

The Euler Society Newsletter



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<http://www.eulersociety.org>.

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Euler lived at the Embassy

Society Vice President Ruediger Thiele just pointed out a fascinating fact. The Bavarian Embassy in Berlin is located in Leonhard Euler's house. If in Berlin, that should be a must stop for members of The Euler Society. A picture of the house, as it appears today, is at the right. It may perplex some readers why it is that Bavaria has an embassy in Berlin when Bavaria is one of the German states. Indeed, that is the way things are done in Germany. Each of the states of the German Federation has an embassy in Berlin. Since reunification, most of the states have built or bought modern buildings for their embassies. Bavaria, though, has chosen to keep its embassy in this historic building. We hope that some Society member will visit soon and give us a report on what Euleriana might be there. It would also be interesting to get some information about Euler's living conditions in Petersburg. More information about the Bavarian Embassy is at

http://www.bayern.de/Bayern/Information/bund_europaE.html



“New” Euler Letter?

Staffan Rodhe, in his studies of Euler's Swedish contemporary Samuel Klingenskierna (1698-1765), has come across what seems to be a previously unknown bit of Euler correspondence. The catalog of Euler's letters lists a 1745 letter from Klingenskierna to Euler, asking about some experiments in electricity. Staffan has found a different letter, dated 1763, and posted it, in .pdf format at <http://www.kubkou.se/Kling-Wolff.pdf>.

At the Bookstore

Here we review books and other resources on Euler that should be still available in bookstores and on line. Please send ideas for book reviews to the editor at esandifer@earthlink.net

“‘Polemic’ is only recently become a word of rebuke.” So Clifford Truesdell writes in the Preface to *An Idiot's Fugitive Essays on Science Methods – Methods, Criticism, Training, Circumstances* (Springer, 1984, ISBN 0-387-91221-5). In an era when most Euler scholarship was done in the Soviet Union and in the DDR, Truesdell kept the candle lit in the West, though his work and his personality were both controversial. He also writes “Those men of my own age who did not simply ignore my work were prone to reject it, ... They found me guilty of felonious thought.” This volume contains 42 “Fugitive essays”, about a third of which directly concern Euler, and more than half of the rest involving Euler indirectly. Thus this volume, along with the multilingual, multi-authored volume *Leonhard Euler* published by Birkhäuser in 1983 on the 200th anniversary of Euler's death, combine to be the most concentrated accumulations of Eulerian scholarship in many years. Thus, the *Fugitive Essays* ought to be required reading for anyone trying to understand Euler. They are entertaining, opinionated, well informed and at times controversial. Nor is it inaccurate to call them “polemics.”

Now that Truesdell has passed away and we try to form a post-Truesdell and post-Soviet community of Euler scholarship, it may be a good time to examine the impact of Truesdell in relation to the Soviet-DDR scholarship and the efforts of the editors of the *Opera Omnia*. Any such study would have to include the *Fugitive Essays*.

In the Treasure Room

We describe books and other resources on Euler that are out of print, or may even be called “antiquarian,” so that readers might know what to look for in libraries and used book stores and what they might be getting if they buy or bid on line. Please send ideas for book reviews to the editor at esandifer@earthlink.net

Euler wrote two works on the topic we now call Graph Theory. The first, on the Königsburg Bridge Problem, is one of his most widely read papers and introduces the idea we now call Eulerian paths. The second, E-309, “Solution d’une question curieuse que ne paroit soumise à aucune analyse” written in 1759, solves the problem of the Knight’s Tour. Euler writes “I found myself one day at a party where, on the occasion of a game of chess, someone proposed this question: *To travel with a knight all the squares of a chess board without ever stopping two times on the same square, and beginning in a given square.*” The person who proposed the problem may have been Philidor, one of the greatest chess players ever. Problems like this are now called Hamiltonian Circuits.

