

# DAILY NEWS



Workshop and Conference on  
**Logic, Algebra, and Arithmetic**

4th issue, October 21, 2003

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## NEWS:

- ≡ A Naila Kuhlmann's drawing from the IPM building (Niavaran) has been published in today's *DAILY NEWS*. Thanks Naila!
- ≡ All invited speakers' return tickets have been reconfirmed.



## Did you know that ...

The Mathematics Genealogy Project (<http://genealogy.math.ndsu.nodak.edu/>) traces Enayat's (mathematical) ancestry all the way to Jacob Bernoulli (1654-1705).

The advisor to student line from Jacob Bernoulli to Enayat goes as follows:



Jacob Bernoulli, Johann Bernoulli, Leonhard Euler, Joseph Lagrange, Simeon Poisson, Michel Chasles, H. A. Newton, E. H. Moore, Oswald Veblen, Alonzo Church, Dana Scott, Kenneth Kunen, Ali Enayat. Today is Nicolaus (I) Bernoulli's birthday (1687-1759) who was a nephew of Jacob Bernoulli.



## Announcement:

- ☑ Persian music concert this evening at 7:00:PM.
- ☑ Conference Dinner at 8:00 PM.

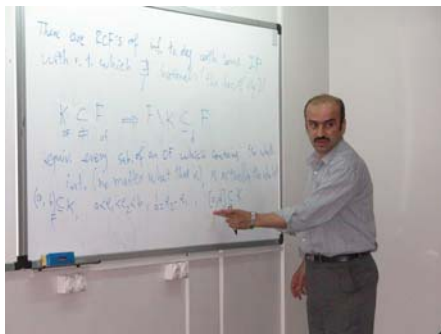


The traditional Persian music arrived to us through an oral tradition, is expressive music. It is expression of feelings, emotions, and "movements of heart", sometimes not measured, sometimes very rhythmic, it makes alternate a meditative character, even nostalgia of the absolute and an exciting joyful mood.

## Daily Program

9:00-10:00	10:00-10:30	10:30-11:30	11:30-11:40	11:40-12:40	12:40-14:00
A. Pillay (I)	Coffee Break 	L. van den Dries (II)	Break	A. Visser (II)	Ashe Reshteh! 
14:00-15:00	15:00-15:10	15:10-15:40	15:40-16:10	16:10-16:30	16:30-17:00
S. Kuhlmann (II)	Break	Z. Movahed	Mor. Moniri	Coffee Break 	S. M. Bagheri
					Iranian Music and Conference Dinner 







## Persian Music



### Compositional Structure

There are three instrumental forms and one vocal form in Persian music. The instrumental reng. forms are pishdaramad, cheharmezrab, and Pishdaramad was invented by a great master of ,the tar

Darvish Khan, and was inteded as a prelude to the daramad of a dastgah. It may be in duple, triple, or quadruple time, and itdraws its melody from some of the important gushehs of the piece.

Cheharmezrab is a solo piece, mostly with a fast tempo, and is usually based on the melody immediately preceding it. The third instrumental form is the reng, which is a simple dance piece that

is usually played at the conclusion of the dastgah.

The vocal form is called tasnif. It has a design similar to the pishdaramad, and is usually placed immediately before the reng.

### Instruments

Iranian classical music is usually performed by small ensembles of variable size. These groups typically consist of the singer, one or two accompanying melodic instruments (either of kamanche, tar,

santur, setar, or nay) and perhaps a rhythmic instrument, such as the dombak, or the now rarer daf. The most important instruments are listed below. Click on the names or pictures to read a description and to hear a sound sample.

Even though they have unique voicings, these instruments are intertwined in the ensemble to maintain a monophonic texture. The following example, in which all of the instruments play the same melodic line is typical of Persian music. To hear what an ensemble sounds like.



### Iranian Classical Music

Iranian classical music is modal and monophonic. The most serious interpretations generally consist of a melodic soloist (or sometimes, a duet) and often a percussion accompanist. Orchestral combinations are becoming popular, but I will largely ignore those.

There are twelve basic modes: seven primary modes (dastgah-s) and five secondary modes (avaz-s). Each avaz is derived from a specific dastgah, but it is also able to stand by itself.

Performance is based on the idea of a "suite" in a single mode, in which the artist will choose items to make a finished composition.

Actual performances generally proceed largely as improvisations, incorporating and culminating in the chosen melodic patterns. Part of the artistry is to make smooth transitions between elements of the suite.

The standard melodic patterns of Iranian classical music are codified in something called the Radif, written down from oral sources at the beginning of this century. The Radif consists of a large number of melodies or



sequences (gushe-s) grouped by mode. Some dastgah-s have more gushe-s than others. To form a suite, the artists will select appropriate gushe-s, along with classical poetry, improvised elements or original compositions. Some gushe-s are always present in a classical rendition, whereas others are less common; the order within the suite is also pre-determined, to some extent. Some gushe-s and compositions have specific rhythms, while others do not. When there is a percussion accompanist, he will take part in some sections but not in others. Finally, there are different versions of the Radif that different artists will use, especially for different instruments.

There is a large body of classical poetry, from medieval times to the present day, available to vocalists. This is some of the world's great literature, and the flowing, timeless intensity of an Iranian singer will really bring these fine poems to life. Most of the poems are rhythmically free (that is, sung without a time signature, but following an internal rhythm of phrasing), and are generally performed within the context of a suite of gushe-s taken from the Radif.

Although the classical poetry is largely medieval, and the codification of the Radif is modern, the musical forms are believed to date from the days of Classical Persia. Iranian music has managed to sustain itself in recent decades, despite political suppression, and looks to be undergoing a burst of creativity.

A variety of instruments are used; I'll list them in no particular order. The santur is a hammered dulcimer, similar to the santur used in Indian classical music (pioneered by Shivkumar Sharma,

though of a brighter tone. The tar and setar are fretted plucked-string instruments, with sharp overtone series (the tar is the larger of the two). The ney is the reed flute common throughout the Near-east, although the Iranian technique is probably the most versatile, using both the low breathy register and the sharp higher register (held between the teeth). The kamancheh is a narrow, upright bowed-string instrument. The violin and oud (ancestor of the lute) are also used.

Iranian classical instruments are generally brighter and crisper in tone than many of those used by neighboring cultures. However, the voices are very deep and rich, although highly animated. The main percussion instruments are the zarb (also called tombak) and daf (in that order), and both tend to add a surprisingly subtle sonority to a performance. There are also solo percussion recordings, but we do not explore



those.

