so that, inescapably, some of these would also have to be included in any revision. The only way to incorporate these changes, as well as others, was to write a new book, whose main thrust, however, remains the systematic analysis of boundary value problems. Of course some topics had to be dropped and others curtailed, but I can only hope that your favorite ones are not among them.

So this new book has now gone into **2nd E**d (Wiley 1997, Marriott has this) and **3rd Ed** (Wiley 2011).

The 3rd edition has a coauthor as explained here:

Why a third edition? The principal reason is to include more material from analysis, approximation theory, partial differential equations, and numerical analysis as needed for understanding modern computational methods that play such a vital role in the solution of boundary value problems. As I am not an expert in computational mathematics, it was essential to find a highly qualified coauthor. When I moved to San Diego in early 2008, I was offered an office at the University of California, San Diego (UCSD), which, luckily, was next to the office of Michael Holst. Here was the perfect coauthor, and it was my good fortune that he agreed to collaborate on the new edition! The most substantial change for the new third edition is a fairly extensive

You can SEE that all of Ivar's energy has gone into this new book which is probably better adapted to graduate courses and has more modern material. So he has never made a "new edition" of the two volume set (Marriott has the original 1968 volumes). His Delaware web site contains nothing but what you see

below, it has no errata for example. Nor can I find such still on the web. So when I am ready, I might send him an email!

Meanwhile, the two volume set had a new paperback *printing* by SIAM in 1987 for $87 total (it is their Classic Series). These are the only two books Stak ever wrote says Amazon. I suspect errata have been corrected, here is the Google book page (and maybe that is why no errata are on the web!)

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This SIAM edition is an unabridged, corrected republication of the work first published by The Macmillan Company, New York, 1968.

Title	Boundary Value Problems of Mathematical Physics Two Volume Set *Volume 29 of Classics in Applied Mathematics*
Author	Ivar Stakgold
Publisher	Society for Industrial and Applied Mathematics, 1987
ISBN	0898714567, 9780898714562
Length	352 pages
Subjects	Mathematics / General

the page count seems wrong. Marriott does not have this paper thing, so I cannot check to see if bugs have been fixed.

Confusion: The Amazon data above suggests that SIAM published the book in 1987, but the copyright date is 2000. Today 7.10.11 I luckily was able to download Volume II of the SIAM edition from here,

http://www.4shared.com/get/41A4B2yG/Boundary_Value_Problems_Of_Mat.html

and it shows only the 2000 date, there is no mention of 1987. It does say things are "corrected":

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The SIAM site says that Vol I is 2000 as well, so I think the 1987 date is completely bogus. I could not find Volume I for download today. So if I can only have 1 volume, this is the one I think I would choose.

And here is something from the U of Delaware (I wrongly thought Stak died in 2003, it must be someone else I am thinking of)



Ivar Stakgold
Professor Emeritus
Ph.D., Harvard University

Address:
515 Ewing Hall
Department of Mathematical Sciences
University of Delaware
Newark, Delaware 19716

Telephone: 302-831-1874

E-Mail: stakgold@math.udel.edu

Fax: 302-831-4511

Research Interests:
• Nonlinear partial differential equations • Reaction-diffusion • Bifurcation theory.

Here is a review of the two-volume set volume 1 only:

10 [4, 6].—IVAR STAKGOLD, *Boundary Value Problems of Mathematical Physics, Vol.* I, The Macmillan Company, New York, 1967, viii + 340 pp., 24 cm. Price $12.95.

This is the first of two volumes intended for a graduate course in mathematical physics. Although the topics discussed are mathematical in nature, it is written in a clear and pleasant style by a man who knows how to talk to physicists and engineers and who enjoys doing so.

While the easier results are proved, more difficult theorems or those requiring lengthy proof are motivated heuristically, in such a way that the reader at least gets the feeling of how the proof goes. In such cases it is clearly stated that a proof is needed, and whether the proof is difficult or easy.

Chapter 1 deals with ordinary differential equations. In addition to the standard material on this subject, there is a beautiful discussion of one-dimensional distribution theory. Its purpose is to provide a firm foundation for the Dirac delta function, which is then used to define fundamental solutions and Green's functions.

