



## **VIII VAM MEETING**

**Aix en Provence (F), 18 – 19 – 20 October 2013**

# **SOLITONS INDUCTION BY TUINA IN THE HORSE**

Francesco LONGO

DVM, Repr. Sp.

**S.I.A.V. – It.V.A.S.**

(Italian Veterinary Acupuncture Society)

**C.I.A.V. – It.V.A.C.**

(Italian Veterinary Acupuncture Clinical Center)

Bologna – Italy

[longo.agovet@katamail.com](mailto:longo.agovet@katamail.com)

[www.siav-itvas.org](http://www.siav-itvas.org)





# SOLITONS INDUCTION BY TUINA



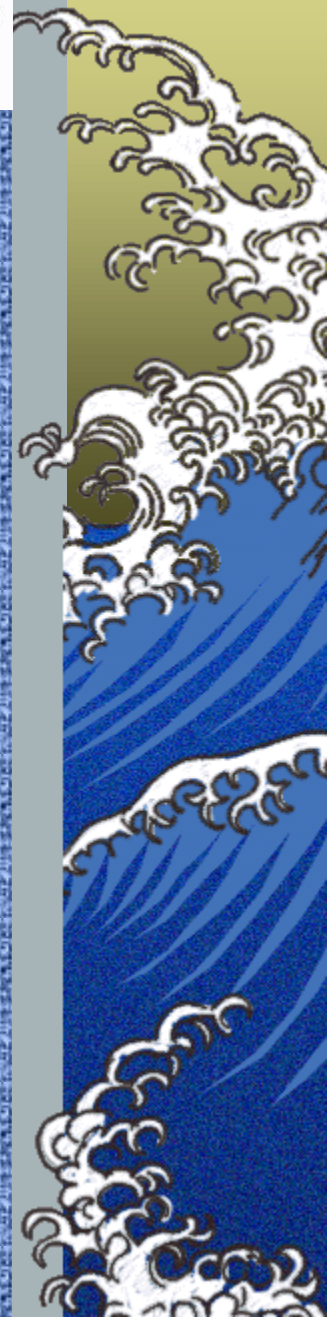
## ANMO – TUINA

按摩

推拿

pressing/rubbing - pressing/grasping

MOVING QI (Energy) and XUE (Blood)  
REGULATING ZANG – FU FUNCTIONS  
RESTORING YIN/YANG BALANCE





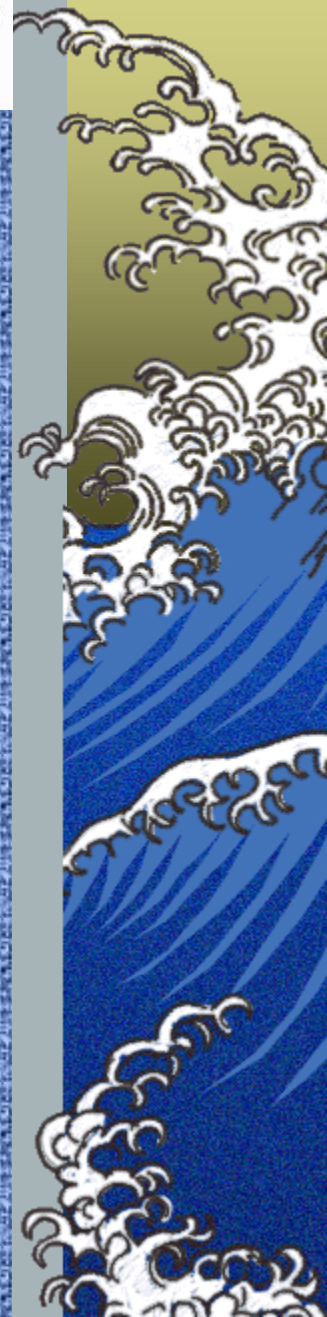
# SOLITONS INDUCTION BY TUINA



## ANMO – TUINA



- BAI DONG FA (Shaking / Swinging)
- MO CA FA (Friction by palm of the hand)
- JI YA FA (Squeezing)
- ZHEN DONG FA (Trembling)
- KOU JI FA (Percussing)
- SPECIAL MANIPULATIONS for PASSIVE JOINT MOVEMENTS







**SOLITONS INDUCTION BY TUINA**

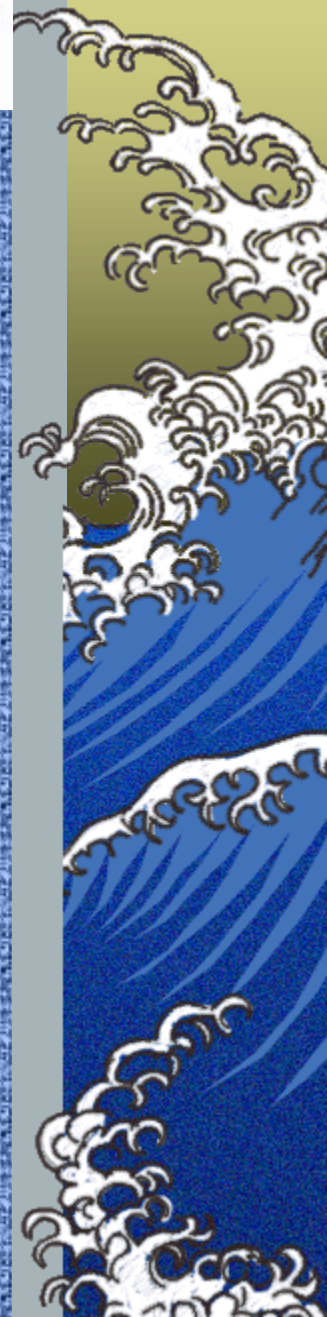


# **TRADITIONAL CHINESE MEDICINE**



**QI**

$$E = mc^2$$





# SOLITONS INDUCTION BY TUINA

## ENERGETIC CHANNELS

Darras, J. C., de Vernejoul, P., Albarede, P.  
(1992):

Nuclear medicine and acupuncture: a study  
on the migration of radioactive tracers after  
injection at acupoints

*American Journal of Acupuncture* 20(3): 245-256.

