The Euler Society Newsletter

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Calinger to deliver Euler Lecture

Ronald Calinger, Professor of History of Catholic University and Chancellor of The Euler Society, will deliver the first Euler Lecture at the upcoming E2K+2 Conference in August. The title of his address will be "Leonhard Euler: The Happiest Man in the World" He will cover aspects of Euler's first twelve years in Berlin (1741 - 1753), a time of prodigious achievement according to his grandson. The paper will consider his relations with Frederick II, his role in renovating the Royal Brandenburg Society into the Berlin Academy of Sciences, and his rise to preeminence in the mathematical sciences. It will examine a few selected areas of his most important research on infinitary analysis, the shape of Earth, the three body problem, a pulse theory of optics, and continuum mechanics. The paper will also review his religious views, criticism of Wolffian free thinking and science, and support of Pierre de Maupertuis on the principle of the conservation of living forces. We plan to circulate the paper before the meeting, and to leave time for discussion, especially for those members of the audience who have read the paper before the meeting.

Ronald Calinger is a professor of history at the Catholic University of America. His doctorate in the history of science is from the University of Chicago (1971). He has written extensively on the history of the mathematical sciences in the eighteenth and the nineteenth century. With financial support from the Hitachi Foundation, he began the International Virtual Institute for Historical Studies of Mathematics (http://ivihsm.cua.edu). In 1996, the Austrian government awarded him the Austrian Cross in the Sciences and Arts, First Class. His main area of research is Leonhard Euler's life, work, and influence. His two recent books are *Classics of Mathematics* (1995) and *A Contextual History of Mathematics: to Euler* (1996).

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

A History of Algorithms From the Pebble to the Microchip, Jean-Luc Chabert, et. al., Springer, 1998, an English translation of the 1994 French edition *Histoire d'algorithmes. Du caillou à la puce.*, Éditions Belin, Paris.

A review of this book is at MAA Online at http://www.maa.org/reviews/histalgo.html. The book describes the history of calculation, mathematics problems where the answer is a number. There are a great many snippets of translations of original mathematics, embedded in explanations of content and context. Euler, Master Calculator, appears often. For example, a bit more than two pages from his 1744 "Essay on Continued Fractions" captures what we now consider the important points of the paper. The authors comment "Except for the fact that it was written in Latin, Euler's formulation is modern enough for a transcription to be unnecessary.

We also get a page from the *Introductio* about series, some from his first paper on the Euler-Mascheroni constant, and about half a dozen others. In the section on the Euler-Maclaurin summation formula, we see the work by both namesakes and thus see why share the naming of the formula.

Though the book is only about 10% Euler, it's a good book anyway.

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

Léonard Euler et ses amis by L.-Gustave du Pasquer, Hermann, Paris, 1927

This is a delightful and informal little biography (in French) of Euler, written by the editor of Series I Volume 7 of the Opera Omnia. The playful flavor of the book fits appropriately with the volume of the O.O., since Volume 7 is the volume that includes recreational mathematics, like Euler's "Knight's Tour" paper, and the Königsburg Bridge Problem.

Here are a few passages from the book, as translated by Euler Society Ombudsman John Glaus:

Leohnard Euler was born in Basel on the 15 April 1707 (April 4 in the old style). His father Paul Euler, pastor of the Church of Saint John in Basel, had married into the family of Marguerite Brucker which already contained a number of renowned scientists. By 1708, Paul Euler had been called to be the pastor in Reihen, a small village next to Basel. It was there in the countryside that Leonard Euler passed the years of his childhood. Life in a rustic setting combined with the example set by his parents, provided him with a simple and virtuous upbringing which he kept all his life and by strengthening his character it provided the springboard to the long and glorious career that has immortalized his name. A story is told which underscores his personal characteristics. The young Leohnard often had the opportunity to watch hens lay eggs. One day, having secretly collected some eggs and not gone to dinner, his parents worried has to search for the little four year old him for quite a while. When they discovered him in a corner of the hen house, they asked him what he was doing there, he replied in his most serious mien that he intended to lay some eggs and watch them hatch into little chicks.

A few days after the nomination of his competitor Stahelin, Leohnard Euler, fully self-possessed with his friend Daniel Bernoulli's promise, he left Basel on April 5, 1727 and traveled down the Rhine by boat to Mayence. From there the trip continued on foot through Frankfurt am. Main , Cassel, Hanover, Hamburg, Lubeck and then again by boat to Reval and Kronstadt. Having arrived in St. Petersburg, Euler was named as adjunct to the mathematics class of the Imperial Academy of Sciences.