Chapter 2 is an introduction to linear spaces, with particular emphasis on linear transformations in a Hilbert space.

These concepts are applied in Chapter 3 to the study of linear integral equations with symmetric kernels. This chapter includes some discussion of variational methods both for nonhomogeneous problems and for eigenvalue problems. In particular, eigenfunction expansions are discussed, and the Rayleigh-Ritz method and the eigenvalue inclusion theorem are presented.

Chapter 4 deals with singular self-adjoint boundary value problems for second-order ordinary differential operators. It includes a proof of Weyl's limit point-limit circle theorem, and a discussion of the general spectral representation.

The author has been able to concoct a large set of exercises which are nontrivial and educational, but still not too difficult for students taking the course for which the book is designed.

HANS F. WEINBERGER

December 5, 2011

I finally got around to writing up a little errata document, and I see that I have a djvu only for volume 2 of the SIAM 2000. However, google books has both volumes of 2000 *but in different locations*.

I see places where it might exists as an rar download. Tried one, numbv

Password recover: RAR Magic Password Cracker

But same as I already had, vol II.

I need to find somewhere a copy of the 2000 SIAM volume 1 so I can check my errata. Marriott does not have this new one, I could not download it on line anywhere. Google books only has the first half of the thing. So time to look harder.

string boundary value problems of mathematical physics

http://books.google.com/books?id=1u-h48uVyC4C // Volume II only (but I have it djvu)

http://books.google.com/books?id=OdsK7R2PO18C // Volume I only, to page 172 only!

marriott	only old one
weber	only old one
utah state	only old one
idaho state	only old one

I walked down the **Sweet library** and Tony there (17 years) did an IL loan . They use the OCLC system which is (wiki) the Online Computer Library Center. They *maintain* Worldcat. He logged into the OCLC with password etc and I saw the 2000 edition somewhere. When I enter the year 2000, then it shows up for me too on worldcat. Here is the go to list

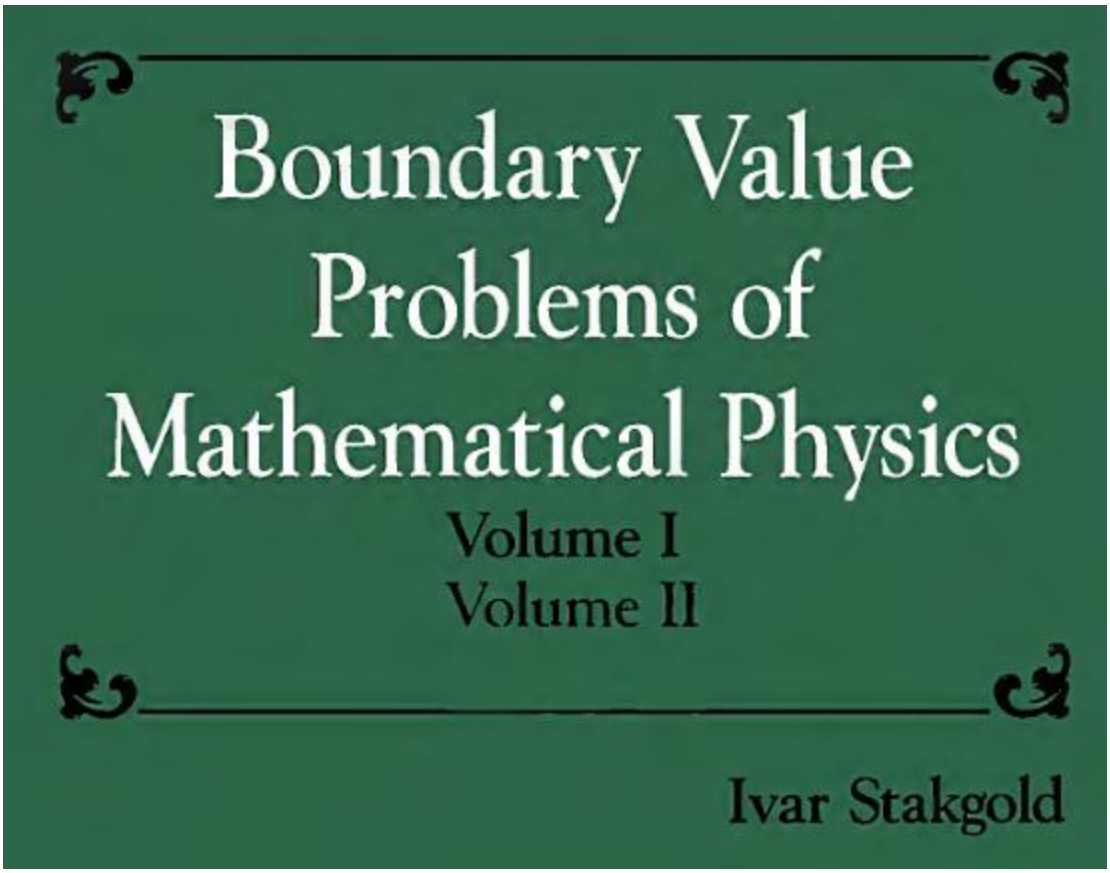
1. **University of Washington Libraries** Seattle, WA 98195 United States	Book	701 miles MAP IT	Library info Search at this library Ask a librarian Add to favorites
2. **University of Michigan** Ann Arbor, MI 48109 United States	Book	1400 miles MAP IT	Library info Ask a librarian Add to favorites
3. **Monroe County Public Library** MONROEVILLE, AL 36460 United States	Book	1500 miles MAP IT	Library info Add to favorites
4. **Howard University** WASHINGTON, DC 20059 United States	Book	1800 miles MAP IT	Library info Add to favorites
5. **Université de Montréal, prêt entre bibliothèques** Montreal, QC H3T 1N8 Canada	Book	1900 miles MAP IT	Library info Add to favorites
6. **MIT Libraries** **Massachusetts Institute of Technology Libraries** Cambridge, MA 02139 United States	Book	2000 miles MAP IT	Library info Ask a librarian Add to favorites

