



# Journal Data in Brief





## Journal info

[Aims and scope](#)

[Editorial board](#)

### Editors-in-Chief

Hao-Ran Wang

Neoland Biosciences, Medford, Massachusetts, United States

Ganhui Lan

Covance Inc, Warwick, Pennsylvania, United States

[Help improve this page](#)

### Deputy Editor-in-Chief

Stamatis Zoras

University of Derby, Derby, United Kingdom

### Managing Editors

Ilaria Carnevale, PhD

Sahar Farajnia, PhD

### Section Editors

Magda Pál, PhD

Hungarian Academy of Sciences Centre for Agricultural Research, Martonvasar, Hungary

### Biochemistry and Immunology

Nicholas A. Pullen

University of Northern Colorado, Greeley, Colorado, United States

### Business, Management and Accounting

Joseph Yui-yip Lau, MSc, BSc, CMILT

Hong Kong Polytechnic University, Hung Hom, Kowloon, Kowloon

### Chemistry

Paolo Bertoncello

Swansea University, Swansea, United Kingdom

### Computer Science and Artificial Intelligence

Niko Lukač

University of Maribor, Maribor, Slovenia

### Earth and Planetary Sciences

Chaosheng Zhang

National University of Ireland Galway, Galway, Ireland

### Economics

Larisa Yarovaya, PhD, MSc, BA (hons)

University of Southampton Centre for Digital Finance, Southampton, United Kingdom

University of Southampton Centre for Digital Finance, Southampton, United Kingdom

## Energy

Maria Malvoni

National Technical University of Athens School of Electrical and Computer Engineering, ATHINA, Greece

## Engineering

Maria Grazia De Giorgi

University of Salento, Lecce, Italy

## Genetics, Genomics and Molecular Biology

Giulio Chiesa

Boston University, Boston, Massachusetts, United States

Yolanda Pico

University of Valencia, Valencia, Spain

## Mathematics and Physics

Bo Li

Tsinghua University, Beijing, China

## Materials Science: Chemistry

Anton Oliynyk

Manhattan College, Riverdale, New York, United States

## Materials Science: Materials Informatics

Taylor D. Sparks

The University of Utah, Salt Lake City, Utah, United States

## Medicine and Public Health

Iain Brownlee

Northumbria University, Newcastle Upon Tyne, United Kingdom

## Microbiology

Rasha Maal-Bared

EPCOR, Edmonton, Alberta, Canada

## Neuroscience

Joseph D. Zak

Harvard University, Cambridge, Massachusetts, United States

## Pharmacology, Toxicology, Pharmaceutical Sciences

Luisa Camacho

US Food and Drug Administration, Jefferson, Arkansas, United States

## Proteomics

Nico Jehmlich

Helmholtz-Centre for Environmental Research - UFZ, Leipzig, Germany

## Psychology and Psychiatry

Teddy J. Akiki

Yale University School of Medicine, New Haven, Connecticut, United States

## Social Psychology

James W. Fryer

SUNY Potsdam, Potsdam, New York, United States

**James W. Fryer**  
SUNY Potsdam, Potsdam, New York, United States

## **Social Science**

**W. Christopher Carleton**  
Max-Planck-Institute for Chemical Ecology, Jena, Germany

## **Zoology**

**Stephanie A. Poindexter**  
Boston University, Boston, Massachusetts, United States

## **Editorial Board**

**Canan Acar**  
Bahcesehir University, Istanbul, Turkey

**Georgios S.E. Antipas**  
Paul Scherrer Institute, Villigen, Switzerland

**Sebastian Aparicio**  
Durham University, Durham, United Kingdom

**J. Fernando Ayala-Zavala**  
Center for Food Research and Development Emerging Technologies Laboratory,  
Hermosillo, Sonora, Mexico

**Takashi Azuma**  
Osaka University of Pharmaceutical Sciences Faculty of Pharmaceutical Sciences,  
Takatsuki, Japan

**Cristina Baglivo**  
University of Salento, Lecce, Italy

**Anita Bandrowski**  
University of California San Diego Center for Research in Biological Systems, San  
Diego, California, United States

**Georgios Bartzas**  
Ethnikó Metsóbio Polytechnéio, Athens, Greece

**Chandra Sekhar Bathula**  
Louisiana State University Department of Comparative Biomedical Sciences,  
Baton Rouge, Louisiana, United States

**Alexssandro Geferson Becker**  
Federal University of Parana, Curitiba, Brazil

**Deepayan Bhowmik**  
University of Stirling, Stirling, United Kingdom

**Terrence Blackburne**  
University of Washington, Seattle, Washington, United States

**Julian Blasco**  
Institute of Marine Science of Andalusia, Puerto Real, Spain

**Wulaer Bolati**  
Fujita Health University, Toyoake, Japan

**Christian Brand**  
University of Vienna, Wien, Austria

**Anabela Cachada**  
University of Porto, Porto, Portugal

**Marco António Campinho**  
Centre of Marine Sciences, Faro, Portugal

**Angelo Canale**  
University of Pisa, Pisa, Italy

**Carmen Cavallo**  
Chalmers University of Technology, Goteborg, Sweden

**Yassine Chaibi**  
Moroccan School of Engineering Sciences Department of Electrical Engineering,  
Rabat, Morocco

**Yassine Chaibi**

Moroccan School of Engineering Sciences Department of Electrical Engineering,  
Rabat, Morocco

**Anurag Chaurasia**

National Bureau of Agriculturally Important Microorganisms, Maunath Bhanjan,  
India

**Vasilisa Christidou**

University of Thessaly Department of Early Childhood Education, Volos, Greece

**Stefano Cinti**

University of Naples Federico II, Napoli, Italy

**Paolo Maria Congedo**

University of Salento, Lecce, Italy

**Matteo Convertino**

Hokkaido University, Sapporo, Japan

**Alessandro Coppola**

University Hospital Agostino Gemelli, Rome, Italy

**Stefano Coppola**

Leiden University, Leiden, The Netherlands

**Adam Croom**

University of California Merced, Merced, California, United States

**Xinyi (Lizzy) Cui**

Nanjing University, Nanjing, China

**Samantha M. Curle**

University of Bath Department of Education, Bath, United Kingdom

**Ashish Dhir**

University of California Davis Medical Center, Davis, California, United States

**José G. Dórea**

University of Brasília, Brasília, Brazil

**Paula Duarte-Guterman**

The University of British Columbia, Vancouver, British Columbia, Canada

**Lars Ebert**

University of Zurich, Zürich, Switzerland

**Michael H. Farkas**

University at Buffalo - The State University of New York, Buffalo, New York,  
United States

**Iztok Fister Jr.**

University of Maribor Faculty of Electrical Engineering and Computer Science  
Institute of Informatics, Maribor, Slovenia

**Yuuki Fujiwara**

National Center of Neurology and Psychiatry National Institute of Neuroscience,  
Tokyo, Japan

**Matteo D. Gallidabino**

Northumbria University Department of Applied Sciences, Newcastle upon Tyne,  
United Kingdom

**Archan Ganguly**

University of California San Diego Department of Cellular and Molecular  
Medicine, La Jolla, California, United States

**Vural Gökmen**

Hacettepe University, Ankara, Turkey

**Daren Gooddy**

British Geological Survey - Wallingford Office, Wallingford, United Kingdom

**Daniel Granato**

Natural Resources Institute Finland, HELSINKI, Finland

**Jyotasana Gulati**

Alkahest Inc, San Carlos, California, United States

**Fei Han**

Shenyang Pharmaceutical University, Shenyang, China

**Fei Han**

Shenyang Pharmaceutical University, Shenyang, China

**David Hernandez**

NEW YORK UNIVERSITY SCHOOL OF MEDICINE, New York, New York, United States

**Tao Huan**

The University of British Columbia, Vancouver, British Columbia, Canada

**Tanya Hundal**

Mayo Foundation for Medical Education and Research, Rochester, Minnesota, United States

**Begoña Jiménez**

Spanish Scientific Research Council, Madrid, Spain

**Erin Kane**

Boston University, Boston, Massachusetts, United States

**Kuruntachalam Kannan**

University at Albany State University of New York, Albany, New York, United States

**Nerantzis Kazakis**

Aristotle University of Thessaloniki, Thessaloniki, Greece

**John F. Kennedy**

Chembiochem Laboratories Ltd, Tenbury Wells, United Kingdom

**Ki-Hyun Kim**

Hanyang University College of Engineering Department of Civil and Environmental Engineering, Seongdong-gu, Korea, Republic of

**Priyan Malarvizhi Kumar**

Middlesex University, London, United Kingdom

**Vivek Kumar**

Cold Spring Harbor Laboratory, Cold Spring Harbor, New York, United States

**Giorgia La Barbera**

University of Copenhagen, Copenhagen, Denmark

**Yu Li**

South China Normal University, Guangzhou, China

**Heng Liang**

Harbin Institute of Technology, School of Environment, Harbin, China

**Fuchen Liu**

Yale University School of Medicine, New Haven, Connecticut, United States

**Howard I. Maibach**

University of California San Francisco Department of Dermatology, San Francisco, California, United States

