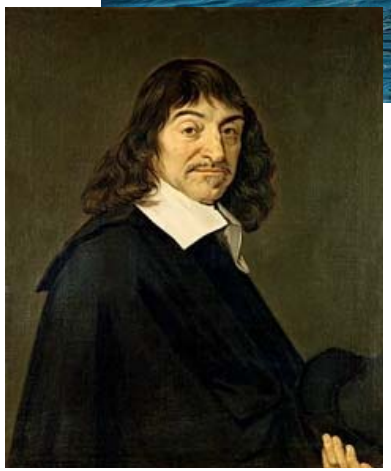
A STEADY STREAM OF DATA IS COMING YOUR WAY...

worldflow pioneers of instrumentation 2008 calendar

A Worldflow publication

FLOW RESEARCH

Flow Research, Inc.



René Descartes

2008

Focus this Year: Knowledge Websites and Duonyms

We wish you

a happy and prosperous year!

The Pioneers of Instrumentation Calendar features those people who have made important contributions to the history, theory, science, and philosophy of instrumentation.

Each month features a different knowledge website from the group of Flow Research sponsored websites. Most of the photos on these pages were taken by Flow Research. In addition to the Flow Research websites, different pioneers of instrumentation are highlighted, along with their contributions. We hope you enjoy this 2008 Worldflow Pioneers of Instrumentation Calendar.

Flowtime, a form of decimal time: Finer division yields greater precision

www.FlowCoriolis.com

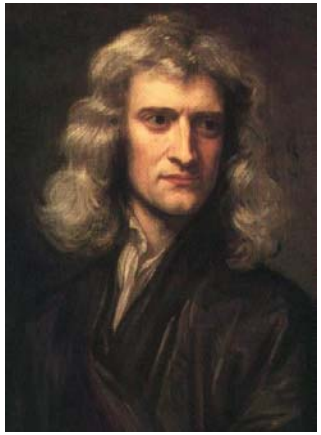
Daniel Bernoulli (1700 – 1782) formulated what is known today as Bernoulli's theorem. This principle states that, in a flowing stream, the sum of a fluid's static energy, kinetic energy, and potential energy is conserved across a constriction in the pipe.

The World Market for Coriolis Flowmeters, 3rd Edition

Flow Research, Inc.
27 Water Street
Wakefield, MA 01880
(781) 245-3200
(781) 224-7552 (fax)
www.flowresearch.com

For more information on the worldwide Coriolis flowmeter market, go to www.flowcoriolis.com.

Pioneers of Instrumentation



Isaac Newton (1643 – 1727) and Leibniz developed the calculus independently, although Newton didn't fully publish his work until 1704. This was 20 years after Leibniz published his findings. In 1687, Newton described universal gravitation and the three laws of motion. Newton also contributed to optics and astronomy.

Robert Boyle (1627 – 1691) is regarded by many as the first modern chemist. He formulated the law that the volume of a gas varies inversely with pressure during an exchange with Franciscus Linus, a Jesuit critic. This principle is now known as Boyle's Law. He worked with Robert Hooke to improve the air pump, and did experiments with the properties of air.

Dec 2007

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January 2008

Feb 2008

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Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1 New Year's Day	2	3	4 Isaac Newton 1643	5 ABB Begins Operations 1988
6	7	8 New Moon	9	10	11	12
13 Patrick Dempsey 1966	14	15 Basketball Invented (1892) First Quarter	16	17	18	19
20	21 Martin Luther King, Jr.	22 Full Moon	23 Tupperware Invented (1942)	24	25 Robert Boyle 1627	26
27 Electric Light Patented (1880)	28	29 Daniel Bernoulli 1700	30 Last Quarter	31		

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www.flowresearch.com

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www.FlowMags.com

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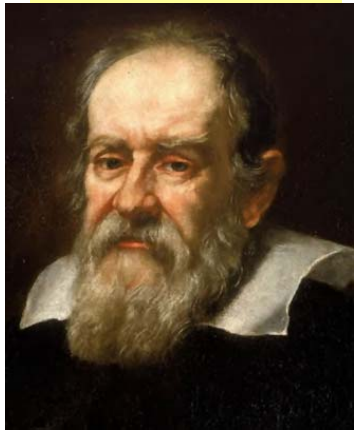
The **Market Barometer** covers the flowmeter markets every quarter, while the **Energy Monitor,** also quarterly**,** follows the oil & gas, refining, power, and renewables industries. For more details, visit www.worldflow.com.

