

# The Euler Society Newsletter



Volume 3, number 1  
June, 2004

Visit The Euler Society home page at  
<http://www.eulersociety.org>.

## Photos from Euler 2003

If you have photos of Euler 2003, or of anything else regarding Euler, please see the Call for Photos below.  
In the last Newsletter, we asked readers to try to identify the people in the Group Photo below. Try one last time before checking our answers, given below the photo.



**Back row** – Craig Waff, Ron Calinger, Erik Tou, Larry D’Antonio, Domimic Klyve, Stacy Langton, Rob Bradley, Bill Dunham, Mary Lynn Doan, John Doan, Lee Stemkoski, Roger Godard, Marc Phillips

**Front Row** – John Glaus, Rachel Esselstein, Ed Sandifer, Fred Rickey, Bruce Burdick, Mary Ann McLoughlin, Dierdre Collins

## At the Bookstore

### List of Reviews

We list the books that have been reviewed in the first two years of this Newsletter. The notation II.3 means that the book was reviewed in Volume II (2003), issue number 2.

- I.1 *Euler The Master of Us All*, by William Dunham, Mathematical Association of America, 1999.
- I.2 *Leonhard Euler*, by Ferdinand Rudio, Zürcher & Furrer, Zürich, 1909.
- I.2 *Léonard Euler et ses amis* by L.-Gustave du Pasquier, Hermann, Paris, 1927
- I.3 *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.
- I.3 *Les Secrets du Cavalier: Les problèmes d’Euler*, by G. D’Hooghe, Editions Brepols, Bruzelles, 1962
- I.3 *An Idiot’s Fugitive Essays on Science: Methods, Criticism, Training, Circumstances*, by Clifford Truesdell, Springer, New York, 1984.
- II.1 *June 8, 2004: Venus in Transit*, by Eli Maor, Princeton University Press, 2000.
- II.1 *Gamma: Exploring Euler’s Constant*, by Julian Havil, Princeton University Press. 2003.
- II.2 *The Euler-Mayer Correspondence (1751-1755)* by Eric G. Forbes, American Elsevier Publishing, New York. 1971.
- II.2 *The Man Who Flattened the Earth: Maupertuis and the Sciences in the Enlightenment* by Mary Terrall, University of Chicago Press, Chicago and London, 2002.
- II.3 *Writing the History of Mathematics: Its Historical Development* edited by Joseph W. Dauben and Christoph J. Scriba, Birkhäuser, Boston, Basel and Berlin, 2002.
- II.4 *Science in Russia and the Soviet Union: a short history*, Loren R. Graham. Cambridge University Press, 1993.
- II.4 *Science in Russian Culture: a history to 1860*, Alexander Vucinich. Stanford University Press, 1963.
- II.5 *The Great Cat Massacre*, Roger Darnton, Vintage, 1984.
- II.5 *Isaac Newton*, James Gleick, Pantheon, 2003 and Harper Audio, 2003.

## The Great Cat Massacre

Robert Darnton's *The Great Cat Massacre and other episodes in French cultural history* has become something of a classic in the History curriculum since it was first appeared in 1984. It is a series of six essays, varying in length from 24 to 66 pages, on a carefully crafted sequence of 18<sup>th</sup> Century French topics, from peasants to philosophers. The title episode, the massacre of the cats, is perpetrated by a mob of printers' apprentices in the second episode.

It is a mark of a well-written book that a reader can find a great many threads and progressions that build through the course of the book. Readers of these pages may want to pay attention to the themes of classification systems. In the first essay we learn that scholars of folk stories use a classification scheme that describes over a thousand different story types. We know, of course, that the folk who told those tales had no such classification scheme; it was imposed "from above" by scholars. In the third essay, Darnton tells of a bourgeois gentleman describing his townspeople as they go by in the annual parade. The order of the procession is a classification, with the more prestigious citizens leading the way. The sixth essay is of particular interest to some of us; it describes the classifications of knowledge proposed by Bacon, by Chambers and by d'Alembert and Diderot. Darnton shows us how these proponents competing world views used their classification systems to promote their philosophies. (For those who need to be punched in the nose with the point of all this, we note that all of Euler's work is classified into the 80 or so volumes of the *Opera Omnia*. That classification itself promotes a particular view of Euler and his work, and makes it a challenge for us even to conceive of perspectives on his work that are out of harmony with that view.)