<sup>43</sup>Tc  
(96)

TECHNETIUM (SURVEING BY  $\gamma$  RAY)

(It derives from Molybdenum bombarded by  
Deuterium 2H)

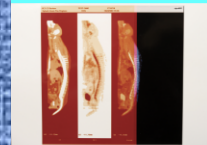
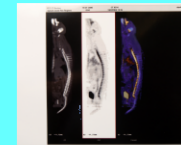
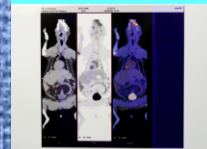


PATHWAYS OF ENERGETIC CHANNELS



PET

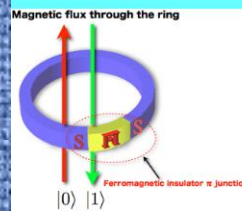
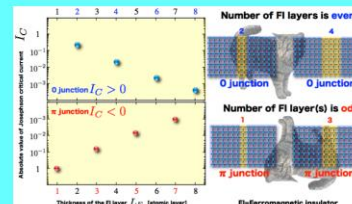
Positron Emission Tomography



Longo F. – Giovanardi C. (2009)

SQUID

SUPERCONDUCTING QUANTUM  
INTERFERENCE DEVICE





# **SOLITONS INDUCTION BY TUINA**



## **SOLITONS**

### **SOLITARY WAVES**



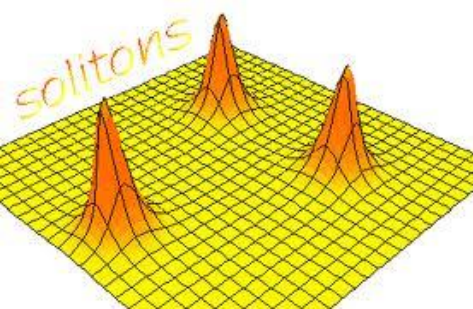
**THEY PROPAGATE in LIVING SYSTEMS  
through NON HOMOGENEOUS MEDIUM  
of the EMPTY SPACE among ATOMS**



**THEY TRANSPORT ENERGY and  
INFORMATION**



**SIGNALS of  
SALIENT INTENSITY**





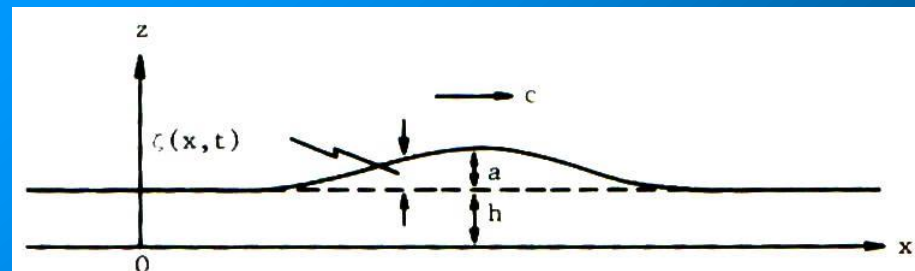
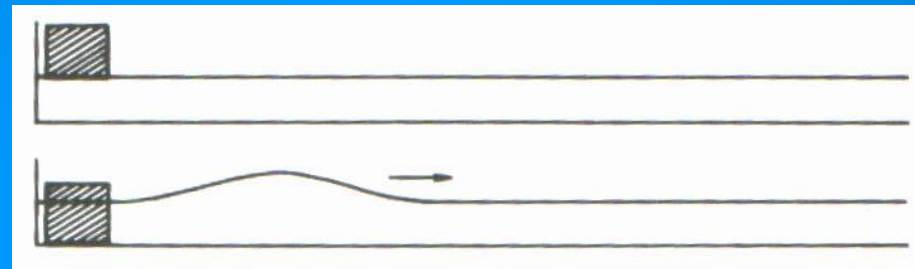


# SOLITONS INDUCTION BY TUINA

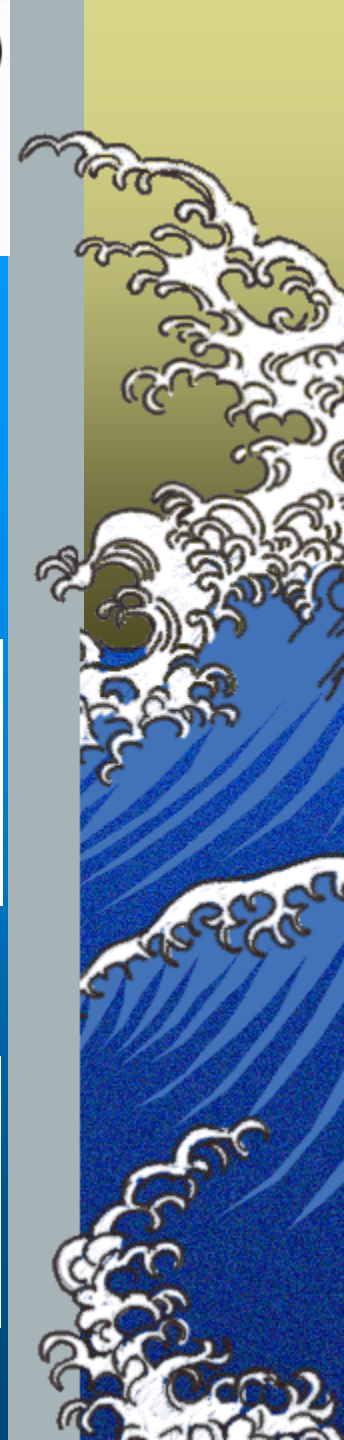


## SOLITONS

J.S. Russell (1844)