The World Market for Magnetic Flowmeters, 3rd Edition

Flow Research, Inc.
27 Water Street
Wakefield, MA 01880
(781) 245-3200
(781) 224-7552 (fax)
www.flowresearch.com

For more information on the worldwide magnetic flowmeter market, go to www.flowmags.com

Pioneers of Instrumentation



Galileo Galilei (1564 – 1642) was an Italian astronomer, physicist, and philosopher who made a significant break from the thinking of Aristotle. He is sometimes considered "the father of modern physics." He made major improvements to the telescope. Galileo was the first to report lunar mountains and craters, and among the first to observe sunspots. He was a strong advocate of Copernicanism, which put him at odds with the church of his day.

Magnetic flowmeters were first introduced in Holland in 1952. Today, over 50 companies manufacture magnetic flowmeters, and 50 of these suppliers are profiled in **The Global Market for Magnetic Flowmeters, 3rd Edition**.

Magnetic flowmeters have the advantage that they create very little permanent pressure drop, and have no moving parts. This market is currently in a growth mode. Magnetic flowmeters have good accuracy, and are widely used for sanitary applications.

Jan 2008

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February 2008

Mar 2008

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Sunday	*Monday*	*Tuesday*	*Wednesday*	*Thursday*	*Friday*	*Saturday*
	**Duonym: Bedhead** Bedhead: n. 1. A condition of irregularly shaped hair, resulting from reclining 2. A person who typically has a bedhead. "After a restless night of fitful sleep, to my surprise I awoke with a bedhead."				1 Steamboat Patented (1788) Endress+Hauser Founded (1953)	2 Groundhog Day
3 Flush Toilet Invented (1837)	4	5	6 Ash Wednesday	7 New Moon	8 Fountain Pen Invented (1883)	9
10	11 Jennifer Anniston 1969	12 Lincoln's Birthday	13	14 First Quarter Valentine's Day	15 Galileo Galilei 1564	16
17	18 President's Day Tintype Camera Patented (1856)	19	20	21 Full Moon Jennifer Love Hewitt 1979	22 Washington's Birthday	23
24	25	26	27	28	29 Last Quarter	

Flowtiime: A form of decimal time. Finer division yields greater precision.

www.FlowUltrasonic.com

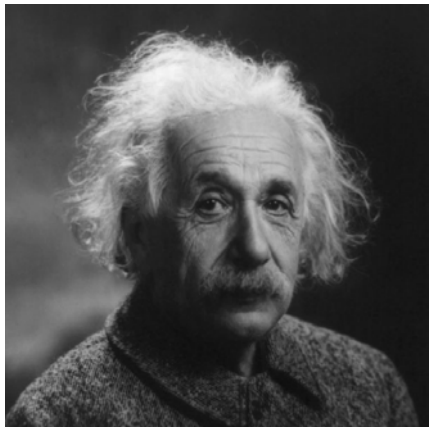
Rene Descartes (1596 – 1650) is known as "the father of modern philosophy." In mathematics, he invented the Cartesian coordinate system and analytic geometry. His most famous statement was "I think, therefore I am."

The World Market for Ultrasonic Flowmeters. 3rd Edition

Pioneers of Instrumentation

Flow Research, Inc.
27 Water Street
Wakefield, MA 01880
(781) 245-3200
(781) 224-7552 (fax)
www.flowresearch.com

For more information on the worldwide ultrasonic flowmeter market, go to www.flowultrasonic.com



Albert Einstein (1879 – 1955) is considered by many to be one of the greatest physicists of all time. He is best known for his theory of relativity, but also made major contributions to quantum theory and statistical mechanics. Einstein was born in Germany, but in the 1930s was granted permanent residence in the United States. He became an American citizen in 1940.

Jean Baptiste Joseph Fourier (1768 – 1830) was a French physicist and mathematician who is known for investigating the Fourier series and its application to problems of heat flow. The Fourier transform is named after him. In 1827, Fourier observed that atmospheric gases might increase the earth's temperature; this would later be called the greenhouse effect.