A few of our favorite characters make several appearances. The fourth essay is about the files kept by one Police Inspector d'Hémery assigned to "investigate" the literary community in France. He kept files on over 500 writers, including d'Alembert, Diderot, Fontenelle and Rousseau. D'Hémery reports that d'Alembert urges "all *philosophes* to embrace a life of chastity and poverty" and describes him as "a charming man, both in his character and his wit."

Even though it's not about Euler, it's not about mathematics, and it's not about Russia, Prussia or Switzerland, Darnton's book tells us a good deal about the cultural context of the Enlightenment and the environment in which Euler's work was done and read.

*The Great Cat Massacre and other episodes in French cultural history*, by Robert Darnton, Vintage, New York, 1984, ISBN 0-394-72927-7

## Isaac Newton

Each age has its own interpretation of the life and work of Isaac Newton. Our age has several, the latest being by the well known popular author James Gleick. Many of us read his book *Chaos* when it came out several years ago. His new book on Newton was also released on CD as an audio book, and it is that edition we used here.

There are those of us who believe that the Renaissance ended when Cardano published his solution of cubic equations in the mid 1500's. This was the first time Europeans were sure that they had done something that the Ancients had not been able to do. Their goals shifted from recovering the wisdom of the Ancient world to going beyond their achievements and entering into a new world.

Gleick, though, describes a Newton rooted much more in the Renaissance than in the Enlightenment, absorbed as he was with alchemy, theology and biblical chronologies. He was certain that the Ancients knew the secrets of planetary orbits, gravity and inverse square laws and that he was only rediscovering them. Moreover, he brushes aside the scribblings of algebra as something trivial. Even if the Ancients didn't use algebra, they didn't really need it. They had better secrets, still hidden.

Newton's politics, sometimes radical, also can be interpreted as looking backward instead of forward. When he arranged it so he would not have to take holy vows in order to remain the Lucasian Professor, it wasn't in order to free the Chair from the influence of the Church but so that he could keep the Professorship himself. Likewise, when the King was Catholic, he petitioned against allowing the appointment of a Catholic master at Cambridge. Gleick's interpretation makes this seem less like an independent institution asserting its sovereignty and more like a stodgy university trying to keep things from changing. Still, this last episode led to Newton's appointment as the Member of Parliament for Cambridge, where he sat silently as Parliament passed monumentally important legislation asserting that even the Monarch was subject to the rule of law.

Reading of Newton helps us Eulerians in at least two ways. First, of course, Newton was one of the giants on whose shoulders Euler stood. We need to understand what Newton did in order to understand what Euler added to it. Second, and a bit more subtle, we see the variety of valid ways Newton, his life and his work can be interpreted. We have hardly any comprehensive interpretations of Euler. With luck, there will be one or two over the next few years, likely timed to coincide with Euler's Tricentennial in 2007. We should be disappointed if those interpretations are too similar. We should take the diversity of interpretations of Newton as a model.

Gleick's book is pleasant and thought-provoking. Also, listening to it gives it a different flavor and is highly recommended.

*Isaac Newton*, by James Gleick, Pantheon, 2003. 288 pages. ISBN 0375422331. Also available as an audio cassette or audio CD from Harper Audio – 5 ½ hours.

## An Eneström mystery

Where is E 528? Eneström lists this article as “Annotatio in praecedentem dissertationem,” published in 1779 in the *Acta* of the Petersburg Academy. The cross reference table that tells us wherein the *Opera Omnia* to find a given Eneström number tells us to look in III.9, but it isn't there. All those numbers are over 800. So where is it? It's not clear what the “praecedentem dissertationem” was, because this two page article begins on page 201 of its volume. The Euler article before it comprises pages 162 to 187 and is “circa naturam aëris” – about the nature of air. That article appears in the hard-to-find II.31, published just recently and not yet in many libraries. Is E 528 a sequel to E 527?

If you find E 528, please contact Lee and Dominic, so they can complete the Data Base.