Of course, Euler did not have the last word on chess. In 1962, one G. D’Hooghe, Pharmacien published *Les Secrets du Cavalier: Les problèmes d’Euler* (Editions Brepols, Bruxelles-Paris), a brilliantly irreverent account of Euler’s work on the subject and some extensions. It was written for the chess-playing audience, so its “proofs” are carefully disguised, sometimes as algorithms and other times hidden in dialogues among chess players. It displays a sense of humor characteristic of science the 1950’s and 1960’s, a time of scientific optimism when scientists read *The Journal of Irreproducible Results* and *The Worm Runner’s Digest*.

Besides its humor, D’Hooghe exploits the most modern technology of the time. He and his collaborators built a special purpose computer to make a complete study of all possible Knight’s Tours, but because of the limits of their technology, they are only able to complete the study on 4x5 and 5x5 chess boards. This is an interesting, though rather difficult to find little book.

Euler et Ses Amis

We continue with excerpts from Gustav du Pasquier’s book of this title, as translated by John Glaus
Another snippet from Du Pasquier

St. Petersburg. Daniel Bernoulli and Jacques Hermann, Isaac Bruckner and a host of lesser Swiss compatriots and German émigrés are there. However, in dark Slavic fashion the horizon clouds. Nicholas Bernoulli II, dies while Euler is en route and Catherine I, Peter the Great’s czarina dies the day Euler arrives in Russia. Her successor Peter II waxing and waning with the nascent academy in the balance has not yet understood its mission to bring about useful discoveries. Admiral Sievers extends the courtesy of a welcome to Euler from the fledging Russian navy, knowing full well that a person of Euler’s caliber who has produced a winning paper on the masting of ships can only improve the value of the *manu navalis*.

Happily for mathematics, the politics of the nation calmed with the death of Peter II and stabilized with Anna II on the throne. There were three Baseler mathematicians of note: Jacques Hermann of "Phoronomia" fame as well as Daniel and Jean Bernoulli. Together they produce the first sensible precursor to the theory of thermodynamics. As preceptor to the young Peter II, Hermann wrote, *A Mathematics Reader* in collaboration with the great French astronomer Joseph-Nicolas Delisle. The Hermann and Bulffinger’s (winner of the 1728 Paris Prize for weight) departures allowed Euler to head the Department of Physics at the Academy. To be continued..... Euler and Goldbach and Euler’s scientific activity from 1733-1741.

Auction Notes

In a two day auction “Geometry and Space”, in London April 10-11, 2002, Sotheby’s auctioned the three volumes of Euler’s *Optics* for 4935 Pounds. The estimated price had been only in the range of 1000-1500 pounds. The highest priced items in the auction were a copy of the 1482 Ratdolt edition of Euclid’s *Elements* which went for 124,250 Pounds, a copy of Luca Pacioli’s *Somma d’aritmetica geometria proporzioni e proporzionalità* from 1494 for 151,750 Pounds and a 1521 copy of Jean Pelerin’s *De artificiali perspectiva*, third edition that went for 212.250 Pounds.

HOMSIGMAA

The MAA has a new Special Interest Group, HOMSIGMAA (History of Mathematics Special Interest Group of the Mathematical Association of America), which came into being as the result of hard work by Rob Bradley and Amy Shell. HOMSIGMAA doesn’t yet have a page at the [MAA Web site](#). For now, it’s hosted by Rob Bradley [here](#).

On This Date in Euler’s Life

We use Old Style dates for events in Russia, New Style elsewhere.

May 3, 1759	Euler reads E-316, “Sur les Lunettes à trios verres qui représentent les objets debout”, “On glasses with three lenses which represent objects upright”.
May 27, 1742	Goldbach’s letter to Euler containing the Goldbach Conjecture that every even number is the sum of two prime numbers.
May 28, 1746	Euler writes Goldbach telling him that $\pi = 16 \arctan(1/5) - 4 \arctan(1/239)$
May 29, 1766	Euler and his son Johann Albrecht leave the Berlin Academy to return to Petersburg

June 6, 1777	Last surviving dated letter Euler wrote, a letter to Stanislaw August
June 8, 1724	Euler graduates from the University of Basel with a degree “maître ès arts
June 17, 1751	Euler reads E-242 before the Berlin Academy. In this paper, he almost solves the Four Squares Problem by showing that every positive whole number is the sum of at most four perfect squares of rational numbers.