Feb 2008

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March 2008

Apr 2008

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Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
 **Duonym: Buffertime** n.: The extra time that a person allots when deciding how long it will take to reach a destination or perform a task to allow for unexpected difficulties or delays "Once again he was late for work because he did not allow enough buffertime: this time, rain slowed his driving and he got stuck behind a funeral procession for a deadhead."						1
2	3	4	5	6	7 Monopoly Game Invented (1933) New Moon	8
Daylight Savings Time Begins (US) 9 False Teeth Patented (1822)	10	11	12	13	Albert Einstein 1879 14 Cotton Gin Patented (1794) First Quarter	15
16 Palm Sunday	17 St. Patrick's Day	18	19	20 Spring begins	Joseph Fourier 1768 21 Full Moon Good Friday	22
23 Easter	24	25 	26 Lifeboat Patented (1845)	27	28	29 Last Quarter
30	31 Rene Descartes 1596					

Duonym: Duolook (also Layeredlook)

n. 1. The look of clothes when one or more articles of clothing are worn on top of each other, in a layered fashion, as a T-shirt over another shirt, or running shorts over running pants or sweatpants.

"He wants to start a trend towards the duolook and often wears a red t-shirt over a blue longsleeved shirt."

Flowtiime: A form of decimal time. Finer division yields greater precision.

www.FlowVortex.com

Our **Worldflow Monitoring Service** includes the following:

- **Market Barometer**
- **Energy Monitor**
- **Flash Reports**
- **White Papers**
- **24/7 Living Database**

The **Market Barometer** covers the flowmeter markets every quarter, while the **Energy Monitor,** also quarterly**,** follows the oil & gas, refining, power, and renewables industries. For more details, visit www.worldflow.com.

The World Market for Vortex Flowmeters, 3rd Edition

Flow Research, Inc.
27 Water Street
Wakefield, MA 01880
(781) 245-3200
(781) 224-7552 (fax)
www.flowresearch.com

For more information on vortex flowmeters, go to www.flowvortex.com.

Pioneers of Instrumentation

Leonardo da Vinci (1452 – 1519) made the first recorded observation of the vortex shedding phenomenon over 400 years ago. He observed the formation of vortex swirls downstream of a rock in a stream of water.

Vortex flowmeters make use of a principle called the von Karman effect. Technology enhancements and new product introductions have been driving the vortex flowmeter market in the past few years. Both the introduction of reducer vortex flowmeters and the growing availability of multivariable vortex meters have made these products more attractive to end-users. Our market study, **The World Market for Vortex Flowmeters, 3rd Edition,** profiles 36 suppliers worldwide.

Mar 2008

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April 2008

May 2008

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Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1 April Fool's Day	2 Radar Patented (1935)	3	4	5
6 New Moon	7 Matches Invented (1827)	8	9	10 Safety Pin Patented (1849) Vincenc Strouhal 1850	11	12 First Quarter
13	14	15 Bottle Opener Invented (1738) Leonardo da Vinci 1452	16	17	18	19
20 Full Moon Radium Discovered (1902)	21	22	23	24	25 Integrated Circuit Patented (1961)	26
27	28 Last Quarter	29	30	*Visualize a Home Run*		

Flowtiime: A form of decimal time. Finer division yields greater precision.

www.FlowDP.com
www.FlowPlate.com

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- **White Papers**
- **24/7 Living Database**

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Pioneers of Instrumentation

The World Market for DP Flowmeters and Primary Elements

Flow Research, Inc.
27 Water Street
Wakefield, MA 01880
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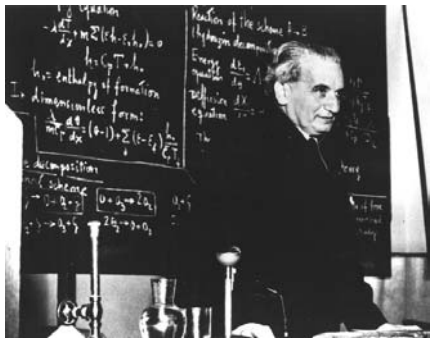
(781) 224-7552 (fax)
www.flowresearch.com

For more information on the DP flowmeter and primary elements market, go to www.flowdp.com and www.flowplate.com.



Von Karman (1881 – 1963) made early studies in 1912 on the use of bluff bodies and vortex swirls. The series of vortex swirls are now called the von Karman vortex street.

Gaspard-Gustave Coriolis (1792 – 1843) is well known for his work on the Coriolis effect. The Coriolis effect forms the basis for the operation of Coriolis flowmeters today. He was also the first person to apply the term "work" to the product of force and distance.