so I would guess they will get it from Seattle if they can.

But then I took one more web search adding djvu and I got this China hit

http://ishare.iask.sina.com.cn/f/7195899.html

which looks like some kind of repository thing. I did a quick download and was stunned to find that this is the 2000 version in a single binding,



It is all there. The name of the download file was

20100326_6842572_0.djvu

which I have now changed. So now I will continue with my errata checking.

So here he is at San Diego

http://ccom.ucsd.edu/people/faculty.php



Ivar Stakgold is a Professor Emeritus in the Department of Mathematical Sciences at the University of Delaware. He is also a Research Scientist in the Department of Mathematics at UCSD. His research interests are in nonlinear partial differential equations, reaction-diffusion equations, and bifurcation theory. He is the author of several books, including three editions of Green's Functions and Boundary Value Problems, a classic graduate textbook on applied analysis and partial differential equations that is used by a number of applied mathematics doctoral programs around the country.

And now finally this

The Cauchy relations in a molecular theory of elasticity.

Stakgold, Ivar.

Abstract

Thesis (Ph. D.)--Harvard University, 1949.

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Download	http://worldcat.org/oclc/76999709
Archiv	OCLC's Experimental Thesis Catalog (United States)
Typ	text
Sprache	eng

and a little more

http://search.barnesandnoble.com/Boundary-Value-Problems-of-Mathematical-Physics/Ivar-Stakgold/e/9780898714562

B&N want $138 just for volume 1 of the SIAM !!

About the Author:
Ivar Stakgold is Professor Emeritus at the University of Delaware, where he has taught since 1975. He is a member of the editorial boards of the International Journal of Engineering Science, Journal of Integral Equations, and the Pitman Advanced Mathematics Program. He is Director of the Delaware Mathematics Coalition and his current research interests include nonlinear boundary value problems, combustion, and climatology. Dr. Stakgold is a former president of SIAM.

So where was he between 1949 and 1975? A period of 26 years. His preface says Harvard and then Northwestern *(Chicago)

IVAR STAKGOLD is Emeritus Professor and former Chair of the Department of Mathematical Sciences at the University of Delaware. He earned his Ph.D. at Harvard University. His research interests include nonlinear partial differential equations, reaction-diffusion, and bifurcation theory. Dr. Stakgold is the former President of the Society of Industrial and Applied Mathematics and the author of a seminal text, *Green's Functions and Boundary Value Problems*. He is also the honoree of a book in the field—*Nonlinear Problems in Applied Mathematics: In Honor of Ivar Stakgold on His 70th Birthday*.