## Upcoming Events

### Euler 2004 – Countdown to the Tercentenary

The Euler Society will return to the Conference Center at Roger Williams University for Euler 2004. As in 2003, the meeting will begin with a Sunday evening reception, and will extend to noon on Wednesday. The dates will be August 8 to 11.

Registration procedures will be very similar to those for Euler 2003. Abstracts will be due on July 1.

### Euler in Phoenix

Bill Dunham and Ed Sandifer will be running a Minicourse on Euler at the Phoenix Combined Mathematics Meetings of the MAA, AMS, AWM, and others next January. The Minicourses are the ones that meet twice during the meetings for two hours at a time. Bill Dunham wrote *Journey Through Genius* and *Euler: The Master of Us All*. Ed Sandifer is known to some as the Editor of this Newsletter. The MAA usually charges a little extra, something like \$35, to attend a Minicourse.

### Mathematical Instruments in Phoenix

The Phoenix meetings (see above) will also feature a Short Course on mathematical instruments, titled “The Material Culture of Mathematics.” Short Courses are the ones that meet all day for two days before the main meetings begin. The session “Mathematics in the Ancient World” at the Baltimore meetings was a Short Course. The Short Course is being organized by Amy Shell-Gellasch and Glen van Brummelen. Short Courses usually cost a bit more than MiniCourses, something on the order of \$100.

## Proceedings

The Proceedings of Euler 2002 were distributed on CD (compact disk) at Euler 2003. Members of The Euler Society and others who attended either Euler 2002 in Rumford or Euler 2003 in Rhode Island are entitled to copies. If you did not receive a copy, please send your name and mailing address to the Editor at [esandifer@earthlink.net](mailto:esandifer@earthlink.net).

## Proceedings Deadline

The deadline for items for the Proceedings of Euler 2003 will be **June 1, 2004**. The preferred format for submissions will be as Microsoft Word documents. Second choice is as a .pdf document. Third choice is on paper. Items submitted as Word documents will appear in the Proceedings in both .doc and .pdf format. We are considering .html as well, but are not prepared to commit to that.

## 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](mailto:esandifer@earthlink.net).

## Call for Photos

If you took pictures at Euler 2003, or if you have pictures from other places relating to Euler, please send them to the Editor. If you have several, then please consider burning them on a CD and mailing them. A few at a time by eMail will work, too.

## 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

|                        |                     |                                      |  |
|------------------------|---------------------|--------------------------------------|--|
| Chancellor             | Ronald Calinger     | Catholic University                  | <a href="mailto:calinger@cua.edu">calinger@cua.edu</a>                             |
| President              | Robert Bradley      | Adelphi University                   | <a href="mailto:bradley@panther.adelphi.edu">bradley@panther.adelphi.edu</a>       |
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| Ombudsman (ex officio) | John Glaus          | The Euler Society                    | <a href="mailto:restinn@midmaine.com">restinn@midmaine.com</a>                     |

# Euler 2003 Conference



## COUNTDOWN TO THE TERCENTENARY

SUNDAY, AUGUST 10 – WEDNESDAY, AUGUST 13, 2003  
ROGER WILLIAMS UNIVERSITY, BRISTOL, RHODE ISLAND

THE 2003 EULER CONFERENCE WILL BE HELD AT THE ROGER WILLIAMS UNIVERSITY RESIDENCE AND CONFERENCE CENTER. THIS FACILITY IS LOCATED JUST MINUTES FROM HISTORIC BRISTOL AND THE EXCITEMENT OF NEWPORT. DURING E2003 YOU WILL BE ACCOMMODATED IN THE CONFERENCE CENTER'S LUXURY BEDROOMS INCLUDING SATELLITE TV, IN-ROOM COFFEE, INDIVIDUAL CLIMATE CONTROL AND DRY CLEANING SERVICES. THE CENTER ALSO OFFERS AN INDOOR HEATED POOL, SAUNA AND FITNESS CENTER FACILITY.