Apr 2008

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May 2008

Jun 2008

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Sunday	*Monday*	*Tuesday*	*Wednesday*	*Thursday*	*Friday*	*Saturday*
	**Duonym: Fatcat** n.: 1. A rich and privileged person 2. An overweight cat *"Sensing that fame is imminent, the fatcat relaxes with a cigar."*			1	2	3 Henri Pitot 1695
4	5 New Moon	6 Refrigerator Patented (1851)	7	8 Coca-Cola Introduced (1886)	9	10
11 Mother's Day Pentecost Theodore von Karman 1881	12 First Quarter	13 Francis Beaufort 1774	14	15	16	17 Armed Forces Day Rubberband Patented (1845)
18	19	20 Full Moon Birthday of Blue Jeans (1873) www.levisbluejeans.com	21 Gustave Coriolis 1792	22 Toothpaste Tube Invented (1892)	23	24 Gabriel Fahrenheit 1686
25	26 Memorial Day (Observed)	27	28 Last Quarter	29	30 Ice Cream Freezer Patented (1848)	31

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www.LevisBlueJeans.com

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For more details, visit www.worldflow.com.

Shades of Experience

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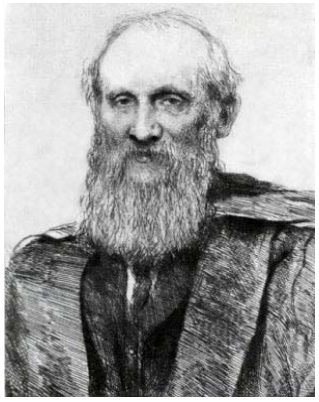
27 Water Street
Wakefield, MA 01880
(781) 245-3200
(781) 224-7552 (fax)
www.flowresearch.com

www.LevisBlueJeans.com provides information about the history of blue jeans and their role in society.

Pioneers of Instrumentation

Blaise Pascal (1623 – 1662) made important contributions to the study of hydraulic fluids. He also helped establish the principles and value of the barometer.



Lord Kelvin, (1824 – 1907) whose real name was William Thompson, is known for developing the Kelvin scale of absolute temperature measurement. He also made contributions to thermodynamics and the mathematical analysis of electricity.

May 2008

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June 2008

Jul 2008

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27	28	29	30	31		

Sunday	*Monday*	*Tuesday*	*Wednesday*	*Thursday*	*Friday*	*Saturday*
1	2	3 New Moon	4	5	6	7
8	9	10 Ball Point Pen Patented (1943) First Quarter	11	12	13 Ashley and Mary Kate Olsen (1986)	14 Flag Day
15 Celluloid Patented (1869) Father's Day	16	17	18 Full Moon	19 Blaise Pascal 1623	20	21 Reaper Patented (1834) Summer begins
22	23	24	25 George Orwell 1903	Lord Kelvin 1824 26 Bicycle Patented (1819) Last Quarter	27	28
29	30					

Duonym: Flowmeter

n. An instrument used for measuring flowrate, volumetric flow, or mass flow.

"Today the new-technology flowmeters, including Coriolis, magnetic, ultrasonic, vortex, and thermal, are taking market share away from the more traditional meters."

Flowtiime: A form of decimal time. Finer division yields greater precision.

www.duonyms.com

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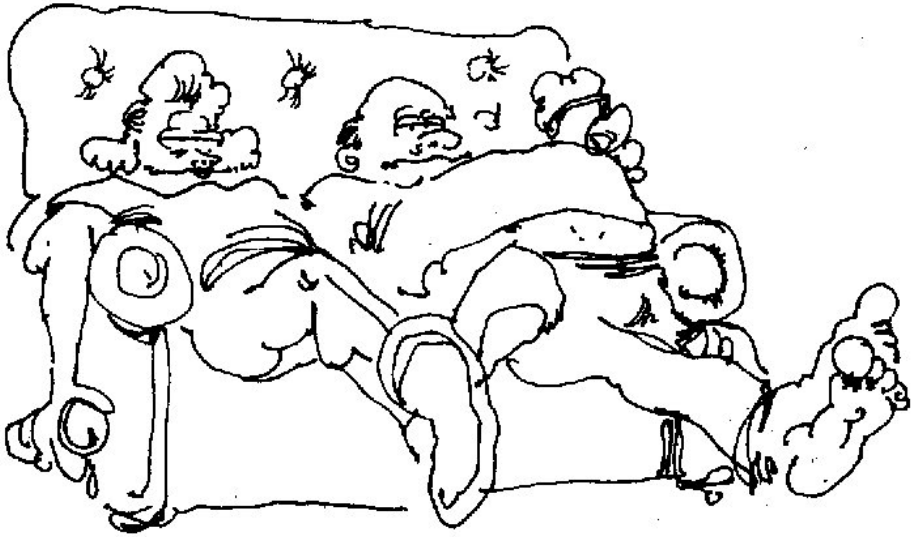