**Manousos Makridakis**

Biomedical Research Foundation of the Academy of Athens, Athens, Greece

**Mauro Masiol**

Ca' Foscari University of Venice, Venezia, Italy

**Mandana Mazaheri**

NSW Government, Dept. of Planning and Environment, Sydney, Australia

**Janine McCartney**

HHC Services Inc, Lester, Pennsylvania, United States

**Weizhi Meng**

Technical University of Denmark Department of Applied Mathematics and Computer Science, Kgs Lyngby, Denmark

**Lukasz Migas**

Delft University of Technology Delft Centre for Systems and Control, Delft, Netherlands

**Eiko N. Minakawa**

National Center of Neurology and Psychiatry National Institute of Neuroscience, Tokyo, Japan

**Hyo-Bang Moon**

Hanyang University Department of Marine Science and Convergence

**Hyo-Bang Moon**

Hanyang University Department of Marine Science and Convergence Engineering, Ansan, Korea, Republic of

**Kathryn Renae Moss**

Johns Hopkins University, Baltimore, Maryland, United States

**Rabindra Nepal**

University of Wollongong School of Accounting Economics and Finance, Wollongong, Australia

**Georgios Nikolopoulos**

National Public Health Organization, Athens, Greece

**Michael D. O'Toole**

The University of Manchester, Manchester, United Kingdom

**Eneko Osaba Icedo**

Foundation of Tecnalia Research and Innovation, Derio, Spain

**Fatih Özogul**

Cukurova University, Adana, Turkey

**Sangita Patel**

University at Buffalo - The State University of New York, Buffalo, New York, United States

**Basil Paul**

Baylor College of Medicine, Houston, Texas, United States

**Laura Pellegrini**

Institute of Oncology Research, Bellinzona, Switzerland

**Paulo Alexandre da Silva Pereira**

Mykolas Romeris University, Institute of Public Administration, Vilnius, Lithuania

**Saeed Peyghami**

Aalborg University, Aalborg, Denmark

**Charlotte Poschenrieder**

Autonomous University of Barcelona Faculty of Biosciences, Bellaterra, Spain

**Cristina Postigo**

Institute of Environmental Assessment and Water Research, Barcelona, Spain

**Benjamin Quost**

Sorbonne University, Paris, France

**Emmanuel Ramasso**

Graduate School of Mechanics and Micro Technology Besancon, Besancon, France

**Bahman Ramavandi**

Boushehr University of Medical Sciences, Bushehr, Iran, Islamic Republic of

**Bhagwan Rekadwad**

Savitribai Phule Pune University, Institute of Bioinformatics and Biotechnology, Pune, Maharashtra, India

**Paolo Rocco**

University of Catania, Catania, Italy

**Teresa Rocha-Santos**

University of Aveiro, Aveiro, Portugal

**Donato Romano**

Sant'Anna School of Advanced Studies, Pisa, Italy

**Cecilia Rossetti**

Technical University of Denmark Department of Chemistry, Kgs. Lyngby, Denmark

**Zhi Ruan**

Zhejiang University School of Medicine, Hangzhou, Zhejiang, China

**Sergi Sabater**

University of Girona, Girona, Spain

**Anderson de Souza Sant'Ana**

State University of Campinas Faculty of Food Engineering, Campinas, São Paulo, Brazil



**Anderson de Souza Sant'Ana**

State University of Campinas Faculty of Food Engineering, Campinas, São Paulo, Brazil

**Ian M. Schmutte**

University of Georgia Terry College of Business, Athens, Georgia, United States

**Mahmoud Shakouri**

University of Nebraska Kearney, Kearney, Nebraska, United States

**Nima Shamsaei**

Auburn University, Auburn, Alabama, United States

**Gaurav Sharma**

Institute of Bioinformatics and Applied Biotechnology, Bangalore, India

**Scott C. Sheridan**

Kent State University, Kent, Ohio, United States

**Valerijs Skribans**

Riga Technical University, Riga, Latvia

**Steve Smith**

University of Veterinary Medicine Vienna, Wien, Austria

**Anna Sokolova**

University of Nevada at Reno Department of Economics, Reno, Nevada, United States

**Eddy Solomon**

NYU LANGONE MEDICAL CENTER, New York, New York, United States

**Christian Sonne**

Aarhus University Department of Environmental Science, Roskilde, Denmark

**Dan J. Stein**

University of Cape Town Department of Psychiatry and Mental Health, Cape Town, South Africa

**Guanyong SU**

Nanjing University of Science and Technology, Nanjing, China

**Qian Sui**

East China University of Science and Technology, Shanghai, China

**Jinchun Sun**

US Food and Drug Administration National Center for Toxicological Research  
Division of Systems Biology, Jefferson, Arkansas, United States

**Piotr Szefer**

Medical University of Gdansk Faculty of Pharmacy and Laboratory Medicine,  
Gdansk, Poland

**Meisam Tabatabaei**

Mara University of Technology Faculty of Plantation and Agrotechnology, Jasin,  
Malaysia

**Shiu-keung Tang**

The Hong Kong Polytechnic University, Department of Building Services  
Engineering, Hong Kong, China

**Gene Thompson**

Rikkyo University College of Business, Tokyo, Japan

**Fidel Toldrá**

Instituto de Agroquímica y Tecnología de Alimentos (IATA), Paterna (Valencia),  
Spain

**Maria Concetta Tomei**

Water Research Institute National Research Council, Roma, Italy

**Chibuike C. Udenigwe**

University of Ottawa Department of Chemistry and Biomolecular Sciences,  
Ottawa, Ontario, Canada

**Agustina B. Ventre Lespiaucq**

Rey Juan Carlos University, Madrid, Spain

**Enza Vernucci**

Sapienza Università di Roma, Rome, Italy



Enza Vernucci  
Sapienza Università di Roma, Rome, Italy

Olivia Viessmann  
Harvard Medical School, Boston, Massachusetts, United States

Kai Wang  
Boston Children's Hospital and Harvard Medical School, Boston, Massachusetts,  
United States

Qilin Wang  
University of Technology Sydney Faculty of Engineering and Information  
Technology, Sydney, New South Wales, Australia

Akinobu Watanabe  
New York Institute of Technology, Old Westbury, New York, United States

Andrew Woodham  
Boston Children's Hospital and Harvard Medical School, Boston, Massachusetts,  
United States

Chuanhong Wu  
Qingdao University, Qingdao, China

Dazhi Yang  
Singapore Institute of Manufacturing Technology, Singapore, Singapore

Dejun Yang  
University of Massachusetts Medical School, Worcester, Massachusetts, United  
States

Kuo-Hui Yeh  
National Dong Hwa University - Meilun Campus, Hualien, Taiwan

Chunbo Zhang  
Nanchang University, Nanchang, China

Yanlong Zhu  
University of Wisconsin Madison, Madison, Wisconsin, United States

## Algal Announcements Section Editor

Hector De la Hoz Siegler  
University of Calgary, Calgary, Alberta, Canada

## Algal Announcement Editorial Board Members

Timothy Davis, PhD  
Bowling Green State University, Bowling Green, Ohio, United States

Kenneth Reardon  
Colorado State University, Fort Collins, Colorado, United States

---

ISSN: 2352-3409

Copyright © 2020 Elsevier Inc. All rights reserved



[About ScienceDirect](#) [Remote access](#) [Shopping cart](#) [Advertise](#) [Contact and support](#) [Terms and conditions](#) [Privacy policy](#)

We use cookies to help provide and enhance our service and tailor content and ads. By continuing you agree to the [use of cookies](#).

Copyright © 2020 Elsevier B.V. or its licensors or contributors. ScienceDirect® is a registered trademark of Elsevier B.V.

ScienceDirect® is a registered trademark of Elsevier B.V.





## Data in Brief

Open access

Articles in press [Latest issue](#) [Article collections](#) [All issues](#) [Submit your article](#)

Search in this journal



## Volume 29

In progress (April 2020)

This issue is in progress but contains articles that are final and fully citable.