*when the boat suddenly stopped-not so the mass of water in the channel wick it had put in motion; it assumed the form of a **large solitary elevation**, a rounded, smooth and well-defined heap of water, wick **continued its course along the channel** apparently without change of form or diminution of **speed**, preserving its **original figure***





# SOLITONS INDUCTION BY TUINA

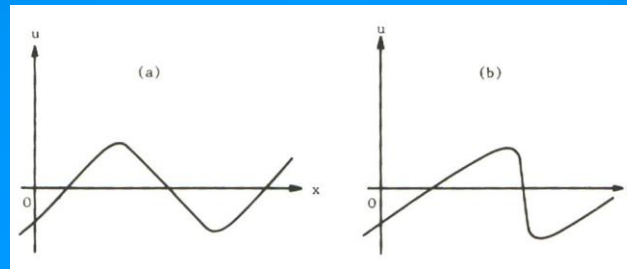


## SOLITONS

D.J. Korteweg – G. De Vries (1895)

$$\frac{\partial \zeta}{\partial t} = \frac{3}{2} \sqrt{\frac{g}{h}} \left( \zeta \frac{\partial \zeta}{\partial x} + \frac{2}{3} \alpha \frac{\partial \zeta}{\partial x} + \frac{1}{3} \sigma \frac{\partial^3 \zeta}{\partial x^3} \right)$$

THE UPPER PART OF THE WAVE MOVES AT  
HIGHER SPEED THAN THE LOWER PART



**SHOCK WAVE – NON LINEAR WAVE**







# SOLITONS INDUCTION BY TUINA

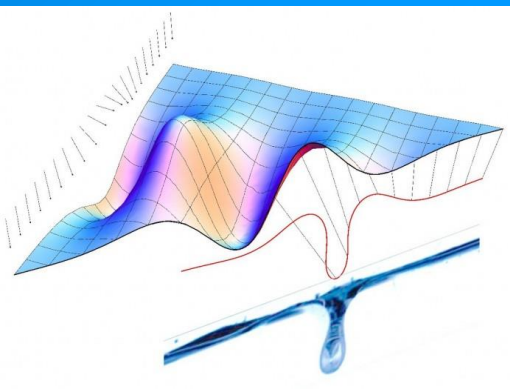


## SOLITONS

N.J. Zabusky – M.D. Kruskal (1965)



**SOLITARY WAVES PRESERVE THEIR FORM  
AFTER INTERACTIONS (OVERLAP PRINCIPLE)  
ENERGY PROPAGATES AS LOCALIZED PACKETS  
(THE ENERGY IS NOT DISPERSED)**





