



A. Curriculum Vitae

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Education:

9/2003-12/2004 **Université Pierre et Marie, Villefranche sur Mer, France**
Ph.D. Degree in Geosciences, Laboratory of Oceanography in Villefranche
9/2000- 8/2003 **Université Pierre et Marie, Paris, France**
Ph.D. student, Department of Sesimotectonics and Tectonophysics
10/1999- 7/2000 **CAVILAM, Vichy, France**
Intensive French langue training course
9/1997- 8/1999 **National Cheng Kung University, Tainan, Taiwan**
Master's Degree in Geosciences, Institute of Earth Science
9/1994- 8/1996 **Chinese Culture University, Taipei, Taiwan**
Bachelor's Degree in Geosciences, Department of Geology

Dissertation : Neotectonique et geomorphologie de la deformation frontale de l'ouest de Taiwan

Advisor: Professor **Jacques Angelier**, Université Pierre et Marie Curie, France

Co advisor: Professor **Benoit Deffontaines**, Université de Maren-la-Vallée, France

This work comprises a surface process analysis investigation of neotectonic effect and morphology evolution of western Taiwan. Most of the dissertation has been published as journal articles (see publication list).

Research Domain : My research is focused on the interaction between **Surface Processes** and **Tectonic Geomorphology** of active mountains belt. I have worked with different researchers in many types of scientific facilities to determine active structure (e.g. airborne LIDAR, Photogrammetric analysis, RTK-GPS, Digital Elevation Model and cosmogenic dating) and using GIS system to manipulate digital image and geological data.

Honors :

2008: Grant to Young geomorphologist, International Association of Geomorphologists, Romania.

2007-2009: Distinguished Postdoctoral Fellowship, Academia Sinica, R.O.C.



Professional experience:

- 1/2009- present** Postdoctoral Fellow of Academia Sinica. "The Isotopic and Elemental Records in Environmental Samples: Tracing the Impacts of Anthropogenic Activities on Global Changes". The Science Vanguard Research Program. (Research advisor: Dr. Der-Chuen Lee)
- 1/2007- 12/2008** Distinguished Postdoctoral Fellow of Academia Sinica. "Tectonic deformation and landscape evolution of the Taiwan mountain belt: case study by the fold and thrust belt in centre-western Foothills".
- 8/2006- 12/2006** Postdoctoral Fellow of National Science Council. "Modeling of fault deformation at plate suture: Leveling and GPS measurements across the Longitudinal Valley fault in eastern Taiwan and Numerical modeling of kinematics and rock mechanics of fault motion". (Research advisor: Dr. Jain-Cheng Lee).
- 1/2005- 8/2005** Postdoctoral Fellow of National Science Council. "Kinematics of near surface deformation of active faulting in southwestern Taiwan and regional sesimotectonics". (Research advisor: Dr. Jain-Cheng Lee).

Other research experience :

- 9/2009- 10/2009** *Visiting scientist*, Centre Europeen de Recherche et d'Enseignement de Geosciences del'Environnement (CEREGE), Aix en Provence, France
- Sample preparation and extraction ^{10}Be for AMS-5MV measurement.
 - Using high precision ICP-MS to determinate the ^{27}Al content of the quartz samples
- 9/2008- 11/2008** *Visiting scientist*, Centre Europeen de Recherche et d'Enseignement de Geosciences del'Environnement (CEREGE), Aix en Provence, France
- Development of quantitative theory of cosmogenic dating at lateritic and fluvial terraces.
 - Analysis of how cosmogenic ray reflect environmental diversity at different morphologic region.
 - Prepare for the facilities of cosmogenic Nuclide Geochronology Laboratory in Taiwan.
- 9/2007- 11/2007** *Visiting scientist*, Centre Europeen de Recherche et d'Enseignement de Geosciences del'Environnement (CEREGE), Aix en Provence, France
- Theoretical and laboratory analysis of cosmogenic nuclides technique.
 - Application of cosmogenic nuclides to quantify rates of the geomorphic processes.
 - Numerical study of these relationships thus requires quantifying the rates of denudation/erosion.
- 6/2003- 9/2003** *Visiting scientist*, Ecole Nationale des Sciences Géographiques (ENSG), Marne-la Vallée, France
- Mathematical concepts in photogrammetry
 - Digital Elevation Model technologies and application
 - Numerical study of photogrammetry and remote sensing to hazards and disaster management._____



B. Publications Lists

A) SCI Papers :