< Previous vol/issue

Next vol/issue >

### Actions for selected articles

Select all / Deselect all

Download PDFs

Export citations

Show all article previews

Receive an update when the latest issues in this journal are published

Sign in to set up alerts

Help improve this page

### Computer Science

- Data article ● Open access  
**A dataset for connecting similar past and present causalities**  
 Ryohei Ikejiri, Yasunobu Sumikawa  
 Article 105185  
[Download PDF](#) [Article preview](#)
- Data article ● Open access  
**Dataset of depressive posts in Russian language collected from social media**  
 Sergazy Narynov, Daniyar Mukhtarkhanuly, Batyrkhan Omarov  
 Article 105195  
[Download PDF](#) [Article preview](#)
- Data article ● Open access  
**Single-trial fMRI activation maps measured during the InterTVA event-related voice localizer: A data set ready for inter-subject pattern analysis**  
 Virginia Aglieri, Bastien Cagna, Pascal Belin, Sylvain Takerkart  
 Article 105170  
[Download PDF](#) [Article preview](#)
- Data article ● Open access  
**A data set for electric power consumption forecasting based on socio-demographic features: Data from an area of southern Colombia**  
 Jorge Parraga-Alava, Jorge Dario Moncayo-Nacaza, Javier Revelo-Fuelagán, Paul D. Rosero-Montalvo, ... Diego Hernán Peluffo-Ordóñez  
 Article 105246  
[Download PDF](#) [Article preview](#)
- Data article ● Open access  
**MALINI (Machine Learning in NeuroImaging): A MATLAB toolbox for aiding clinical diagnostics using resting-state fMRI data**  
 Pradyumna Lanka, D. Rangaprakash, Sai Sheshan Roy Gotoor, Michael N. Dretsche, ... Gopikrishna Deshpande  
 Article 105213  
[Download PDF](#) [Article preview](#)
- Data article ● Open access  
**Role of gender on academic performance based on different parameters: Data from secondary school education**  
 S. Ranjeeth, T.P. Latchoumi, R.Victor Paul  
 Article 105257  
[Download PDF](#) [Article preview](#)
- Data article ● Open access  
**Estimation of upper and lower bounds of Gini coefficient by fuzzy data**  
 Reza Ashraf Ganjoei, Hossein Akbarifard, Mashaallah Mashinchi, Sayyed Abdol Majid Jalaei Esfandabadi  
 Article 105288  
[Download PDF](#) [Article preview](#)

Data article ● Open access  
**A dataset for evaluating one-shot categorization of novel object classes**  
Yaniv Morgenstern, Philipp Schmidt, Roland W. Fleming  
Article 105302  
[Download PDF](#) [Article preview](#) ▼

Data article ● Open access  
**A dataset of histograms of original and fake voice recordings (H-Voice)**  
Dora M. Ballesteros, Yohanna Rodriguez, Diego Renza  
Article 105331  
[Download PDF](#) [Article preview](#) ▼

Data article ● Open access  
**Dataset of thermal and visible aerial images for multi-modal and multi-spectral image registration and fusion**  
Lina M. García-Moreno, Jean P. Díaz-Paz, Humberto Loaiza-Correa, Andrés D. Restrepo-Girón  
Article 105326  
[Download PDF](#) [Article preview](#) ▼

Data article ● Open access  
**Data on OCT and fundus images for the detection of glaucoma**  
Hina Raja, M. Usman Akram, Sajid Gul Khawaja, Muhammad Arslan, ... Noman Nazir  
Article 105342  
[Download PDF](#) [Article preview](#) ▼

#### *Construction and Architecture*

Data article ● Open access  
**Data collected by coupling fix and wearable sensors for addressing urban microclimate variability in an historical Italian city**  
Benedetta Pioppi, Ilaria Pigliatù, Anna Laura Pisello  
Article 105322  
[Download PDF](#) [Article preview](#) ▼

#### *Decision Sciences*

Data article ● Open access  
**On the data to know the prioritization and vulnerability of patients on surgical waiting lists**  
Fabián Silva-Aravena, Eduardo Álvarez-Miranda, César A. Astudillo, Luis González-Martínez, José G. Ledezma  
Article 105310  
[Download PDF](#) [Article preview](#) ▼

#### *Design*

Data article ● Open access  
**Data set and model code on the optimal operating state of a negative emission polygeneration system**  
Kathleen B. Aviso, Raymond R. Tan, Dominic C.Y. Fao, Jui-Yuan Lee, Aristotle T. Ubando  
Article 105140  
[Download PDF](#) [Article preview](#) ▼


Data article ● Open access  
**A spatial database of CO<sub>2</sub> emissions, urban form fragmentation and city-scale effect related impact factors for the low carbon urban system in Jinjiang city, China**  
Shaoqing Dai, Shudi Zuo, Yin Ren  
Article 105274  
[Download PDF](#) [Article preview](#) ▼


#### *Earth and Planetary Sciences*

Data article ● Open access  
**A dataset representing the impact of aromatic nuclei on the carbon isotope of gases**  
Yanhong Liu, Yingqin Wu, Yanqing Xia, Lantian Xing, ... Tianzhu Lei  
Article 105101  
[Download PDF](#) [Article preview](#) ▼

Data article ● Open access  
**Rock magnetic and environmental magnetic data of lacustrine sediments from the Heqing basin**  
Xinwen Xu, Xiaoke Qiang, Hui Zhao, Chaofeng Fu  
Article 105107  
[Download PDF](#) [Article preview](#) ▼

Data article ● Open access  
**U–Th whole rock data and high spatial resolution U–Th disequilibrium and U–Pb zircon ages of Mt. Erives and Mt. Hasan Quaternary stratovolcanic complexes (Central Anatolia)**


Data article [Open access](#)  
**U–Th whole rock data and high spatial resolution U–Th disequilibrium and U–Pb zircon ages of Mt. Erciyes and Mt. Hasan Quaternary stratovolcanic complexes (Central Anatolia)**  
Bjarne Friedrichs, Axel K. Schmitt, Lucy McGee, Simon Turner  
Article 105113  
[Download PDF](#) [Article preview](#) 

Data article [Open access](#)  
**Validation data of parallel 3D surface-borehole electromagnetic forward modeling**  
Chong Liu, LiZhen Cheng, Bahman Abbassi  
Article 105209  
[Download PDF](#) [Article preview](#) 

Data article [Open access](#)  
**Dataset on raindrop size distribution, raindrop fall velocity and precipitation data measured by disdrometers and rain gauges over Peruvian central Andes (12.0°S)**  
Jairo M. Valdivia, Kevin Contreras, Daniel Martínez-Castro, Elver Villalobos-Puma, ... Yamina Silva  
Article 105215  
[Download PDF](#) [Article preview](#) 


Data article [Open access](#)  
**Data supporting Maastrichtian paleoclimate variables applying a multi proxy approach to a paleosol profile, Arctic Alaska**  
Susana Salazar-Jaramillo, Paul J. McCarthy, Andrés Ochoa, Sarah J. Fowell, Fred J. Longstaffe  
Article 105191  
[Download PDF](#) [Article preview](#) 

Data article [Open access](#)  
**Dataset on the road traffic noise measurements in the municipality of Thessaloniki, Greece**  
Paraskevi Begou, Pavlos Kassomenos, Apostolos Kalassis  
Article 105214  
[Download PDF](#) [Article preview](#) 

Data article [Open access](#)  
**Seismic data of a rockslide: Evaluation of noise levels, site effects, frequency content and identification of seismic phases**  
Mar Tapia, Marta Guinau, Pere Roig, Cristina Pérez-Guillén, ... Giorgi Khazaradze  
Article 105250  
[Download PDF](#) [Article preview](#) 


Data article [Open access](#)  
**Dataset on the major and trace elements contents and contamination in the sediments of Saronikos Gulf and Elefsis Bay, Greece**  
Aristomenis P. Karageorgis, Fotini Botsou, Helen Kaberi, Stylianos Iliakis  
Article 105330  
[Download PDF](#) [Article preview](#) 

#### *Economics, Econometrics and Finance*

Data article [Open access](#)  
**Dataset used in the economic evaluation trastuzumab-based regimens for HER-2 positive metastatic breast cancer patients in the Taiwanese healthcare setting**  
Vakaramoko Diaby, Ching-Yu Wang, Hussain Alqhtani, Sascha van Boemmel-Wegmann, ... Gilberto de Lima Lopes  
Article 105194  
[Download PDF](#) [Article preview](#) 

Data article [Open access](#)  
**Data of pre-IPO or listing firm characteristics and post-listing stock returns of Chinese listed firms**  
Hong Li  
Article 105226  
[Download PDF](#) [Article preview](#) 

#### *Energy*

Data article [Open access](#)  
**Dataset on a ferroelectric based electrostatic and electrochemical Li-cell with a traditional cathode**  
Maria Helena Braga, Andrew J. Murchison, John B. Goodenough  
Article 105087  
[Download PDF](#) [Article preview](#) 

Data article [Open access](#)  
**Spatializing household energy consumption in the Netherlands: Socioeconomic, urban morphology, microclimate, land surface temperature and vegetation data**



- [Data article](#) ● [Open access](#)  
**Spatializing household energy consumption in the Netherlands: Socioeconomic, urban morphology, microclimate, land surface temperature and vegetation data**  
Bardia Mashhoodi, Dominic Stead, Arjan van Timmeren  
Article 105118  
[Download PDF](#) [Article preview](#) ▼
  
- [Data article](#) ● [Open access](#)  
**Datasets for high hydrogen content syngas fuel variability effect on combustion physicochemical properties**  
Kai Zhang, Xi Jiang  
Article 105116  
[Download PDF](#) [Article preview](#) ▼
  
- [Data article](#) ● [Open access](#)  
**Online database of Power Hardware In-the-Loop tests**  
Eduardo García-Martínez, José Francisco Sanz, Jesús Muñoz-Cruzado, Juan Manuel Perié  
Article 105128  
[Download PDF](#) [Article preview](#) ▼
  
- [Data article](#) ● [Open access](#)  
**Data on the use of virgin coconut oil and bioethanol produced from sugar palm sap as raw materials for biodiesel synthesis**  
Sunusi Gugule, Feti Fatimah, Choleb Paul Maanari, Trina Ekawati Tallei  
Article 105199  
[Download PDF](#) [Article preview](#) ▼
  