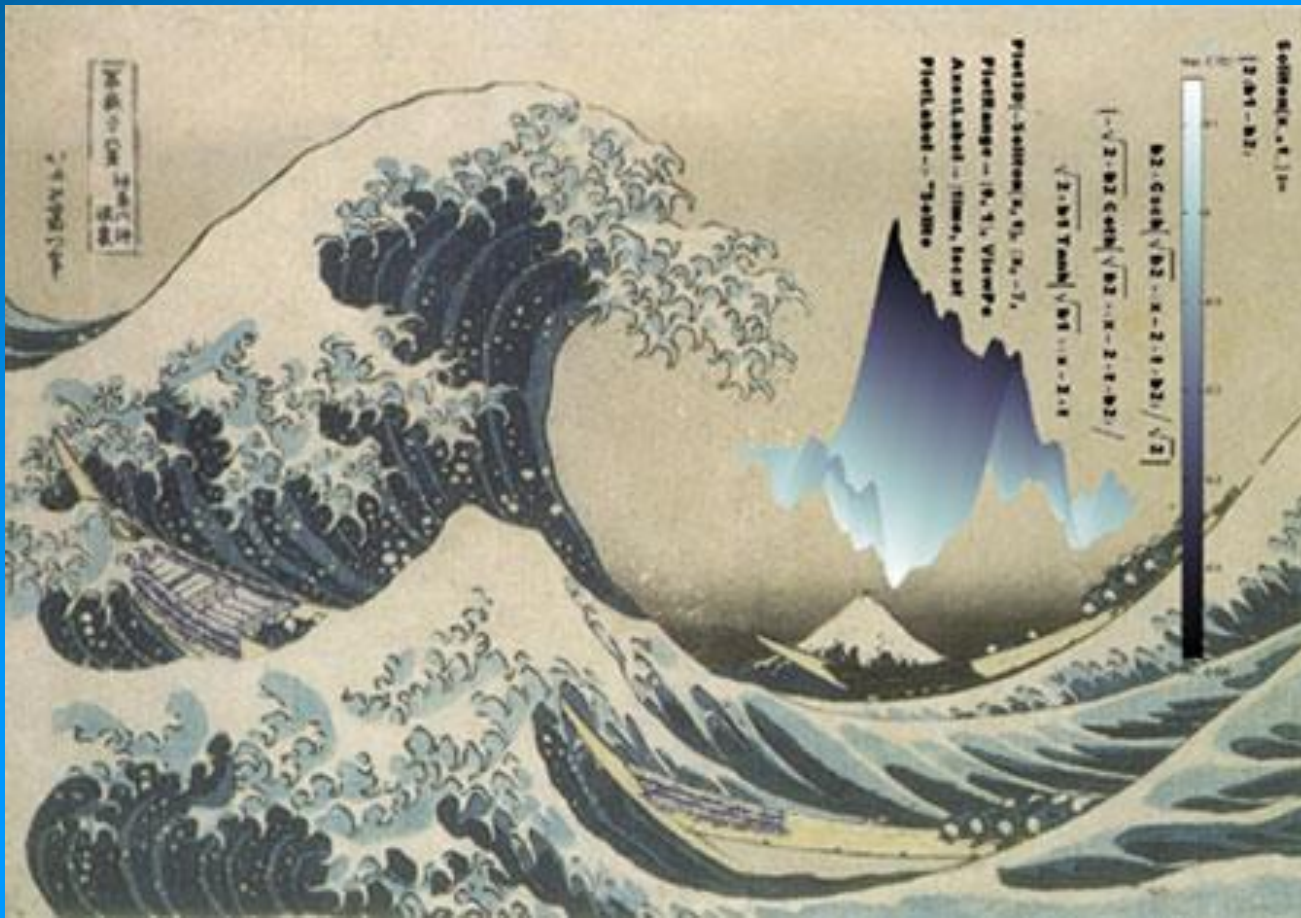
**SOLITONS INDUCTION BY TUINA**



# SOLITONS

**KATSUSHIKA HOKUSAI**

***KANAGAWA-OKI NAMI-URA*** (1832)







**SOLITONS INDUCTION BY TUINA**

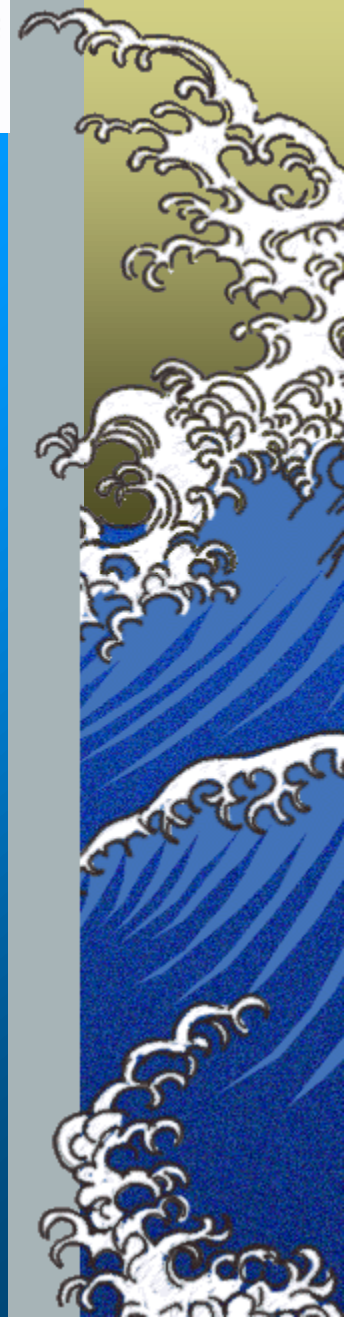
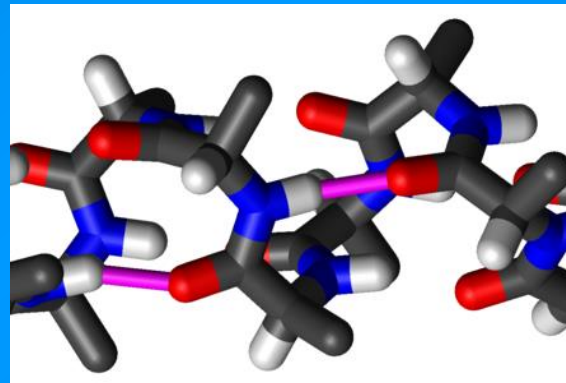


## **SOLITONS**

**A.S. DAVYDOV (1979, 1982)**



**SOLITARY WAVES PROPAGATE ALONG  
PROTEIN CHAINS**







# **SOLITONS INDUCTION BY TUINA**



## **SOLITONS**

**L.S. BRIZHIK (1998, 2003, 2009)**



**DYNAMIC PATHWAYS**

**ELECTROMAGNETIC SIGNALS**



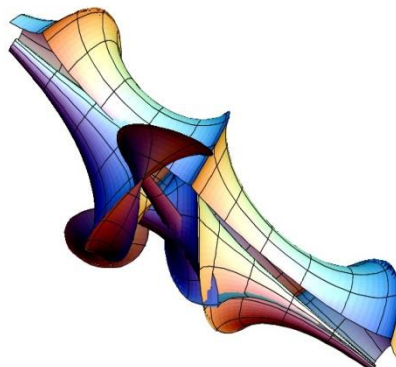
**ENERGETIC PACKETS TRAVEL WITHOUT DISPERSION**