### **DIRECTIONS:**

ROGER WILLIAMS UNIVERSITY RESIDENCE AND CONFERENCE CENTER IN PORTSMOUTH, IS LOCATED 1.5 MILES FROM THE UNIVERSITY'S MAIN CAMPUS IN BRISTOL AND ABOUT 12 MILES NORTH OF THE PICTURESQUE NEWPORT BEACHES, QUIET SHOPPING VILLAGES AND HISTORIC MANSIONS.

### **RATES:**

FOR ALL FOUR DAYS \$329.00

INCLUDES: LUXURY ACCOMMODATIONS, BREAKFAST, LUNCH AND MORNING AND AFTERNOON REFRESHMENT BREAKS.

DAY MEETING PACKAGE: \$29.00 PER DAY

INCLUDES: BREAKFAST, LUNCH AND MORNING AND AFTERNOON REFRESHMENT BREAKS.

THERE IS A \$50.00 REGISTRATION FEE TO BE MADE PAYABLE TO THE EULER SOCIETY

### **PLEASE MAKE YOUR RESERVATIONS DIRECTLY WITH:**

**LORIE PROULX**

ROGER WILLIAMS UNIVERSITY RESIDENCES AND CONFERENCE CENTER: [LPROULX@RWU.EDU](mailto:LPROULX@RWU.EDU) OR [WWW.RWU.EDU](http://WWW.RWU.EDU)

### **CALL FOR PAPERS:**

DEADLINE HAS NOW PASSED.

### **BLURB:**

LAST YEAR'S ATTENDEES CAME FROM KYOTO, OXFORD, WEST POINT, CORNELL, MIAMI, WESTERN CONNECTICUT, NEW MEXICO, SAN DIEGO, MAINE, AND ELSEWHERE. THEY UNANIMOUSLY AGREED THAT THE EULER CONFERENCE WAS THE BEST MEETING THEY HAD EVER ATTENDED. EXPECT NEWPORT TO BE JUST AS GREAT.

# Euler 2003 Program

Roger Williams University  
August 10-13, 2003

Sunday, August 10

Evening – registration and reception

Monday, August 11

Morning

- 8:30 Talk 1. Bruce Burdick, Roger Williams University  
Mathematical Streets in Mexico City
- 9:30 Talk 2. Dominic Klyve and Lee Stemkoski, Dartmouth College  
The Euler Online Database
- 11:00 Talk 3. Ron Calinger, Catholic University of America  
[The Euler Lecture](#)  
Euler's Golden Decade in Berlin: The First Half to 1751

Afternoon

- 1:30 Talk 4. Sam Kutler, Saint John's College  
Five Favorite Irrational Numbers - Some differences between ancient and modern mathematics
- 2:30 Talk 5. Rob Bradley, Adelphi University  
To Speak of many things: of logs, and roots, and beaks of birds, of spheres and nodding rings
- 4:00 Talk 6. Reading from Original Sources in French – E-170 or E-172

Tuesday, August 12

Morning

- 8:30 Talk 7. Hardy Grant, York University  
Sur l'utilité des mathématiques supérieures – a forgotten Euler essay
- 9:30 Talk 8. Ed Sandifer, Western Connecticut State University  
Euler's Life-long Plan for Mechanics
- 11:00 Talk 9. Fred Rickey, United States Military Academy  
Reading the *Introductio*

Afternoon – Session on Mechanics

- 1:30 Talk 10. Roger Godard, Royal Military College of Canada  
Euler's Influence on Condorcet's Views on Meteorology
- 2:30 Talk 11. Larry D'Antonio, Ramapo College  
"The fabric of the universe is most perfect": Euler's research on elastic curves
- 4:00 Talk 12. Stacy Langton, University of San Diego  
An error of Euler on Rigid Bodies

Evening

Reading from Original Sources in Latin – selections from the *Introductio*

Wednesday, August 13

Morning – Session on Euler and His Friends

- 8:30 Talk 13. John Glaus, The Euler Society  
Young Leonhard Euler travels to the Venice of the North to illuminate the Russia bear
- 9:30 Talk 14. Craig Waff  
The Young and the Productive: The Mathematical Work of the Precocious Clairaut Brothers, 1726-1731
- 11:00 Talk 15. Mary Lynn Doan, Victor Valley Community College  
Euler, Mayer and the Longitude Problem

Half hour breaks every day at 10:30 and 3:30