

# Curriculum Vitae



## About

Name: Tengfei Wang  
Gender: Male  
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Geophysics  
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## Language

CET-6 : 522

## Programming

Unix/Linux  
C/C++  
MPI/OpenMP  
Shell/Python/Java

## Special skills

1. High-performance computing with C through MPI & OpenMP.
2. C++/Python/Java & Unix/Linux OS
3. Large data processing & Small-cluster maintenance experience.
4. Good mathematical background.

## Education

2011-2017 PhD. Tongji University Profession: Geophysics

2007-2011 B.S. Tongji University Profession: Geophysics

## Research

2010-2011 Local angle domain imaging in azimuthally anisotropic media

Introduce the Kirchhoff PSTM algorithm for azimuthally anisotropic media in local angle domain.

2011-2013 Velocity building with Tomography based on angle gather in depth domain

Using Gaussian beam migration as engine, combining open-source software to solve large sparse matrix in geophysical problem & parallelizing with OpenMP and MPI

2013-2015 Elastic FWI based on wave mode decomposition

Precondition the gradient of elastic FWI using decomposed wavefields to mitigate elastic parameter trade-offs through wave mode decomposition. Complete algorithm design and programming with hybrid MPI+OpenMP method to solve the memory consumption problem.

2015 – Elastic Reflection FWI based on wave mode decomposition

Update the background P- and S- velocities using reflected waves. Mode decomposition is used to mitigate parameter trade-offs both in imaging and rabbit-ear gradient calculation.

## Internship

2012-2014 CNPC CDEC Sichuan Geophysical Company

Participate the project of my supervisor and transplant the Tomography algorithm into the platform of their company.

2011-2012 Sinopec research center in Nanjing

Participate the project of my supervisor and take responsibility to the test and transplantation of the algorithm. Complete part of the algorithm optimization.

## Honor

2011	Geophysical scholarship of Liu Guangding
2012	The Graduate National scholarship
2013	Geophysical scholarship of Tongji University

## International experience

2016	3-month visit in King Abdullah University of Science and Technology
2016	<b>EAGE annual meeting</b> Oral Presentation: Comparison between mode decomposition based and Gaussian Newton methods in elastic full waveform inversion
2015	<b>EAGE annual meeting</b> Oral Presentation: Elastic wave mode decoupling for full waveform inversion
2012	<b>SEG annual meeting</b> Oral presentation: Pure mode modeling and reverse-time migration of P-wave in HTI and orthorhombic media

## Journal Articles

2017	<b>Geophysical Journal International: Elastic full waveform inversion based on mode decomposition: The approach and mechanism</b> Tengfei Wang, Jiubing Cheng
2014	<b>Chinese J. Geophysics: Description of qP-wave propagation in anisotropic media, Part II: Separation of pure-mode scalar waves.</b> Jiubing Cheng, Chen Maogen, Tengfei Wang
2013	<b>Chinese J. Geophysics: Description of qP-wave propagation in anisotropic media, Part I: Pseudo-pure-mode wave equations.</b> Jiubing Cheng, Kang Wei, Tengfei Wang
2012	<b>Geophysics: Azimuth-preserved local angle-domain prestack time migration in isotropic vertical transversely isotropic and azimuthally anisotropic media</b> Jiubing Cheng, Tengfei Wang, Chenglong Wang, Jianhua Geng

## Conference Abstracts

- 2017      **87th SEG Annual meeting: Born reflection kernel analysis and wave-equation reflection traveltime inversion in elastic media**  
Tengfei Wang and Jiubing Cheng
- 2017      **79th EAGE Annual meeting: Elastic wave-equation reflection traveltime inversion using dynamic warping and wave mode decomposition**  
Tengfei Wang, Jiubing Cheng, Chenlong Wang and Qiang Guo
- 2016      **78th EAGE Annual meeting: Comparison between mode decomposition based and Gaussian Newton methods in elastic full waveform inversion**  
Tengfei Wang and Jiubing Cheng
- 2016      **SPG/SEG 2016 International Geophysical Conference: Regularization method of tomography based on the ADCIGs with geological dip information**  
Tao Yang, Tengfei Wang and Jiubing Cheng
- 2015      **77th EAGE Annual meeting: Elastic wave mode decoupling for full waveform inversion**  
Tengfei Wang and Jiubing Cheng
- 2014      **SPG/SEG 2014 International Geophysical Conference: Migration velocity model building using local angle domain nonlinear tomography.**  
Tengfei Wang, Kang Wei and Jiubing Cheng