- [Data article](#) ● [Open access](#)  
**Comprehensive determination of input state variables dataset required for anaerobic digestion modelling (ADM1) based on characterisation of organic substrates**  
Henry Fisgativa, Bastien Zennaro, Cyrille Charnier, Charlotte Richard, ... Fabrice Béline  
Article 105212  
[Download PDF](#) [Article preview](#) ▼
  
- [Data article](#) ● [Open access](#)  
**Data set on performance and relative exhaust emission (REE) characteristics of fish oil ethyl ester with fuel preheating in diesel engine**  
Abdulfatah Abdu Yusuf, V. Karthickeyan, Sharif S. Nura, Abdurrahman H. Shu'ibu, ... Freddie L. Inambao  
Article 105237  
[Download PDF](#) [Article preview](#) ▼
  
- [Data article](#) ● [Open access](#)  
**Kinetics and thermodynamics dataset of iron oxide reduction using torrefied microalgae for chemical looping combustion**  
Aristotle T. Ubando, Wei-Hsin Chen, Veeramuthu Ashokkumar, Jo-Shu Chang  
Article 105261  
[Download PDF](#) [Article preview](#) ▼
  
- [Data article](#) ● [Open access](#)  
**Dataset on a primary lithium battery cell with a ferroelectric Li-glass electrolyte and MnO<sub>2</sub> cathode**  
Maria Helena Braga, Andrew J. Murchison, John B. Goodenough  
Article 105339  
[Download PDF](#) [Article preview](#) ▼

### Engineering

- [Data article](#) ● [Open access](#)  
**Dataset from PPG wireless sensor for activity monitoring**  
Giorgio Biagetti, Paolo Crippa, Laura Falaschetti, Leonardo Saraceni, ... Claudio Turchetti  
Article 105044  
[Download PDF](#) [Article preview](#) ▼
  
- [Data article](#) ● [Open access](#)  
**Data from long time testing of 18650 lithium polymer batteries**  
Martin Novak, Jan Chysky, Lukas Novak  
Article 105137  
[Download PDF](#) [Article preview](#) ▼
  
- [Data article](#) ● [Open access](#)  
**Data on the first endurance activity of a Brushless DC motor for aerospace applications**  
Mirko Mazzoleni, Matteo Scandella, Fabio Previdi, Giulio Pispola  
Article 105133  
[Download PDF](#) [Article preview](#) ▼

- [Data article](#) ● [Open access](#)  
**Data on the first endurance activity of a Brushless DC motor for aerospace applications**  
Mirko Mazzoleni, Matteo Scandella, Fabio Previdi, Giulio Pisola  
Article 105153  
[Download PDF](#) [Article preview](#) ▼
  
- [Data article](#) ● [Open access](#)  
**ReCAN – Dataset for reverse engineering of Controller Area Networks**  
Mattia Zago, Stefano Longari, Andrea Tricarico, Michele Carminati, ... Stefano Zanero  
Article 105149  
[Download PDF](#) [Article preview](#) ▼
  
- [Data article](#) ● [Open access](#)  
**Data for bottom ash and marble powder utilization as an alternative binder for sustainable concrete construction**  
Mohamad Atiyeh, Ertug Aydin  
Article 105160  
[Download PDF](#) [Article preview](#) ▼
  
- [Data article](#) ● [Open access](#)  
**Piezoelectric micromanipulator dataset for hysteresis identification**  
Helon Vicente Hultmann Ayala, Micky Rakotondrabe, Leandro dos Santos Coelho  
Article 105175  
[Download PDF](#) [Article preview](#) ▼
  
- [Data article](#) ● [Open access](#)  
**Monitored deformation data during the construction of an urban subway**  
Xiaotian Hao, Bin Wang, Hailong Wang  
Article 105126  
[Download PDF](#) [Article preview](#) ▼
  
- [Data article](#) ● [Open access](#)  
**Dataset on microstructural, structural and tribology characterization of TiC thin film on CpTi substrate grown by RF magnetron sputtering**  
Olayinka Oluwatosin Abegunde, Esther Titilayo Akinlabi, Philip Oluseyi Oladijo  
Article 105205  
[Download PDF](#) [Article preview](#) ▼
  
- [Data article](#) ● [Open access](#)  
**Dataset for EEG signals used to detect the effect of coffee consumption on the activation of SSVEP signal**  
Bikash K. Pradhan, Kishore K. Tarafdar, Suraj K. Nayak, Anwesha Khasnobish, ... Kunal Pal  
Article 105174  
[Download PDF](#) [Article preview](#) ▼
  
- [Data article](#) ● [Open access](#)  
**Data from the numerical analysis of radial and tangential leakage of gas in scroll compressors**  
Evandro L.L. Pereira, Vitor M. Braga, Cesar J. Deschamps  
Article 105197  
[Download PDF](#) [Article preview](#) ▼
  
- [Data article](#) ● [Open access](#)  
**Dataset of the experimental behavior of an asymmetric self-centering dissipative device**  
Francesco Morelli, Andrea Piscini, Walter Salvatore, Giuseppe Chellini, ... Mirko Donati  
Article 105181  
[Download PDF](#) [Article preview](#) ▼
  
- [Data article](#) ● [Open access](#)  
**Data captured using low-cost active electromyography**  
Benjamin C. Fortune, Christopher G. Pretty, Logan T. Chatfield, Lachlan R. McKenzie, Michael P. Hayes  
Article 105239  
[Download PDF](#) [Article preview](#) ▼
  
- [Data article](#) ● [Open access](#)  
**Analysis of key performance indicators of a 4G LTE network based on experimental data obtained from a densely populated smart city**  
Agbotiname Lucky Imoize, Kehinde Orolu, Aderemi Aaron-Anthony Atayero  
Article 105304  
[Download PDF](#) [Article preview](#) ▼
  
- [Data article](#) ● [Open access](#)  
**Data regarding the computational fluid dynamics simulations of an airfoil with plasma actuator in**

- Data article ● Open access  
**Data regarding the computational fluid dynamics simulations of an airfoil with plasma actuator in unsteady flow**  
Maria Grazia De Giorgi, Valentina Motta, Antonio Suma  
Article 105286  
[Download PDF](#) [Article preview](#) ▼
- Data article ● Open access  
**Monotonic load datasets for additively manufactured thermoplastic reinforced composites**  
Octavio Andrés González-Estrada, Alberto David Partuz Comas, Jorge Guillermo Díaz Rodríguez  
Article 105295  
[Download PDF](#) [Article preview](#) ▼
- Data article ● Open access  
**Residential stock data and dataset on energy efficiency characteristics of residential building fabrics in Ireland**  
Tomás Mac Uidhir, Fionn Rogan, Matthew Collins, John Curtis, Brian Ó Gallachóir  
Article 105247  
[Download PDF](#) [Article preview](#) ▼
- Data article ● Open access  
**Load-displacement experimental data from axial tensile loading of CFRP-SPCC hybrid laminates**  
Muhammad Akhsin Muflikhun, Alvin Y. Chua  
Article 105306  
[Download PDF](#) [Article preview](#) ▼
- Data article ● Open access  
**Numerical validation data of tensile stress zones and crack zones in bamboo reinforced concrete beams using the Fortran PowerStation 4.0 program**  
**Muhjar**  
Article 105332  
[Download PDF](#) [Article preview](#) ▼
- Data article ● Open access  
**Data on the effect of CdS on the lateral collection length of charge carriers for Cu(In,Ga)Se<sub>2</sub> solar cells with mesh transparent conducting electrodes**  
Sangyeob Lee, Ji-seong Jang, Joon Sik Park, Yong-Jun Oh, Choong-Heui Chung  
Article 105352  
[Download PDF](#) [Article preview](#) ▼
- Environmental Science*
- Data article ● Open access  
**Environmental monitoring and exposure science dataset to calculate ingestion and inhalation of metal(loid)s through preschool gardening**  
Iliana Manjón, Mónica D. Ramírez-Andreotta, A. Eduardo Sáez, Robert A. Root, ... Annika Alexander-Ozinskas  
Article 105050  
[Download PDF](#) [Article preview](#) ▼
- Data article ● Open access  
**Life-cycle inventory data and impacts on electricity production at the United Downs Deep Geothermal Power project in the UK**  
Andrea Paulillo, Lucy Cotton, Ryan Law, Alberto Striolo, Paola Lettieri  
Article 105117  
[Download PDF](#) [Article preview](#) ▼
- Data article ● Open access  
**Ecotoxicity and genetic toxicity data from a pulp mill bleaching effluent treated with anaerobic digestion and advanced oxidation process (AOP)**  
Tatiana R. Chaparro, Juan Gabriel Rueda-Bayona  
Article 105141  
[Download PDF](#) [Article preview](#) ▼
- Data article ● Open access  
**Mercury concentration data from Matang Mangrove Forest Reserve, Malaysia**  
Giovanna Wolswijk, Behara Satyanarayana, Quang Dung Le, Yin Fui Siau, ... Farid Dahdouh-Guebas  
Article 105134  
[Download PDF](#) [Article preview](#) ▼
- Data article ● Open access  
**Dataset of ecosystem services in Beijing and its surrounding areas**  
Tianqian Chen, Zhe Feng, Huafu Zhao, Kening Wu