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.

Limericks

by Dick Klingens

In the original Dutch	Author's English translation
Een hoofdonderwijzer uit Rauwerderhem	A schoolmaster in Rauwerderhem
Wist niets van Euler (en die niet van hem)	Didn't know anything of Euler (and he not of him)
Maar ondekt tot zijn glorie	But discovered at his glory
A posteriori	A posteriori
Het collineair zijn van H, Z en M.	The collinearity of H, Z and M.

H, Z and M are used in Holland for orthocenter (hoogtepunt), and gravity center (zwaartepunt) and center of the circumcircle of a triangle (middelpunt).

On This Date in Euler's Life

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

March 2, 1758	Euler reads E-309, "Solution d'un question curieuse, qui ne paroit soummise à aucune analyse", his paper on the Knight's Tour problem.
March 4, 1751	Euler reads his memoir E-178, "Réflexions sur les divers degrés de Lumière du Soliel et des autres Corps celeste", "Thoughts on the various degreees of sunlight and other heavenly bodies"
March 6, 1742	Euler writes Goldbach announcing that no numbers of the form $4mn-m-1$ or $mn-m-n^a$ are perfect squares (#761 in the Correspondence Catalog)
March 8, 1753	Euler reads E-201, "Calcul de probabilité dan les Jeux de hazard", "Calculation of probabilities in games of chance".
March 9, 1752	Euler reads E-246, "Subsidium doctrinae sinuum", "Assistance in the doctrine of sines" to the Berlin Academy
March 17, 1764	Euler's last letter to Goldbach (#910 in the Correspondence Catalog)
March 20, 1749	Euler reads his memoir E-228 "De numeris quae sunt aggregata duorum quadratorum", On numbers that are the sums of two squares" to the Berlin Academy.
March 23, 1752	Euler reads E-249, "De aptissima rotarum dentibus figure tribuenda" about friction and wear in gears.

April 5, 1727	Euler leaves Basel for Petersburg, never to return
April 8, 1756	Euler reads E-276, "Delucidationes de resistentia fluidorum", "Investigations on the resistance of fluids", in a sense a still-unsolved problem because of its relation to the Navier-Stokes equations.
April 15, 1707	Euler born near Basel, Switzerland
April 17, 1766	Euler's son reads A-22, his last paper in Berlin, "Réflexions sur la variation de la lune."
April 24, 1755	Euler reads E-223, "Sur la variation de la latitude des Etoiles, et l'obliquité de l'Ecliptique", "on the variation of the latitude of stars and the obliquity of the ecliptic"

Who's Who in Euleriana

A few of the people who appear in the life and times of Euler

Empress Anna (1693-1740)

Empress of Russia, 1730-1740, daughter of Ivan. Married to Frederick, Duke of Courtland, who died shortly after their marriage. The real power during her reign was exercised by Ostermann (foreign affairs), Munnich (military affairs) and Biron (internal administration).

Jakob Hermann (1668-1733)

Basler mathematician and the author of "Phoronomia." Euler refers to Hermann's work many times in his own early work.

Paul Euler (1670-1745)

Leonhard's father.Theologian and pastor of the Reformed Church (Husserl) in Riehen, Basel- Kanton. Paul was a student of mathematics and theology Paul Euler defended his thesis on October 8 1688 under the presidence of Jacques Bernoulli. Paul Euler supported his son's endeavors to leave for Russia.

Daniel Bernoulli (1700-1782)

Studied medicine at Basel, Heidelberg, Strasbourg and with Michelotti and Margagni in Italy. At 24 he turned down the presidency of the Academy of Sciences of the Republic of Genova and left for a position in mathematics in St. Petersburg.

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.

Expected speakers include Rob Bradley (Adelphi), Homer White (Georgetown College), Fred Rickey (West Point) Kim Plofker (Brown and Dibner Institute), John Glaus (Euler 2007), Craig Waff (Grolier), and others. But get those abstracts in early, folks!

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, presentor and contact information) to esandifer@earthlink.net by May 1, 2002.

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

April 3, 2002	Pohle Colloquium, Adelphi, Garden City, NY – Steve Gimbel of Gettysburg College
April 15, 2002	Leonhard Euler's 295th birthday

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
August 1-3, 2002.	MathFest in Burlington, Vermont
August 4-7, 2002	E2K+2, Rumford, Maine. See below.
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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