"I was dismayed to learn that they have become couchpotatoes and seldom venture forth from the safety of their own loveseat."

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www.flowresearch.com

For more duonyms, go to www.duonyms.com

Gottfried Wilhelm Leibniz (1646 – 1716) invented calculus independently of Newton, and his notation is still in use today. He made major contributions to many fields, including philosophy, biology, psychology, and medicine. In philosophy, he was known for the idea that this is the best of all possible worlds, and was both a rationalist and a pluralist.

The term '**duonym**' or "dual name" refers to the idea of a single word made from two words. Like 'synonym', 'antonym', and 'homonym', it refers to a fundamental word category. A word such as 'gi-normous,' which combines 'gigantic' and 'enormous,' is not a duonym since its components are not themselves words, even though it combines two ideas in a single word.

To form a **duonym**, find two aspects of experience that go together. Find two words that individually describe these two different aspects of experience. Take these two words and join them together to form a single word. This resulting word, which consists of two existing words joined together into a single word, is a potential **duonym**. Here are some examples of **duonyms**: baseball, bedhead, cheesehead, clockwise, coffeepot, downstream, egghead, flowmeter, flowtime, honeymoon, laughhead, pipeline, redhead, screwdriver, stockbroker, thunderstorm, typewriter, undercover, waterpot, windmill, worldflow, wristband, and yearbook.

Jun 2008

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July 2008

Aug 2008

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31						

Sunday	*Monday*	*Tuesday*	*Wednesday*	*Thursday*	*Friday*	*Saturday*
		1 Gottfried Leibniz 1646	2 Lindsay Lohan 1986	3 New Moon	4 Independence Day	5
6	7 Travelers Checks Copyrighted (1891)	8	9 Donut Cutter Patented (1872)	10 First Quarter	11	12
13	14 Tape Measure Invented (1868)	15	16	17	18 Full Moon	19
20	21	22	23 Ice Cream Cone Invented (1904)	24	25 Last Quarter	26
27 Insulin Discovered (1921)	28	29	30	31 Shredded Wheat Patented (1893)		

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www.ShadesofExperience.com

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"A laughhead, he laughs uproariously at things that others find barely amusing." "This year a laughhead is running for high political office, and she's a Democrat."

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www.flowresearch.com

Shades of Experience

There are many areas of experience in which we use a single word to describe a whole range of different phenomena. For example, there are many different shades of the color green, yet we use the same word 'green' to refer to all of them. This serves a purpose, of course, but it also may make us unaware of shades of color. Spring is a great time to be aware of the different shades of green, with trees and plants coming back to life. There are many varieties in other shades of color too, such as blue and red. When you look at a color, try to be aware not only of the color, but also of the shade. Being aware of a name for the shade, such as "lime green" or "lemon yellow," will fix it better in your mind.

There are "**shades of experience**" in other areas besides color. Another example is taste. There are many different tastes corresponding to the words "sweet" and "sour." By being aware of these different **shades of experience**, and thinking of different words to distinguish them, you will enrich your own experience and also improve your memory. You will become "experience-rich." See www.shadesofexperience.com for more details.

Pioneers of Instrumentation

Osborne Reynolds (1842 – 1912) is known in the history of flow for his formulation of the Reynolds number. This number states the relation between the inertial forces and the viscous forces in a flowing stream. The Reynolds number reflects how turbulent or laminar flow is in a flowstream.