- Data article ● *Open access*  
**Data on single pulse fs laser induced submicron bubbles in the subsurface region of soda-lime glass**  
 Shengying Lai, Martin Ehrhardt, Pierre Lorenz, Jian Lu, ... Klaus Zimmer  
 Article 105193  
[Download PDF](#) [Article preview](#) ▼
  
- Data article ● *Open access*  
**Data on a temperature-dependent thermic and electrical properties of a novel blend polymeric system based on poly(vinyl alcohol), chitosan and phosphoric acid**  
 Jonathan Vera, Edgar Mosquera, Jesús Evelio Diosa  
 Article 105203  
[Download PDF](#) [Article preview](#) ▼
  
- Data article ● *Open access*  
**Thermodynamic data of phenol adsorption on chemically modified activated carbons**  
 Liliana Giraldo, Valentina Bernal Fernandez, Juan Carlos Moreno-Piraján  
 Article 105240  
[Download PDF](#) [Article preview](#) ▼
  
- Data article ● *Open access*  
**Characterization data of pulp fibres performance in tissue papers applications**  
 Flávia P. Morais, Raquel A.C. Bértolo, Joana M.R. Curto, Maria E.C.C. Amaral, ... Dmitry V. Evtuygin  
 Article 105253  
[Download PDF](#) [Article preview](#) ▼
  
- Data article ● *Open access*  
**Data related to spectrum analyzes for phases identification, microstructure and mechanical properties of additive manufactured Ti6Al4V reinforced with nano Ytria stabilized zirconia**  
 Amine Hattal, Thierry Chauveau, Madjid Djemai, Jean Jacques Fouchet, ... Guy Dirras  
 Article 105249  
[Download PDF](#) [Article preview](#) ▼
  
- Data article ● *Open access*  
**Dataset for additional information on the evaluation of thermal properties of thin films by IR radiometry using a comprehensive set of Zr–O–N thin films**  
 C.I. da Silva-Oliveira, D. Martinez-Martinez, F.M. Couto, L. Cunha, F. Macedo  
 Article 105291  
[Download PDF](#) [Article preview](#) ▼
  
- Data article ● *Open access*  
**Data on the identification of isoprene and Styrene triblock copolymers with difunctional *t*-BuLi initiator**  
 Pin-Chen Lee, Cheng-Chien Wang, Chuh-Yung Chen  
 Article 105272  
[Download PDF](#) [Article preview](#) ▼

#### Mathematics

- Data article ● *Open access*  
**Dataset on a Benchmark for Equality Constrained Multi-objective Optimization**  
 Oliver Cuate, Lourdes Uribe, Adriana Lara, Oliver Schütze  
 Article 105130  
[Download PDF](#) [Article preview](#) ▼



Kotak Masuk - muhtar@ummu... x Google Terjemahan x Data in Brief x Numerical validation data of ten... x

sciencedirect.com/science/article/pii/S2352340920302262?via%3DIihub

ScienceDirect Journals & Books Register Sign in

Download PDF Share Export Search ScienceDirect Advanced

Outline  
Abstract  
Keywords  
1. Data  
2. Experimental design, materials, and methods  
3. List of symbols  
Acknowledgments  
Conflict of Interest  
Appendix A. Supplementary data  
Research Data  
References

Figures (15)

Data in Brief  
Volume 29, April 2020, 105332

Data Article

### Numerical validation data of tensile stress zones and crack zones in bamboo reinforced concrete beams using the Fortran PowerStation 4.0 program

Muhtar

[Show more](#)  
<https://doi.org/10.1016/j.dib.2020.105332>  
Under a Creative Commons license [Get rights and content](#) [open access](#)

Recommended articles  
No articles found.  
Citing articles (0)

Feedback

Abstract  
Numerical verification is carried out in order to control the compatibility of the BRC beam crack pattern with the stress contour at the ultimate load. The numerical method used is the finite element method (FEM) using the Fortran PowerStation 4.0

screencapture-mai...pdf x  
screencapture-mai...pdf x  
screencapture-mai...pdf x  
screencapture-mai...pdf x  
screencapture-mai...pdf x Show all x

Type here to search

ENG 5:35 10/03/2020

Ads by Google

Send feedback Why this ad?

### Data in Brief

<p><b>COUNTRY</b></p> <p>Netherlands</p> 	<p><b>SUBJECT AREA AND CATEGORY</b></p> <p>Multidisciplinary └ Multidisciplinary</p> <p>Social Sciences └ Education</p>	<p><b>PUBLISHER</b></p> <p>Elsevier BV</p>	<p><b>H-INDEX</b></p> <p><b>30</b></p>
<p><b>PUBLICATION TYPE</b></p> <p>Journals</p>	<p><b>ISSN</b></p> <p>23523409</p>	<p><b>COVERAGE</b></p> <p>2014-2020</p>	<p><b>INFORMATION</b></p> <p><a href="#">Homepage</a></p> <p><a href="#">How to publish in this journal</a></p> <p><a href="mailto:dib-me@elsevier.com">dib-me@elsevier.com</a></p>

Ads by Google

Send feedback

Why this ad?

**SCOPE**

Data in Brief provides a way for researchers to easily share and reuse each other's datasets by publishing data articles that: -Thoroughly describe your data, facilitating reproducibility. -Make your data, which is often buried in supplementary material, easier to find. -Increase traffic towards associated research articles and data, leading to more citations. -Open up doors for new collaborations. Because you never know what data will be useful to someone else, Data in Brief welcomes submissions that describe data from all research areas.

Join the conversation about this journal

Ads by Google

Send feedback Why this ad?

Quartiles



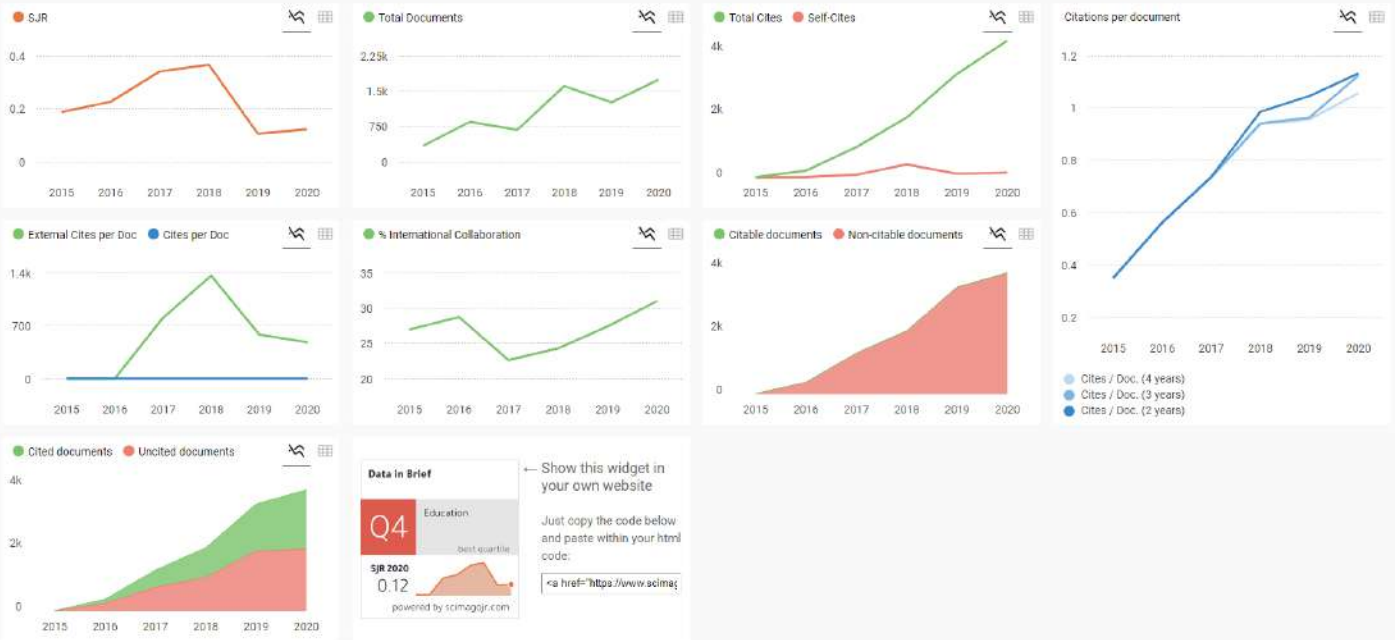
Ads by Google

Send feedback Why this ad?

FIND SIMILAR JOURNALS

options

<p>1 <b>MethodsX</b></p> <p>NLD</p> <p><b>30%</b> similarity</p>	<p>2 <b>Scientific data</b></p> <p>GBR</p> <p><b>26%</b> similarity</p>	<p>3 <b>Genomics</b></p> <p>LISA</p> <p><b>25%</b> similarity</p>	<p>4 <b>Interdisciplinary sciences, computational life sciences</b></p> <p>DEU</p> <p><b>25%</b> similarity</p>	<p>5 <b>BMC Genomics</b></p> <p>GBR</p> <p><b>24%</b> similarity</p>
--	---	---	---	--



Ads by Google

Send feedback Why this ad?