1. Benoit Deffontaines, Char-Shine Liu, Jacques Angelier, Chyi-Tyi Lee, Jean-Claude Sibuet, Yi-Ben Tsai, Serge Lallemand, Chia-Yu Lu, Chao-Shing Lee, Shu-Kun Hsu, Hao-Tsu Chu, Jian-Cheng Lee, Erwan Pathier, **Rou-Fei Chen**, Chin-Tung Cheng, Chi-Wen Liao, Chun-Chia Lin, and Hsi-Hao Hsu, 2001, Preliminary Neotectonic Map of Onshore-offshore Taiwan, TAO, Supplementary Issue, 339-349.
2. Jacques Angelier and **Rou-Fei Chen**, 2002, Mathematical analysis of longitudinal river profiles reveals tectonic uplift: Hsiaomei, Taiwan, C.R.Géosciences 333, 1103-1111.
3. Olivier Lacombe, Jacques Angelier, Frédéric Mouthereau, Hao-Tsu Chu, Benoît Deffontaines, Jian-Cheng Lee, Muriel Rocher, **Rou-Fei Chen** and Lionel Siame, 2004, The Liuchiu Hsu island offshore SW Taiwan: tectonic versus diapiric anticline development and comparisons with onshore structures, C. R.Géosciences 336, 815–825.
4. **Rou-Fei Chen**, Yu-Chang Chan, Jacques Angelier, Jyr-Ching Hu, Chung Huang, Kou-Jen Chang and Tian-Yuan Shih, 2005, Large earthquake-triggered landslides and mountain belt erosion: the Tsaoling case, Taiwan, C. R.Géosciences 337, 1164–1172.
5. Fung-Chun Li, Jacques Angelier, **Rou-Fei Chen**, Benoît Deffontaines, Hui-Ming Hsieh, Ching-Ruey Luo, Tso-Tchang Wu and Ming-Chao Lin, 2005, Estimates of present-day erosion based on sediment transport in rivers: a case study in Taiwan, C. R.Géosciences 337, 1131–1139.
6. Chin-Shyong Hou, Jyr-Ching Hu, Li-Chung Shen, Jing-Suei Wang, Chien-Liang Chen, Tien-Chang Lai, Chung Huang, Yi-Rong Yang, **Rou-Fei Chen**, Yue-Gau Chen and Jacques Angelier, 2005, Estimation of subsidence using GPS measurements, and related hazard: the Pingtung Plain, southwestern Taiwan, C. R.Géosciences 337, 1184–1193.
7. Kuo-Jen Chang, Alfredo Taboada, Ming-Lang Lin and **Rou-Fei Chen**, 2005, Landsliding by earthquake shaking using a block-on-slope thermo-mechanical model: Example of Jiufengershan landslide, central Taiwan, Eng. Geology, 80, 151-163.
8. **Rou-Fei Chen**, Kuo-Jen Chang, Jacques Angelier, Benoît Deffontaines, Chyi-Tyi Lee, Ming-Lang Lin and I-Ho Yan, 2006, Topographical changes revealed by high-resolution airborne LiDAR images: The 1999 Tsaoling landslide induced by chichi earthquake, Eng. Geology, 88, 160-172.
9. Jyr-Ching Hu, Hao-Tsu Chu, Chin-Shyong Hou, Tzu-Hua Lai, **Rou-Fei Chen** and Pei-Fen Nien, 2006, The contribution to tectonic subsidence by groundwater abstraction in the Pingtung area, southwestern Taiwan as determined by GPS measurements, Quaternary Int. 147, 62-69.



10. Jyr-Ching Hu , Chin-Shyong Hou, Li-Chung Shen, Yu-Chang Chan, **Rou-Fei Chen**, Chung Huang, Ruey-Juin Rau, Kate Hui-Hsuan Chen, Chii-Wen Lin, Mong-Han Huang and Pei-Fen Nien, Fault activity and lateral extrusion inferred from velocity field revealed by GPS measurements in the Pingtung area of southwestern Taiwan, *Journal of Asian Earth Sciences*, 2007, 31(3), 287-302.
11. C.Y. Kuo, Y.C. Tai, F. Bouchut, A. Mangeney, M. Pelanti, **R.F. Chen** and K.J. Chang, 2008, Simulation of Tsaoling landslide, Taiwan, based on Saint Venant equations over general topography, *Eng. Geology*, in press and available online.
12. Chu-Chun Kang, Emmy T.-Y. Chang, Jian-Cheng Lee, **Rou-Fei Chen**, 2008, Active tectonics in the Ilan plain: geological and seismological characteristics in the conjunction between the westernmost part of the Okinawa trough and the northernmost part of the Lishan fault, *Western Pacific Earth Sciences*, (accepted).
13. **Rou-Fei Chen**, Jacques Angelier, Benoit Deffontaine, Kuo-Jen Chang and Chai-Yu Lu, 2008, Spatial variations in distribution of Holocene river terraces along a growing fault-related fold: A case study near Chiayi, Central-Western Taiwan. (*Tectonophysics*, under review)
14. Kuo-Jen Chang, Yu-Chang. Chan, **Rou-Fei Chen**, Yu-Chung Hsieh, 2008, Evaluation of tectonic activities using LiDAR topographic data: an example from the Nankan lineament, northern Taiwan, (*TAO*, under review).
15. **R.-F. Chen**, B. Deffontaines, J. Angelier and R.-C. Shih, 2009, Belt front structure and active triangular fault zone: new morpho-tectonic insights near Chiayi-Meishan, Central-Western Taiwan. (*Tectonophysics*, submitted)
16. Kuo-Jen Chang, Yu-Chang. Chan, **Rou-Fei Chen**, Yu-Chung Hsieh, 2009, Reconstruction and inferred evolution of large-scale paleo-landslides in volcanic area. (*Geomorphology*, submitted).

B) Books :

- 張國楨，李建成，陳柔妃 (2005) 震區的地質岩性與構造。九二一集集大地震，行政院國家科學委員會，137-156.

C) Other papers :

- **Rou-Fei Chen**, Jacques Angelier, Denoit Deffontaines and Heng Tsai, 2006, Active uplift at the Taiwan belt front revealed by river profiles: the Hsiaomei anticline area, Chaiyi, Taiwan, *Conferences Commemoration of 100th Anniversary of the 1906 Meishan Earthquake*.