Jul 2008

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August 2008

Sep 2008

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28	29	30				

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
 **Duonym: Flowtime** n. A system of decimal time in which there are still 24 hours per day, but the number of minutes in an hour increases from 60 to 100. Likewise, the number of seconds in a minute goes from 60 to 100. *"Ever since switching to flowtime, she finds that she is more productive. The smaller units of time allow her to manage her time more efficiently."*					1 Elevator Invented (1854) New Moon	2
3	4	5	6	7 Revolving Door Patented (1888)	8 First Quarter	9
10	11	12 Continuous Stitch Sewing Machine Patented (1851)	13	14 Whiffle Ball Invented (1953)	15	16 Full Moon
17	18	19	20	21	22	23 Last Quarter Osborne Reynolds 1842
24 Waffle Iron Patented (1869)	25	26	27	28	29 Chop Suey Invented (1896)	30 New Moon
31 Guillaume Amontons 1663		**Duonym: Homepage** n.: The page on an Internet-accessible website that is designed to be accessed first, and that contains links and other information that is available on the site. *"She put a great deal of personal information on her homepage, in hopes of attracting the attention of some interested viewer."*				

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www.WorldPressure.com

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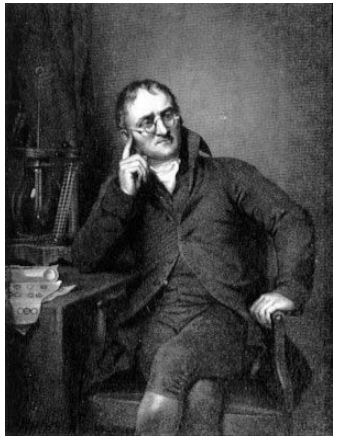
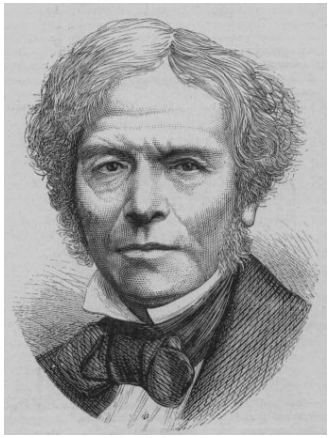
www.flowresearch.com

For more information on the worldwide pressure transmitter market, go to www.worldpressure.com.



The World Market for Pressure Transmitters. 2nd Edition

John Dalton (1766 – 1844) is best known for his early work on and statement of atomic theory. He kept a meteorological diary for 57 years, and published a book of essays on his meteorological observations. He is also known for his research into color blindness.



Michael Faraday (1791 – 1867) is best known in the history of flow for formulating Faraday's Law of Electromagnetic Induction. According to this principle, a voltage is developed when a conductor is passed through a magnetic field, and the resulting voltage is proportional to the velocity of the conductor moving through the field. This principle underlies the operation of magnetic flowmeters today.

Aug 2008

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September 2008

Oct 2008

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Sunday	*Monday*	*Tuesday*	*Wednesday*	*Thursday*	*Friday*	*Saturday*
	1 Labor Day Yokogawa Founded 1915	2	3	4	5	6 John Dalton 1766
7 First Quarter	8 "Scotch" Tape Invented (1930)	9 Hot Dog Invented (1884)	10 Sewing Machine Patented (1846)	11	12	13
14	15 Full Moon	16 Typesetting Machine Patented (1857)	17	18	19	20 Electric Range Patented (1859)
21	22 Autumn begins Last Quarter Michael Faraday 1791	23	24 Emerson Electric Founded (1890)	25	26	27 Answering Machine Invented (1950)
28 Hilary Duff 1987	29 New Moon	30				

Duonym: Phonehead

n.: Someone who seems to spend all his or her time talking on the phone.

"I didn't realize until I had started my new job that I would be working with several phoneheads; however, since they spend so much time on the phone, I haven't yet met them or learned ther names.

Flowtiime: A form of decimal time. Finer division yields greater precision.

www.FlowEverything.com

Our **Worldflow Monitoring Service** includes the following:

- **Market Barometer**
- **Energy Monitor**
- **Flash Reports**
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The **Market Barometer** covers the flowmeter markets every quarter, while the **Energy Monitor,** also quarterly**,** follows the oil & gas, refining, power, and renewables industries. **Flash Reports** keep you tuned into breaking news in flow and energy. For more details, visit www.worldflow.com.

Volume X: The World Market for Flowmeters. 2nd Edition

Flow Research, Inc.
27 Water Street
Wakefield, MA 01880
(781) 245-3200
(781) 224-7552 (fax)
www.flowresearch.com

For more information on the worldwide flowmeter market, go to www.floweverything.com/.