Ivar Stakgold

MathSciNet

Ph.D.

Dissertation:

Advisor: Unknown

Students:
Click here to see the students listed in chronological order.

Name	School	Year	Descendants
Ronald Janz	Northwestern University	1967	
W. Olmstead	Northwestern University	1963	9

This says he was there at least 63-67.

This from a summer 2008 newsletter. He started right as the chair in 1975 and stayed chair till 1991, retiring 1995.

Chair's Message

Peter Monk



I shall remember this year for a very significant reason: after 33 years at Delaware, Professor Ivar Stakgold has left Delaware for the University of San Diego where he has been offered a position as an emeritus professor, and where he will be closer to his family. For as long as I have been at Delaware, Ivar has been a respected member of the Department. Ivar arrived at Delaware as Chair in 1975, serving as Chair until 1991. He retired in 1995 but remained an active emeritus faculty member through March of 2008. I think it is true to say that Ivar deserves a great deal of the credit for building the Department to its present position as a recognized research unit. His arrival coincided with a brave investment by the UNIDEL foundation in our Department and also with the hiring of several of our best known faculty. Under his leadership, Delaware became known as a center of excellence in areas such as Applied Mathematics, Analysis and Combinatorics.

Besides nurturing the Department (with an iron fist – at least from the point of view of a junior assistant professor when I arrived at UD in 1982!), he also added to our national stature by serving as President of the Society for Industrial and Applied Mathematics (SIAM) from 1989 to 1990.

* Received by the editors July 29, 1970, and in revised form November 23, 1970. This invited paper was prepared in part and published under Contract DA-49-092-ARO-110 with the U.S. Army Research Office.

† Department of Engineering Sciences, Northwestern University, Evanston, Illinois 60201. The research and preparation of this paper was supported in part by the National Science Foundation under Grant GP-6616.

The above from a paper submitted in 1970.

So here is my guess on things:

1925	born (confirmed) in Norway! (bridge player) , but Russian
1946	Cornell undergraduate degree (confirmed), Cornell, age 21
1949	Harvard PhD in applied math
1950-1956	assistant professor at Harvard (taught 7 years here)
1956-1960	Wash DC, office of naval research

1961-1974	Dept of Eng'g Sciences Northwestern , taught 13 years here, BV pub!
1975-1991	Chair at Delaware
1991-1995	active department there, wife Alice dies of cancer 1994
1995-2008	emeritus at Delaware
2008-present	at UCSD

2002 age 77 => 2002-77 = 1925 born

conferred with Betty Harmon and Stakgold.

Stakgold learned something about cards and how they work from his mother when he was 12 or 13, but he didn't take up bridge until he went to Cornell. When Kaplan returned to Cornell in 1946 after his war service, "he helped me a lot," said Stakgold. "We went to the local duplicate where he was very good to me, even though he already was playing at a much higher level than I. Bridge was the big thing at Cornell at the time -- any time you would go into the student union you'd see five or six tables of rubber bridge in play."

Stakgold stayed in the Boston area until 1956 where he was an assistant professor at Harvard. At the special party thrown in his honor when he left Boston, Stakgold was extolled by Boston's Larry Weiss as follows: "Ivar Stakgold is one of the best players in the country -- but he's not all that good in the city."

He spent three years in Washington with the Office of Naval Research, then followed that with eight years at Northwestern University in Chicago as head of the math department. His wife Alice contracted cancer in Chicago, and she wanted a change of venue after she recovered. The mothers of both Alice and Ivar lived on the East Coast, so they moved to Delaware where he was math department head at the University of Delaware until his retirement. Alice died in 1994 when a second kind of cancer assailed her.

Ivar was born in Norway, but when he arrived in the United States, the immigration officer said, "You don't look Norwegian." He isn't -- his family is from Russia originally. In fact that's why he could get into the United States before his parents -- he was born in Norway, so no problem. His parents' passports were Russian, so they had to wait.