



ISSN No. : 2321-9653

IJRASET

**International Journal for Research in Applied
Science & Engineering Technology**

IJRASET is indexed with Crossref for DOI-DOI : 10.22214

Website : www.ijraset.com, E-mail : ijraset@gmail.com

ISRA
JIF

ISRA Journal Impact
Factor: 7.429



45.98
INDEX COPERNICUS



THOMSON REUTERS
Researcher ID: N-9581-2016



TOGETHER WE REACH THE GOAL
SJIF 7.429

Certificate

It is here by certified that the paper ID : IJRASET66678, entitled

*Analysis of Different Noise Reduction Effects of Ground Penetrating Radar Image of Cavity Behind
Tunnel Primary Support Based on Singular Value Decomposition and Wavelet Transform*

by

Chao Zhou

*after review is found suitable and has been published in
Volume 13, Issue I, January 2025
in*

By [Signature]

Editor in Chief, IJRASET

*International Journal for Research in Applied Science &
Engineering Technology*

(International Peer Reviewed and Refereed Journal)

Good luck for your future endeavors



ISSN No. : 2321-9653

IJRASET

**International Journal for Research in Applied
Science & Engineering Technology**

IJRASET is indexed with Crossref for DOI-DOI : 10.22214

Website : www.ijraset.com, E-mail : ijraset@gmail.com

Certificate

It is here by certified that the paper ID : IJRASET66678, entitled

*Analysis of Different Noise Reduction Effects of Ground Penetrating Radar Image of Cavity Behind
Tunnel Primary Support Based on Singular Value Decomposition and Wavelet Transform*

by

Liang Zhang

*after review is found suitable and has been published in
Volume 13, Issue I, January 2025
in*

*International Journal for Research in Applied Science &
Engineering Technology*

(International Peer Reviewed and Refereed Journal)

Good luck for your future endeavors

By [Signature]

Editor in Chief, IJRASET

ISRA
JIF

ISRA Journal Impact
Factor: 7.429



45.98
INDEX COPERNICUS



THOMSON REUTERS
Researcher ID: N-9581-2016



TOGETHER WE REACH THE GOAL
SJIF 7.429



ISSN No. : 2321-9653

IJRASET

**International Journal for Research in Applied
Science & Engineering Technology**

IJRASET is indexed with Crossref for DOI-DOI : 10.22214

Website : www.ijraset.com, E-mail : ijraset@gmail.com

ISRA
JIF

ISRA Journal Impact
Factor: 7.429



45.98
INDEX COPERNICUS



THOMSON REUTERS
Researcher ID: N-9581-2016



TOGETHER WE REACH THE GOAL
SJIF 7.429

Certificate

It is here by certified that the paper ID : IJRASET66678, entitled

*Analysis of Different Noise Reduction Effects of Ground Penetrating Radar Image of Cavity Behind
Tunnel Primary Support Based on Singular Value Decomposition and Wavelet Transform*

by

Sheng Zhang

*after review is found suitable and has been published in
Volume 13, Issue I, January 2025
in*

By [Signature]

Editor in Chief, IJRASET

*International Journal for Research in Applied Science &
Engineering Technology*

(International Peer Reviewed and Refereed Journal)

Good luck for your future endeavors



ISSN No. : 2321-9653

IJRASET

**International Journal for Research in Applied
Science & Engineering Technology**

IJRASET is indexed with Crossref for DOI-DOI : 10.22214

Website : www.ijraset.com, E-mail : ijraset@gmail.com

ISRA
JIF

ISRA Journal Impact
Factor: 7.429



45.98
INDEX COPERNICUS



THOMSON REUTERS
Researcher ID: N-9581-2016



TOGETHER WE REACH THE GOAL
SJIF 7.429

Certificate

It is here by certified that the paper ID : IJRASET66678, entitled

*Analysis of Different Noise Reduction Effects of Ground Penetrating Radar Image of Cavity Behind
Tunnel Primary Support Based on Singular Value Decomposition and Wavelet Transform*

by

Shao Xun Wu

*after review is found suitable and has been published in
Volume 13, Issue I, January 2025
in*

By [Signature]

Editor in Chief, IJRASET

*International Journal for Research in Applied Science &
Engineering Technology*

(International Peer Reviewed and Refereed Journal)

Good luck for your future endeavors