Pioneers of Instrumentation

Evangelista Torricelli (1608 – 1647) is best known for inventing the barometer. His invention came as a way to solve a practical problem of getting water to rise above 10 meters, using a suction pump. Torricelli created a tube filled with mercury, and the mercury column fell to about 28 inches. The height of the column rose and fell with changing atmospheric pressure. This invention was the first barometer. A unit of pressure, the torr, was named after Torricelli.

The World Market for Flowmeters, 2nd Edition contains a complete look at the worldwide flowmeter market, including all flow technologies. This one-of-a-kind publication gives you the revenues and units, as well as market shares, for all flow technologies in a single market study. It also gives you the size of the worldwide flowmeter market in dollars and units.

This is the ideal tool for marketing managers who are responsible for more than one flow technology, and who want to understand how the growth rates of different flow technologies compare. For more information, go to www.floweverything.com. **Another instant classic from Flow Research**!

Sep 2008

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October 2008

Nov 2008

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Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	*Winners never quit and quitters never win.*		1	2	3	4
5	6	7 First Quarter	8	9	10	11 Adding Machine Patented (1888)
12	13 Columbus Day (Observed)	14 Full Moon	15 Evangelista Torricelli 1608	16	17	18
19	20 James Chadwick 1891	21 Electric Light Invented (1879) Last Quarter	22	23	24 Matches Patented (1836) Wilhelm Weber 1804	25
26	27	New Moon 28 Cotton Gin Invented (1793)	29	30	31 Halloween	

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www.GasFlows.com

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www.flowresearch.com

For more information on the gas flow measurement market, go to www.gasflows.com.

The World Market for Gas Flow Measurement

Pioneers of Instrumentation

Anders Celsius (1701 – 1744) is known in the history of temperature for proposing the Celsius temperature scale. This scale originally had 0 for the boiling point of water and 100 for the freezing point. The scale was later reversed to the form it has today.

Christian Doppler (1803 – 1853) is known for proposing what is today called the Doppler effect. This has to do with the apparent change in wavelength and frequency of a wave perceived by the observer to be moving relative to the wave source. The Doppler effect is the principle that underlies the operation of today's Doppler flowmeters.

Oct 2008

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November 2008

Dec 2008

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Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
 **Duonym: Racquetball** n.: 1. A game played indoors in a four-walled court with a short-handled racquet and a hollow rubber ball. 2. The hollow, rubber ball used in playing the game of racquetball. *Playing doubles in racquetball on Saturday morning is a time-honored tradition at Route One Racquet in Saugus.*						1 Modern Bra Invented (1914)
2	3	4 Election Day (US) Gatling Gun Patented (1862)	5	6 First Quarter	7	8 Insect Electrocutor Patented (1910)
9	10	11 Veterans Day	12	Full Moon 13 Artificial Snow Invented (1946)	14	15
16	17	18	19 Last Quarter Pencil Patented (1895)	20	21	22 Snowmobile Patented (1927)
23	24	25	26	Anders Celsius 1701 27 New Moon Thanksgiving	28	29 Christian Doppler 1803
30		**Dounym: Upstream** Adj. 1. Against the direction of the flow, or of a stream's current. 2. In the oil and gas industry, 'upstream' refers to the exploration and production segments of the industry. "After months of debating which was more exciting, upstream or downstream, he decided to devote his life to the upstream part of the business."				

Flowtiime: A form of decimal time. Finer division yields greater precision.

www.SteamFlows.com

Our **Worldflow Monitoring Service** includes the following:

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- **Energy Monitor**
- **Flash Reports**
- **White Papers**
- **24/7 Living Database**

The **Market Barometer** covers the flowmeter markets every quarter, while the **Energy Monitor,** also quarterly**,** follows the oil & gas, refining, power, and renewables industries. **Flash Reports** keep you tuned into breaking news in flow and energy. For more details, visit www.worldflow.com.

Flow Research, Inc.
27 Water Street
Wakefield, MA 01880
(781) 245-3200
(781) 224-7552 (fax)
www.flowresearch.com

For more information on the worldwide steam flow measurement market, go to www.steamflows.com.