Metrics based on Scopus® data as of April 2021

**mily** 2 weeks ago

Why the Quartile has a huge difference between SJR - Q4 and the SCOPUS is Q2 (2021)?

reply



**Melanie Ortiz** 2 weeks ago

SCImago Team

Dear Mily, Thank you for contacting us.

As you probably already know, our data come from Scopus, they annually send us an update of the data. This update is sent to us around April / May every year.

The calculation of the indicators is performed with the copy of the Scopus database provided to us annually. However, the methodology used concerning the distribution by Quartiles by Scopus is different from the one used by SCImago.

For every journal, the annual value of the SJR is integrated into the distribution of SJR values of all the subject categories to which the journal belongs. There are more than 300 subject categories. The position of each journal is different in any category and depends on the performance of the category, in general, and the journal, in particular. The distribution by Quartiles cannot be considered over the journals' total amount within a Category. In the case of SCImago, the distribution has to be considered with the formula Highest-SJR minus Lowest-SJR divided into four.

Best Regards,  
SCImago Team



**Jorgo** 3 years ago

Is it compulsory to present the whole data set, or just the results of statistical analysis?  
Do I have to pay processing fees?

← reply



**Elena Corera** 3 years ago

SCImago Team

Please, contact Data in Brief, you are contacting Scimago Journal and Country Rank.

Best,  
SCImago Team



**Herman Bud Harja** 3 years ago

Dear Sir,

I am Herman Budi Harja from Indonesia. I want to know how the way to submit to this Journal.

sincerely,  
Herman Budi

← reply



**Elena Corera** 3 years ago

SCImago Team

Dear Herman,

thank you very much for your comment, unfortunately we cannot help you with your request. We suggest you check author's instructions in journal website. You can find that information in SJR website <https://www.scimagojr.com>

Best Regards,  
SCImago Team

**Leave a comment**

Name:

Email:

(will not be published)

I'm not a robot



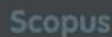
Submit

The users of Scimago Journal & Country Rank have the possibility to dialogue through comments linked to a specific journal. The purpose is to have a forum in which general doubts about the processes of publication in the journal, experiences and other issues derived from the publication of papers are resolved. For topics on particular articles, maintain the dialogue through the usual channels with your editor.

Developed by:



Powered by:



Follow us on @ScimagoJR

Scimago Lab. Copyright 2007-2020. Data Source: Scopus®

EST MODUS IN REBUS  
Numero (Italia) 11.1.100

Manuscript Number: DIB-D-20-00045R1

Title: Numerical validation data of tensile stress zones and crack zones in bamboo reinforced concrete beams using the Fortran PowerStation 4.0 program

Article Type: Data Article

Keywords: numerical validation; finite element method; tensile stress zone; crack zone; bamboo reinforced concrete.

Corresponding Author: Dr. Muhtar - Muhtar, M.T.

Corresponding Author's Institution: University of Muhammadiyah Jember

First Author: Muhtar - Muhtar, M.T.

Order of Authors: Muhtar - Muhtar, M.T.

Abstract: Numerical verification is carried out in order to control the compatibility of the BRC beam crack pattern with the stress contour at the ultimate load. The numerical method used is the finite element method (FEM). Ultimate load data and beam crack pattern data are taken from BRC beam testing in the laboratory. The beam tensile stress data was obtained from FEM analysis using the Fortran PowerStation 4.0 program by inputting ultimate load data from the beam test. Material data entered is the elasticity modulus (E) and Poisson ratio ( $\nu$ ). Bamboo reinforcement and concrete are considered to have the same displacement with a different elasticity modulus (E), so they experience different stresses. The triangle element is employed to model the plane-stress with two directions of displacement at each nodal point, so that each element has six degrees of freedom. The BRC beam tensile stress data from the Fortran PowerStation 4.0 program is processed into a tensile stress data table and becomes the Surfer program data for mapping stress contour images. Crack pattern data from laboratory beam testing is processed into crack zone pattern photo data. The stress contour data from the Surfer program is processed into image data of the tensile stress zone. The Fortran PowerStation 4.0 programming language data in this article can be used for further research with the discretization of triangular elements in other cases. This article consists of a data table, a picture of a crack pattern zone, a drawing of tensile stress zones, and photo documentation. The data is related to "Enhancing bamboo reinforcement using a hose-clamp to increase bond-stress and slip resistance" [1].

Research Data Related to this Submission

-----  
There are no linked research data sets for this submission. The following reason is given:

I have submitted my raw data as a supplementary data file along with my manuscript

# Muhtar

Jl. Karimata 49  
Jember, East Java, 68121 Indonesia  
(062)812-4920-3171  
muhtar@unmuhjember.ac.id

---

January 18, 2020

Managing Editor-Co-EiC  
Data in Brief

Dear **Hao-Ran Wang** and **Ganhui Lan**,

I hereby submit the revised article in accordance with the email notification from "Managing Editor-Co-EiC" on January 13, 2020, with the Subject "our Data in Brief Submission: DIB-D-20-00045". The data of my article is:

Title : Numerical validation data of tensile stress zones and crack zones in bamboo reinforced concrete beams using the Fortran PowerStation 4.0 program.  
Manuscript No. : DIB-D-20-00045  
Related research article : Enhancing bamboo reinforcement using a hose-clamp to increase bond-stress and slip resistance. <https://doi.org/10.1016/j.jobbe.2019.100896>  
Corresponding Author : Muhtar, Department of Civil Engineering, Faculty of Engineering, University of Muhammadiyah Jember, Jember, 68121, Indonesia.  
E-mail: [muhtar@unmuhjember.ac.id](mailto:muhtar@unmuhjember.ac.id)

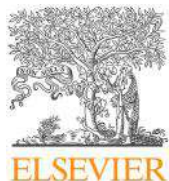
The answers to the comments of the Reviewers and Managing Editor are listed below this letter.

I hope my submission can go through the review process and published as specified in the Author Information Pack for Journal of Data in Brief.

Sincerely,

**Muhtar**





Contents lists available at ScienceDirect

## Data in brief

journal homepage: [www.elsevier.com/locate/dib](http://www.elsevier.com/locate/dib)

## Data Article

# Numerical validation data of tensile stress zones and crack zones in bamboo reinforced concrete beams using the Fortran PowerStation 4.0 program



Muhtar

Department of Civil Engineering, Faculty of Engineering, University of Muhammadiyah Jember, Jember, 68121, Indonesia

## ARTICLE INFO

*Article history:*

Received 31 December 2019

Received in revised form 17 February 2020

Accepted 18 February 2020

Available online 26 February 2020

*Keywords:*

Numerical validation

Finite element method

Tensile stress zone

Crack zone

Bamboo reinforced concrete

## ABSTRACT

Numerical verification is carried out in order to control the compatibility of the BRC beam crack pattern with the stress contour at the ultimate load. The numerical method used is the finite element method (FEM) using the Fortran PowerStation 4.0 program. Material data entered is the elasticity modulus ( $E$ ) and Poisson's ratio ( $\nu$ ). Ultimate load input data is taken from BRC beam testing in the laboratory. Bamboo reinforcement and concrete are considered to have the same displacement with a different elasticity modulus ( $E$ ), so they experience different stresses. The triangle element is employed to model the plane-stress with two directions of displacement at each nodal point, so that each element has six degrees of freedom. The BRC beam tensile stress data from the Fortran PowerStation 4.0 program is processed into a tensile stress data table and becomes the Surfer program input data for mapping tensile stress zone images. Crack pattern data from laboratory beam testing is processed into crack zone pattern photo data and then compared to the tensile stress zone images. From the image data of the tensile stress zones and the crack zones of the BRC beam have compatibility. The Fortran PowerStation 4.0 programming language data in this article can be used for further research with the discretization of triangular elements in other cases. This article consists of a data table, a picture of a crack pattern zone, a drawing of tensile stress zones, and photo documentation. The data is related to "Enhancing bamboo

E-mail address: [muhtar@unmuhjember.ac.id](mailto:muhtar@unmuhjember.ac.id).

<https://doi.org/10.1016/j.dib.2020.105332>

2352-3409/© 2020 The Author(s). Published by Elsevier Inc. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

reinforcement using a hose-clamp to increase bond-stress and slip resistance" [1].