**SELF ORGANIZATION**

***HEALTH***

**ENERGY  
INFORMATION  
FLOW**



***ILLNESS***

**FLOW BLOCKING  
COHERENCE LACKING**



# SOLITONS INDUCTION BY TUINA

## LIVING BEING



### DISSIPATIVE SYSTEM

**EXCHANGE of WATER and ENTROPY  
with EXTERIOR ENVIRONMENT**



**ENTROPY DECREASE**



**Process OF  
SELF-ORGANIZATION**



**ORGANISM TAKES ENERGY from:**

- **SUN**
- **FOOD**
- **EVERY AVAILABLE SOURCES**



**SHAPING of FREE ENERGY**



**TRANSFORMING in WORK**



**ENERGY EMISSION to OUTSIDE**

### COHERENCE

**ALL of PARTICLES FLOAT AGRING  
with THEMSELVES**



**COLLECTIVE OSCILLATION**  
(W. Nernst, 1916)



**MOLECULES SHAPE ONLY ONE  
MICROSTATE**  
(with NO ENTROPY)



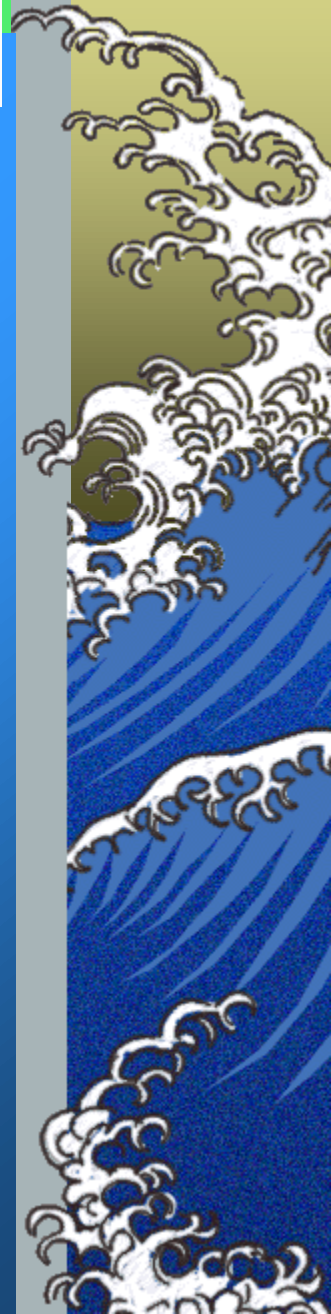
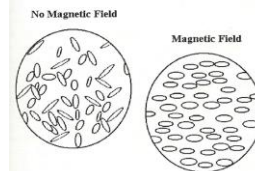
**MACROSCOPIC BODY IS FOUNDED on  
RESONANT BINDING**