Pioneers of Instrumentation

The World Market for Steam Flow Measurement

Joseph Louis Gay-Lussac (1778 – 1850) is known for being the first to formulate what has come to be known as Charles' Law. According to this law, a gas expands linearly with a fixed pressure and rising temperature. While Gay-Lussac was the first to publish this law, in 1802, he referenced unpublished work by Jacques Charles from about 1787. For this reason, the principle has become known as Charles' Law. Gay-Lussac also discovered, with Alexander von Humboldt, that the composition of the atmosphere does not change with decreasing pressure.

James Prescott Joule (1818 – 1889) was a student of John Dalton. He helped develop the absolute scale of measurement by working with Lord Kelvin. He also formulated what is now known as Joule's law, which governs the relationship between current flowing through a substance, resistance, and heat dissipated. The joule, the SI unit of work, is named after him.

Nov 2008

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December 2008

Jan 2009

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Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1 Bingo Invented (1929) Yamatake Founded 1906	2 Britney Spears 1981	3	4 Manila Paper Patented (1845)	5 First Quarter	6 Microwave Oven Patented (1945) Joseph Gay-Lussac 1778
7	8 Coaxial Cable Patented (1931)	9	10	11	12 Full Moon	13 Werner von Siemens 1886
14 Screw Patented (1798)	15	16	17	18 Brad Pitt 1963	19 Corrugated Paper Patented (1871) Last Quarter	20
21 Winter begins	22	23	24 James Joule 1818	25 Christmas	26	27 New Moon
28 Chewing Gum Patented (1869)	29	30	31 New Year's Eve		*The measure of succss is how high you bounce. Bounce high today!*	

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Daniel Bernoulli (1700 – 1782) formulated what is known today as Bernoulli's theorem. This principle states that, in a flowing stream, the sum of a fluid's static energy, kinetic energy, and potential energy is conserved across a constriction in the pipe.

A steady stream of data is coming your way.

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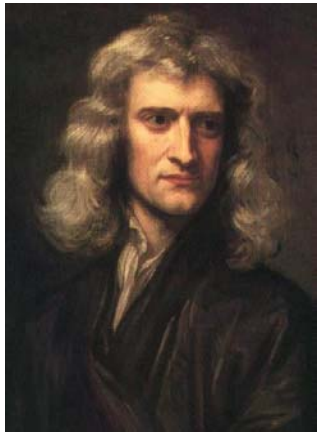
Pioneers of Instrumentation



Isaac Newton (1643 – 1727) and Leibniz developed the calculus independently, although Newton didn't fully publish his work until 1704. This was 20 years after Leibniz published his findings. In 1687, Newton described universal gravitation and the three laws of motion. Newton also contributed to optics and astronomy.

Robert Boyle (1627 – 1691) is regarded by many as the first modern chemist. He formulated the law that the volume of a gas varies inversely with pressure during an exchange with Franciscus Linus, a Jesuit critic. This principle is now known as Boyle's Law. He worked with Robert Hooke to improve the air pump, and did experiments with the properties of air.

Dec 2008

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January 2009

Feb 2009

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Sunday	*Monday*	*Tuesday*	*Wednesday*	*Thursday*	*Friday*	*Saturday*
	**Duonym: Viewpoint** The perspective from which something is seen, perceived, or experienced *"According to the philosophy of Viewpoint Pluralism, there are indefinitely many viewpoints from which any subject or object can be seen."*			1 New Year's Day	2	3
Isaac Newton 1643 4 Blender Invented (1910) First Quarter	5 ABB Begins Operations 1988	6	7	8	9	10
11 Full Moon	12	13 Patrick Dempsey 1966	14	15 Basketball Invented (1892)	16	17
18 Last Quarter	19 Martin Luther King, Jr.	20	21	22	23 Tupperware Invented (1942)	24
25 Robert Boyle 1627	26 New Moon	27 Electric Light Patented (1880)	28	29 Daniel Bernoulli 1700	30	31

Flowtiime: A form of decimal time. Finer division yields greater precision.

January - December, 2008

Yearly Planner

Jan 2008

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Feb 2008

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Mar 2008

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Apr 2008

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May 2008

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Jun 2008

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Jul 2008

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Aug 2008

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Sep 2008

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Oct 2008

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Nov 2008

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January - December, 2009

Yearly Planner

Jan 2009

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Feb 2009

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Mar 2009

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Apr 2009

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May 2009

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Jul 2009

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Aug 2009

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Oct 2009

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Nov 2009

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