© 2020 The Author(s). Published by Elsevier Inc. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

## Specifications Table

Subject	Engineering.
Specific subject area	Civil and structural engineering.
Type of data	Table, image, program.
How data were acquired	The crack pattern data was obtained from the beam flexural test (Fig. 15). The stress contour data was obtained from FEM analysis, using the Fortran PowerStation 4.0 and Surfer programs. Crack pattern data from the beam flexural test is processed and analyzed into crack zone image data. Stress data from FEM analysis is processed into stress table data and becomes the input data for the Surfer program. Data from the Surfer program is processed into stress zone image data. Then, all data is processed, compared, and analyzed into table data, cracks pattern zone image data, tensile stress zone image data, and photo data.
Data format	Raw and analyzed.
Parameters for data collection	Crack pattern data and maximum tensile stress data are two highly related data, in which cracks will occur at the maximum tensile stress position. The initial cracks until the collapsed beams are obtained through observation with a crack detector under a gradually increasing load. Crack pattern zone data from the laboratory beam test needs to be validated by other methods to determine compatibility with stresses that occur. Stress data and stress zone images data are obtained through FEM analysis using the Fortran PowerStation 4.0 and the Surfer programs. The Fortran PowerStation 4.0 programming language can be used for further research.
Description of data collection	The crack pattern data was collected through beam testing in the laboratory. Initial crack and subsequent crack data up to the beam collapsing are obtained through observation in stages, according to the beam loading stage. The crack detector is used to observe cracks. Each crack is numbered and drawn as the crack line. Then the crack data is processed and documentation taken, with results termed the crack zone image data. Tensile stress zone data was obtained from two sources, FEM analysis using the Fortran PowerStation 4.0 and the Surfer programs. FEM analysis with the Fortran PowerStation 4.0 program was obtained for direction stresses of X, Y, and Z. The X directional stress is tensile stress that causes cracks. The X direction stress data is then transferred to the Surfer program to generate the stress zone contour image data. The crack pattern data and the stress zone contour image data are compared and analyzed into table data, image data, program data, and photo data, all of which are termed intact data. This intact data was obtained from two specimens, namely a BRC beam and an SRC beam, to obtain crack patterns and tensile stresses with different reinforcement materials. The behaviors of the crack pattern and the stress zone from the two beams can be used as basis for further research.
Data source location	University of Muhammadiyah Jember, Jember, 68,121, Indonesia, and University of Brawijaya, Malang 65,145, Indonesia
Data accessibility	Data with the article, raw data can be found in Table 1, Table 2, Table 3, <a href="http://bit.ly/351FPqU">http://bit.ly/351FPqU</a> , <a href="http://bit.ly/2MBqas9">http://bit.ly/2MBqas9</a> , <a href="http://bit.ly/2F17w8F">http://bit.ly/2F17w8F</a> , <a href="http://bit.ly/2rDPeal">http://bit.ly/2rDPeal</a> , <a href="http://bit.ly/2Q4lhcl">http://bit.ly/2Q4lhcl</a> , <a href="http://bit.ly/2MTh22j">http://bit.ly/2MTh22j</a> , <a href="http://bit.ly/2ZvZWMU">http://bit.ly/2ZvZWMU</a> , <a href="http://bit.ly/2u2K2xR">http://bit.ly/2u2K2xR</a> , <a href="http://bit.ly/2ZyblCd">http://bit.ly/2ZyblCd</a> , and <a href="http://bit.ly/2Q7j2Wp">http://bit.ly/2Q7j2Wp</a>
Related research article	Enhancing bamboo reinforcement using a hose-clamp to increase bond-stress and slip resistance. <a href="https://doi.org/10.1016/j.jobte.2019.100896">https://doi.org/10.1016/j.jobte.2019.100896</a> [1]

**Value of the Data**

- This data is useful for researchers in developing bamboo reinforced concrete structures, especially for simple construction in areas of abundant bamboo.
- Data can be used for further insight and development, especially stress analysis, capacity, and behavior of bamboo reinforced concrete beams with strengthening reinforcement.
- This data contains a program that can be used as a reference in analyzing and calculating stresses of the BRC beam and SRC beam by triangular element discretizing.
- The added value of this data is in the programming language; Fortran PowerStation 4.0 can now be used generally in further research to analyze the displacement and stress of two-dimensional plane-stress elements.

**1. Data**

The discretization image data of the BRC beam and SRC beam with triangular elements is shown in Fig. 1 and Fig. 2. The reduction data of the stiffness of the BRC beam and the SRC beam after the initial crack occurs up until the beam collapses is shown in Table 1 and Table 2. The input data for the Fortran PowerStation 4.0 program for the BRC beam is shown in the following link: <http://bit.ly/351FPqU>, and the input data for the SRC beam is shown in the link: <http://bit.ly/2MBqas9>. The programming language data for the Fortran PowerStation 4.0 program with the discretization of triangular elements is shown in the link: <http://bit.ly/2F17w8F>.

The data of the load-displacement relationship of the BRC beam and SRC beam from experiments and FEM analyses is shown in Table 3, while the image data of the load-displacement relationship diagrams from experiments and FEM analyses is shown in Fig. 3. The displacement contours data in the X-direction and Y-direction of the Surfer program for the BRC beam is shown in Fig. 8 and Fig. 9, and the displacement contour data in the X-direction and Y-direction from the Surfer program for the SRC beam is shown in Fig. 12 and Fig. 13.

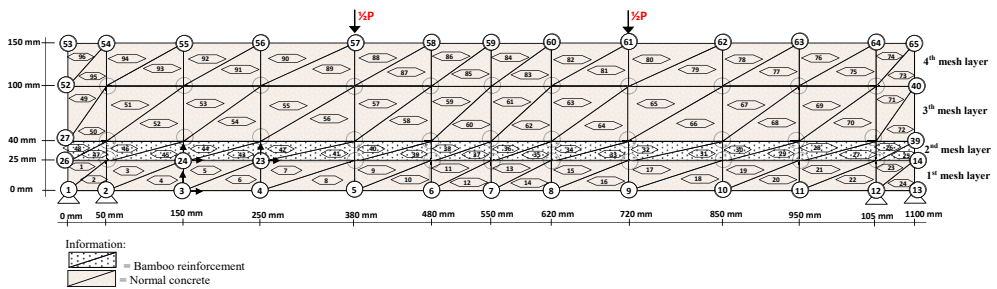


Fig. 1. The discretization of the BRC beam using the triangle element [1].

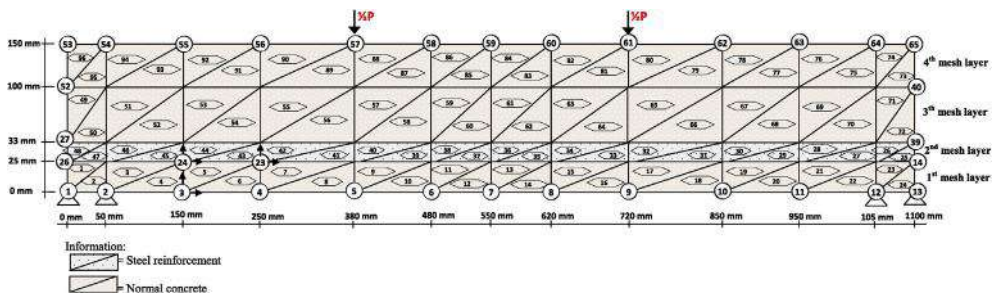


Fig. 2. The discretization of the SRC beam using the triangle element.

**Table 1**  
The reduction data of the stiffness of the BRC beam after initial cracking occurs up until the ultimate load [2].

Layer number	Modulus of elasticity ( $E$ ) of the BRC beam										
	Elastic condition	Plastic conditions with gradual loads									
	0–8.5 kN	9 kN	11 kN	15 kN	17 kN	21 kN	23 kN	25 kN	27 kN	29 kN	33 kN
4th mesh layer	268,512,89	161,107,73	161,107,73	161,107,73	161,107,73	161,107,73	161,107,73	161,107,73	120,830,80	112,775,41	85,924,12
3rd mesh layer	268,512,89	161,107,73	161,107,73	161,107,73	161,107,73	161,107,73	161,107,73	120,830,80	107,405,16	93,979,51	75,183,61
2nd mesh layer	247,451,73	138,845,32	115,704,43	115,704,43	115,704,43	104,133,99	104,133,99	104,133,99	69,422,66	69,422,66	55,538,13
1st mesh layer	268,512,89	134,256,45	118,145,67	83,239,00	67,128,22	51,017,45	51,017,45	37,591,80	32,221,55	26,851,29	13,291,39

**Table 2**  
The reduction data of the stiffness of the SRC beam after initial cracking occurs up until the ultimate load [2].

Layer number	Modulus of elasticity ( $E$ ) of the SRC beam										
	Elastic condition	Plastic conditions with gradual loads									
	0–9 kN	10 kN	11 kN	12 kN	13 kN	15 kN	17 kN	19 kN	21 kN	23 kN	24 kN
4th mesh layer	268,512,89	268,512,89	201,384,67	201,384,67	201,384,67	201,384,67	201,384,67	187,959,02	187,959,02	134,256,45	114,117,98
3rd mesh layer	268,512,89	268,512,89	201,384,67	201,384,67	187,959,02	187,959,02	187,959,02	174,533,38	174,533,38	134,256,45	114,117,98
2nd mesh layer	407,825,73	432,093,18	324,069,88	324,069,88	302,465,22	302,465,22	280,860,56	280,860,56	259,255,91	216,046,59	183,639,60
1st mesh layer	268,512,89	268,512,89	201,384,67	201,384,67	187,959,02	187,959,02	174,533,38	161,107,73	147,682,09	134,256,45	120,830,80