**PASSAGE from  
NON COHERENT STATE  
to  
COHERENT STATE  
(ENERGY SAVING)**



**ENERGY EMISSION to OUTSIDE**



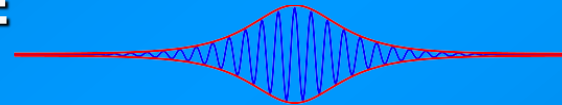


# SOLITONS INDUCTION BY TUINA

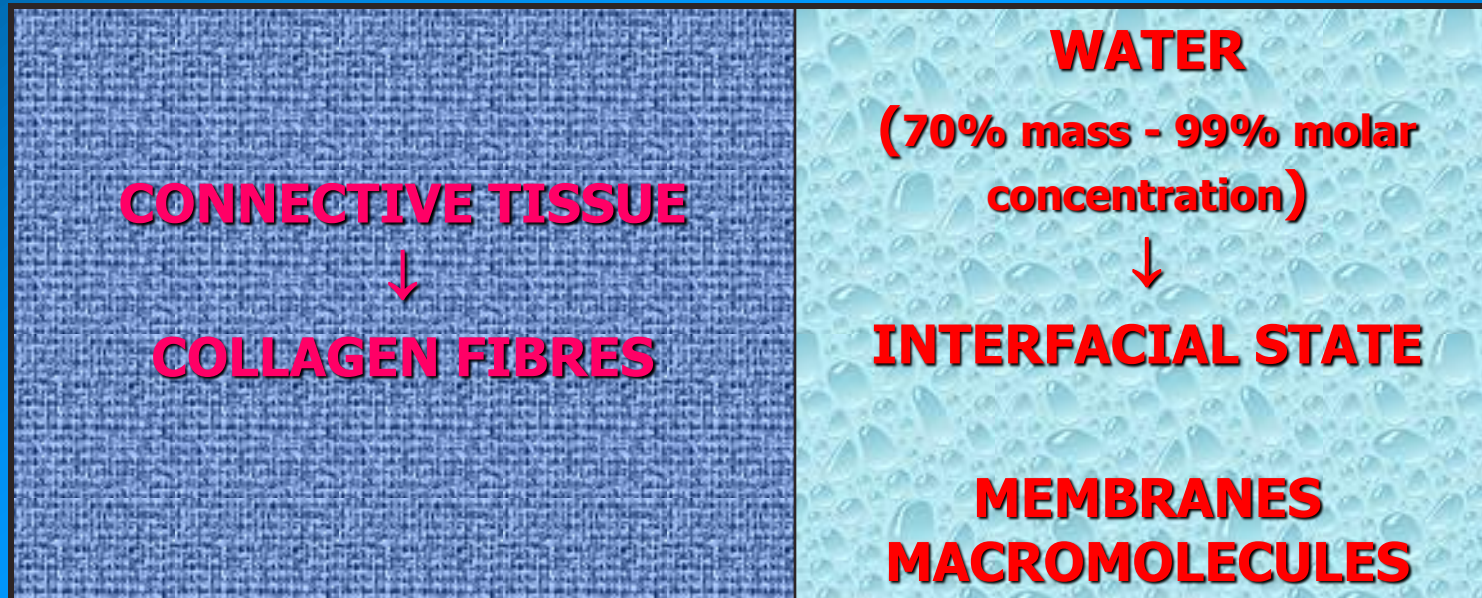


## SOLITONS

E. DEL GIUDICE



THE LIVING MATTER CAN BE DESCRIBED AS A  
LIQUID CRYSTAL



THEY SUPPORT THE SOLITONS FLOW



# **SOLITONS INDUCTION BY TUINA**

## **SOLITONS**

**MERIDIANS COINCIDE with LONG  
MOLECULAR CHAINS in CONNECTIVE**



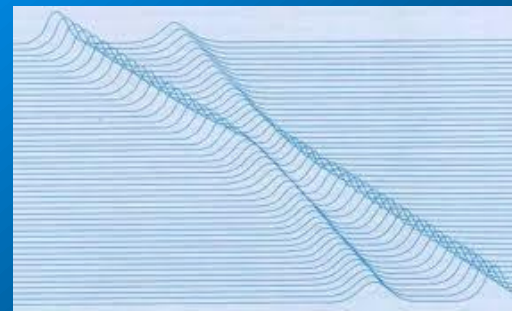
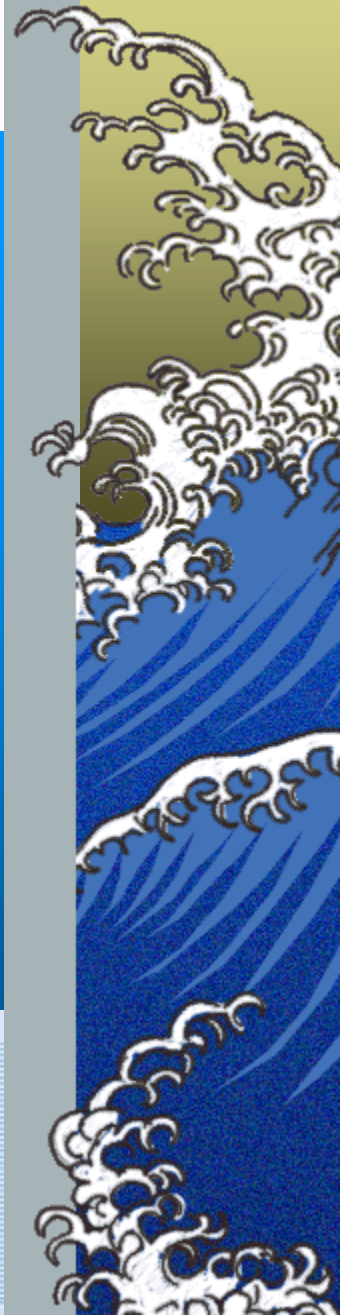
**ACUPOINT STIMULATION  
(NEEDLES – MOXA – TUINA - LASER)**



**STABLE TRAFFIC of SOLITONS ALONG  
MERIDIANS**

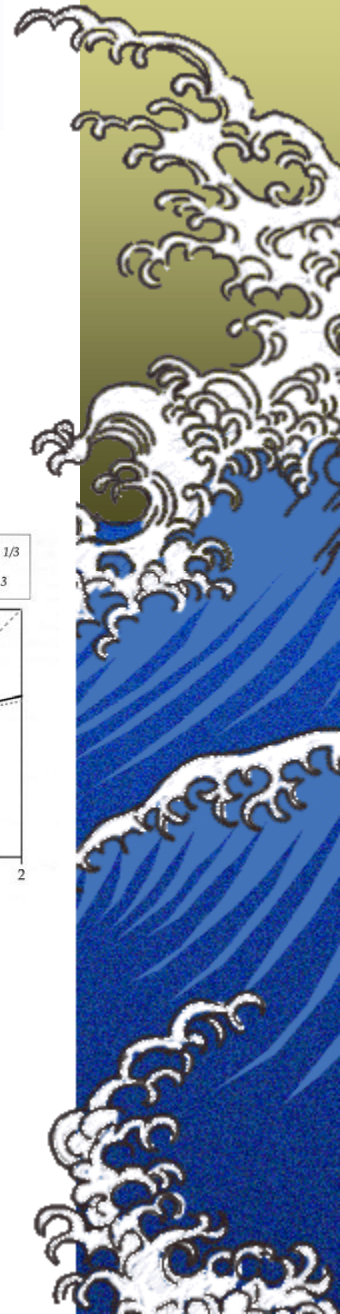


**BIOLOGICAL EFFECTS**





# SOLITONS INDUCTION BY TUINA



**PRINCIPLE of MINIMUM STIMULUS**



***PRINCIPLE of WEBER – FECHNER***



$$p = k \ln \frac{S}{S_0}$$

**STIMULUS MORE LIGHT  
than  
THRESHOLD STIMULUS**



**INCREASE of the RESPONSE**



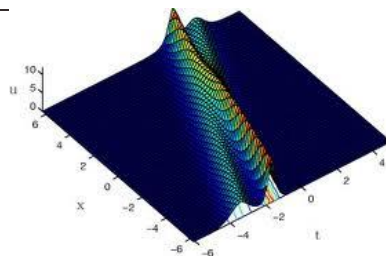
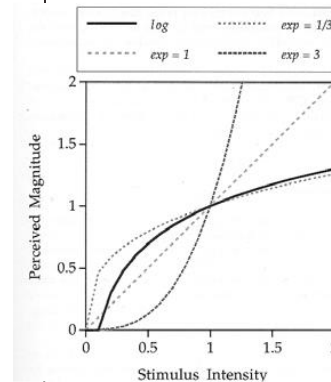
**THE RESPONSE IS ADDRESSED to the INNER**



**ORGANISM OPERATES ON ITSELF**



**RESTRUCTURING – REORGANIZATION**

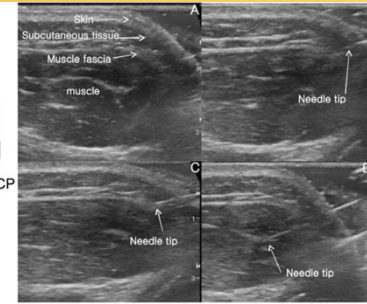
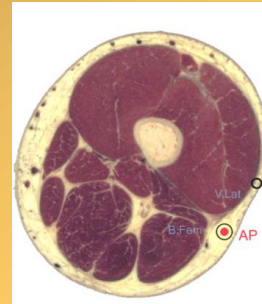
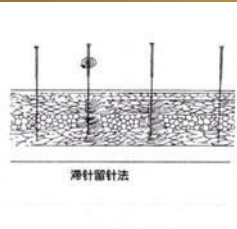
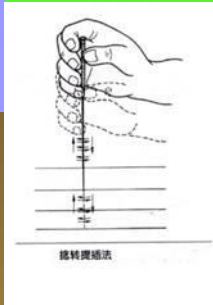