Calls and meeting announcements

Euler 2K+2

The Euler Society’s first big event is scheduled for Rumford, Maine August 4-7, 2002, hot on the heels of the MathFest in Burlington. You can register on line at <http://www.euler2007.com>. Abstracts, or at least solemn promises to send abstracts, are due May 1. We may be able to accept up to 3 late abstracts on a space-available basis. Send abstracts to Ed Sandifer at esandifer@earthlink.net. Note: Ed is out of the country May 1 to May 11. Abstracts received and in order

Homer White – Euler on the Center of Similitude
 Samuel Kutler – Euler and his successors on some definitions and notions
 Eisso Atsema – Geometry of quadrilaterals
 Ryoichi Nakata – Analysis of motion of a rotating tube
 David Pengelley – The discovery of the Euler-Maclaurin formula for series
 Ron Calinger – The Euler Lecture – see Newsletter I.2
 Dominic Klyve and Lee Stemkoski – Graeco-Latin Squares and a Mistaken Conjecture of Euler

Abstracts promised and possible topics

Rob Bradley – Euler and d’Alembert
 Fred Rickey – Euler’s *Introductio*
 Kim Plofker – The Indian solar year
 John Glaus – Euler the administrator
 Craig Waff – Euler and Clairaut
 Ed Sandifer – Some patterns in Euler’s Petersburg mathematics

Call for Papers

The Euler Society calls for papers to be presented at the E2K+2 Conference, August 4-7, 2002 (See below). The Call for Papers is on line at http://www.euler2007.com/CallForPapers_1.htm. Send proposals (title, abstract, presenter and contact information) to esandifer@earthlink.net by May 1, 2002. A limited number of late abstracts may be accepted on a space available basis.

Call for limericks

Continuing a vile tradition in newsletters of Certain Societies on the History or Philosophy of Mathematics, we shamefacedly solicit limericks, clerihews, haiku and other short poetry related to the life, works and influence of Leonhard Euler. Send them to the Editor at esandifer@earthlink.net.

Call for contributions

The Newsletter will gladly include short contributions about Euler, his life, works and influence, and we will provide links to longer contributions. Contact the Editor at esandifer@earthlink.net.

Upcoming Math History events

May 2, 2002	Pohle Colloquium , Adelphi, Garden City, NY – Joe Malkevich and Walter Meyer - Theory and Applications in the Teaching of Linear Algebra: Evolution During 1948-1999
May 4, 2002	John Fauvel Lecture – London
May 24-26, 2002	CSHPM annual meeting – Toronto
June 29-30, 2002	Arithmos V, Danbury, CT. www.arithmos.org . d’Alembert, Euler and Lagrange
August 1-3, 2002.	MathFest in Burlington, Vermont
August 4-7, 2002	E2K+2 , Rumford, Maine. See below.
July 27-28, 2002	Arithmos VI, Danbury, CT, www.arithmos.org . Archimedes
October 2, 2002	Pohle Colloquium , Adelphi, Garden City, NY – Ron Calinger of Catholic University

The Mission

The Mission of **The Euler Society** is threefold: It encourages scholarly contributions examining the life, research, and influence of Leonhard Euler. In part, these will be set within his times, that is, within the Enlightenment, the rise to European power status of Russia and Prussia, and the growth of royal science academies. **The Euler Society** will also explore current studies in the mathematical sciences that build upon his thought. And it will promote translations into English of selections from his writings, including correspondence and notebooks, in leading up to the tercentenary of his birth in 2007.

The Euler Society Executive Committee

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Membership Form

To join **The Euler Society** or to renew your membership, please fill out this form and send it with a check for \$50 US to

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Use this same form and address to change your membership data.

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