# SOLITONS INDUCTION BY TUINA

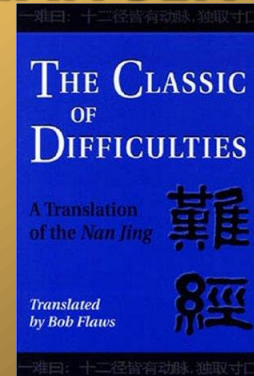


## FASCIA



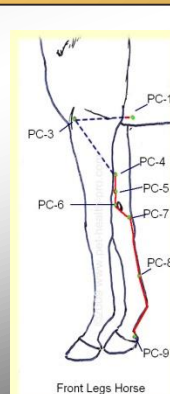
**NETWORK of MERIDIANS EXISTS WITHIN FAT, GREASY MEMBRANES EXTENDING THROUGHOUT THE BODY AND CONNECTS ALL PARTS OF BODY**

## NAN JING



心 包

**XIN BAO LUO**  
**IT HAS MANDATE OF THE OFFICERS**  
**IN HAEDQUARTER AND IN MISSION,**  
**IT RADIATES CHEERFULNESS AND JOY**







# SOLITONS INDUCTION BY TUINA



LIVING MATRIX



FASCIA



MECHANICAL – NEUROLOGICAL FUNCTIONS

ACUPUNCTURE

TUINA



CYTOSKELETON RESHAPING (H.M. Langevin, 2006)



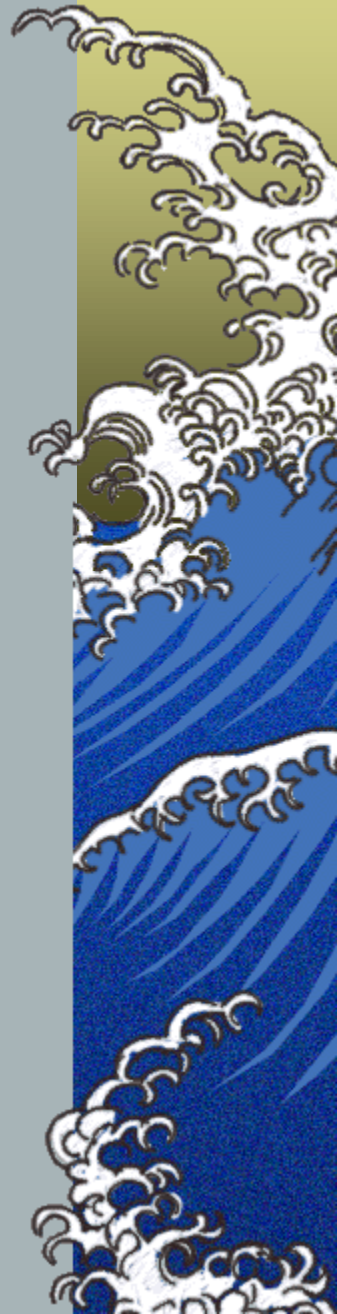
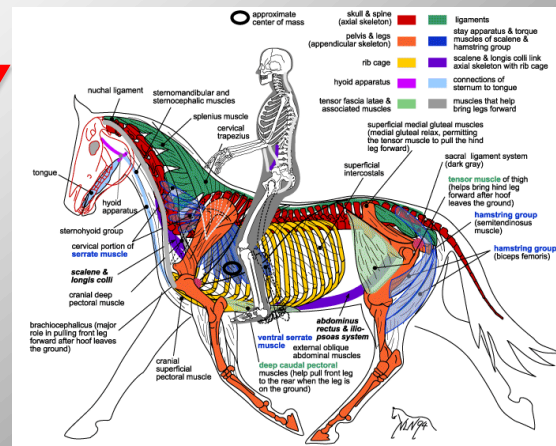
INFORMATION FLOW by MECHANICAL STIMULI



TENSEGRITY

(INTEGRITY TENSIONAL SYSTEM)

CHANGING THE TISSUE **SHAPE**  
IT CHANGES THE  
**BEHAVIOUR**





# SOLITONS INDUCTION BY TUINA

## ENGRAMS



### ENGRAMS

COOPERATION SCHEME OF THE  
NERVOUS BUNDLES AT NCS LEVEL



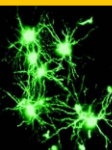
TRACES OF INFORMATIVE  
CONTENTS



NEUROGRAMMA



MEMORY



### ENGRAMS



ENVIROMENTAL STIMULI  
ILLNESS  
BIOCHEMICAL PRODUCTS  
(ALLOPATHIC DRUGS)



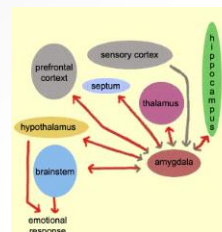
NERVOUS ALTERATIONS



PERMANENT BIOCHEMICAL MODIFICATIONS



PERSISTENT or RECURRENT or SEASONAL  
DISEASES



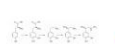
### ENGRAMS



- HIPPOCAMPUS
- AMYGDALA
- PAG
- CEREBELLAR CORTEX
- CEREBELLAR NUCLEUS

### ENGRAMS

LIMBIC SYSTEM INVOLVEMENT



GABA  
ADRENALINE  
NORADRENALINE  
SEROTONIN





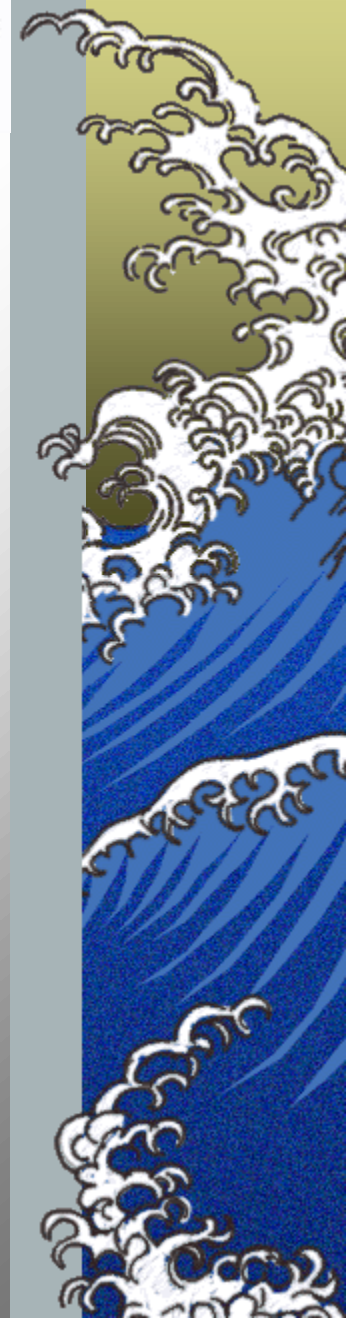
# SOLITONS INDUCTION BY TUINA



## ENGRAMS

CV 1 ( <i>Huiyin</i> )	CV 1 ( <i>Huiyin</i> )
CV 8 ( <i>Shenque</i> )	CV 8 ( <i>Shenque</i> )
CV 17 ( <i>Shanzhong</i> )	CV 17 ( <i>Shanzhong</i> )
*	BL 11 ( <i>Dazhu</i> )
CV 23 ( <i>Lianquan</i> )	CV 23 ( <i>Lianquan</i> )
Yin Tang	Yin Tang
GV 20 ( <i>Baihui</i> )	GV 20 ( <i>Baihui</i> )

3 GATES - 9 WORMS	ACUPOINT	FUNCTIONS
GOLDEN BUG	GV 1 ( <i>Changchiang</i> )	KUNDALINI
STOMACH WORM	GV 3 ( <i>Yao Yangguan</i> )	Tonify KI Qi and Yang
LUNG WORM	GV 4 ( <i>Mingmen</i> )	Tonify KI Qi and Yang
OBSTACLE WORM	GV 5 ( <i>Xuanshu</i> )	Regulates SP Qi and Yang
GREEN WORM	GV 6 ( <i>Jizhong</i> )	Tonify SP and KI/ Removes Dampness
FLESH WORM	GV 11 ( <i>Shendao</i> )	Regulates HT Qi and Yang
WHITE WORM	GV 13 ( <i>Taodao</i> )	Diffuses LU Qi
DRAGON WORM	GV	/
PROSTRATE WORM	GV 16 ( <i>Fengfu</i> )	Removes Wind
***	***	***
LOWER GATE	GV 4 ( <i>Mingmen</i> )	Tonify KI Qi and Yang
MIDDLE GATE	GV 12 ( <i>Shenzhu</i> )	Regulates LU Qi
HIGHER GATE	GV 16 ( <i>Fengfu</i> )	Removes Wind







# **SOLITONS INDUCTION BY TUINA**



**TUINA**

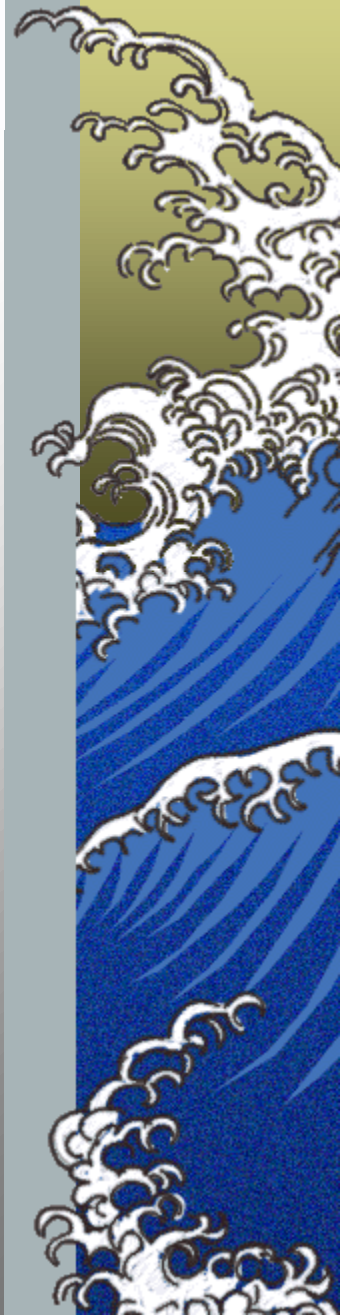
**MANUAL MEDICINE / INFORMATIVE STIMULI**



**RE-DISTRIBUTION OF CEREBROSPINAL FLUID  
(SOLITONS INDUCTION)**

**RE-ORGANIZATION OF THE INNER ENERGY**

**GREAT FLOW of ENERGY and INFORMATION**





# **SOLITONS INDUCTION BY TUINA**

## **THERAPY**

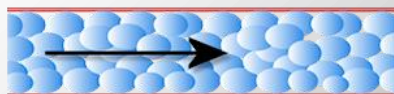


**HEALTHY RELATIONSHIP LINK BASED on PHASE RESONANCE**

<b>ENERGY</b>	<b>TECHNIQUE</b>
<b>LIGHT ENERGY</b>	<b>LASERPUNCTURE</b>
<b>MECHANIC ENERGY</b>	<b>TUINA</b> <b>MASSAGE THERAPY</b>
<b>THERMAL ENERGY</b>	<b>ACUPUNCTURE</b> <b>ELECTROACUPUNCTURE</b> <b>MOXIBUSTION</b>
<b>CHEMICAL ENERGY</b>	<b>HYDROACUPUNCTURE</b> <b>HAEMOACUPUNCTURE</b>
<b>MIND ENERGY</b>	<b>THINKING - INTENTION</b>



FLUSSO CONTINUO



FLUSSO QUANTIZZATO