**Table 3**  
The data of load and displacement of BRC beams and SRC beams.

The data of load and displacement of BRC beams and SRC beams							
Experiment–BRC Beam		Experiment–SRC Beam		FEM–BRC Beam		FEM–SRC Beam	
Load (kN)	Displacement (mm)	Load (kN)	Displacement (mm)	Load (kN)	Displacement (mm)	Load (kN)	Displacement (mm)
0,00	0,00	0,00	0,00	0,00	-0,00	0,00	0,00
0,50	-0,07	1,00	-0,01	0,50	-0,07	1,00	-0,11
1,00	-0,17	2,00	-0,02	1,00	-0,12	2,00	-0,20
1,50	-0,28	4,00	-0,10	1,50	-0,16	3,00	-0,29
2,00	-0,38	5,00	-0,15	2,00	-0,21	4,00	-0,39
2,50	-0,51	6,00	-0,19	2,50	-0,26	5,00	-0,48
3,00	-0,65	7,00	-0,26	3,00	-0,31	6,00	-0,57
3,50	-0,86	8,00	-0,35	3,50	-0,36	7,00	-0,66
4,00	-1,02	9,00	-0,44	4,00	-0,41	9,00	-0,85
4,50	-1,12	10,00	-0,60	4,50	-0,45	10,00	-0,94
5,00	-1,22	11,00	-0,79	5,00	-0,50	11,00	-1,37
5,50	-1,33	12,00	-0,93	5,50	-0,55	12,00	-1,49
6,00	-1,44	13,00	-1,08	6,00	-0,60	13,00	-1,69
6,50	-1,52	14,00	-1,31	6,50	-0,65	15,00	-1,94
7,00	-1,61	15,00	-1,59	7,00	-0,70	17,00	-2,25
9,00	-2,05	16,00	-1,77	9,00	-1,55	19,00	-2,69
11,00	-2,59	17,00	-1,91	11,00	-2,24	21,00	-3,05
13,00	-3,20	18,00	-2,08	13,00	-2,74	23,00	-4,26
15,00	-3,93	19,00	-2,26	15,00	-3,29	24,00	-5,16
17,00	-4,59	20,00	-2,48	17,00	-3,92	24,00	-6,35
19,00	-5,39	21,00	-2,78	19,00	-4,71	24,00	-8,09
21,00	-6,13	22,00	-3,31	21,00	-5,28	24,00	-11,12
23,00	-6,93	23,00	-5,36	23,00	-6,24		
25,00	-7,81	24,00	-6,33	25,00	-7,45		
27,00	-8,81	23,50	-9,33	27,00	-8,43		
29,00	-9,83	23,00	-15,54	29,00	-10,25		
31,00	-11,01	22,50	-15,56	31,00	-12,32		
33,00	-12,34	0,00	-15,56	33,00	-16,39		

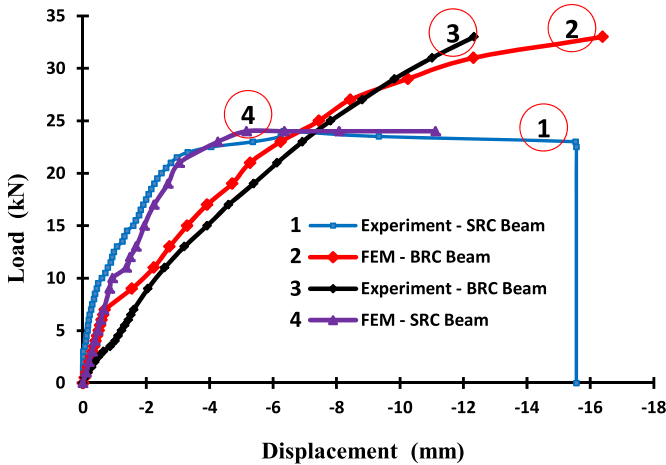


Fig. 3. The load-displacement relationship of the BRC and SRC beams with experiment and FEM.

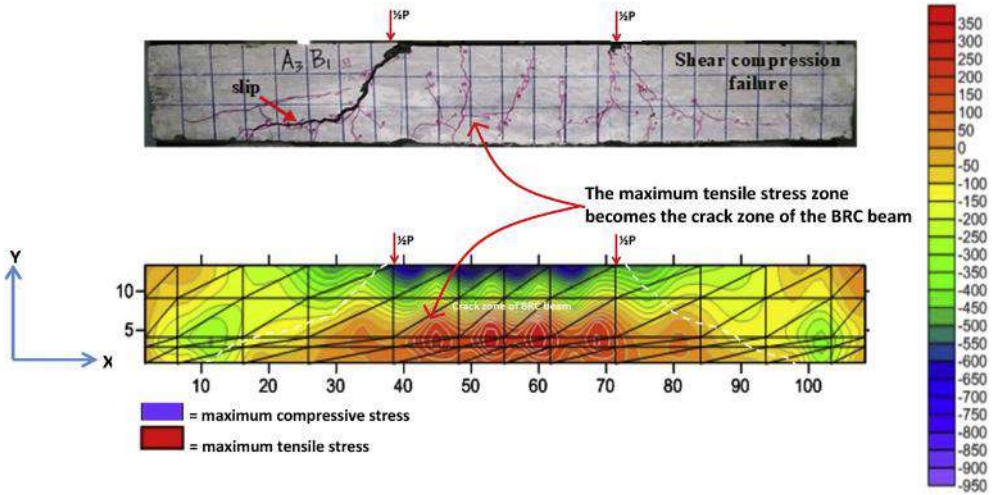


Fig. 4. The data validation of crack pattern with tensile stress contours of the BRC beam.

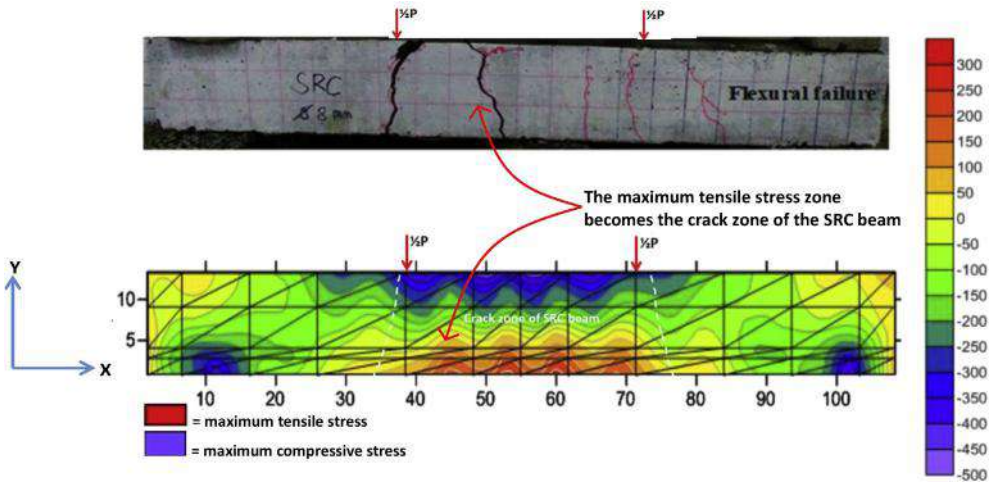


Fig. 5. The data validation of crack pattern with tensile stress contours of the SRC beam.

The table data of stress on the X-direction, Y-direction, and XY-direction from FEM analysis for the BRC beam is shown in the following link: <http://bit.ly/2rDPeal> and the stress contour image data from the Surfer program is shown in Figs. 4, Fig. 6, and Fig. 7. The table data of stress on the X-direction, Y-direction, and XY-direction from FEM analysis for the SRC beam is shown in the following link: <http://bit.ly/2Q4lhc1>, while the stress contour image data from the Surfer program is shown in Figs. 5, Fig. 10, and Fig. 11. Photographs of crack pattern data and tensile stress contour data for the analysis of the compatibility of the zone are shown in Figs. 4 and 5.



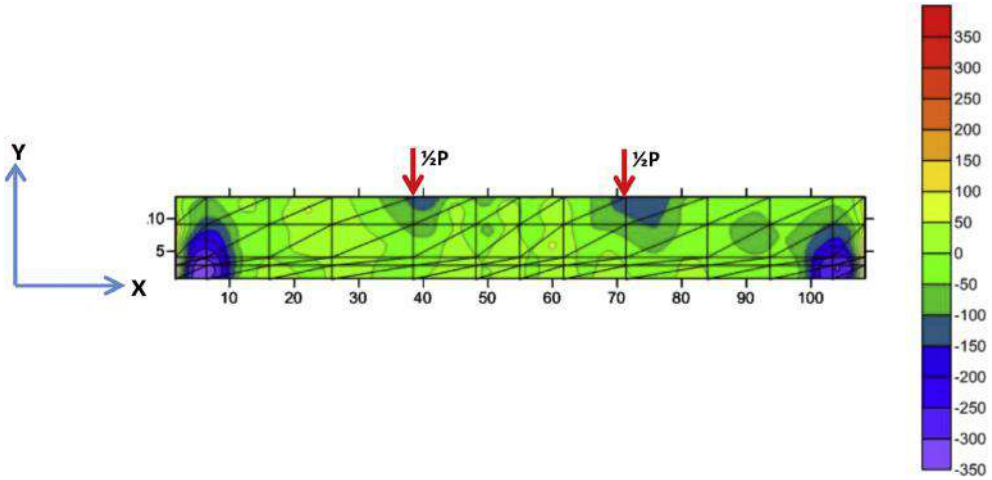


Fig. 6. The stress of Y-direction of BRC beam.

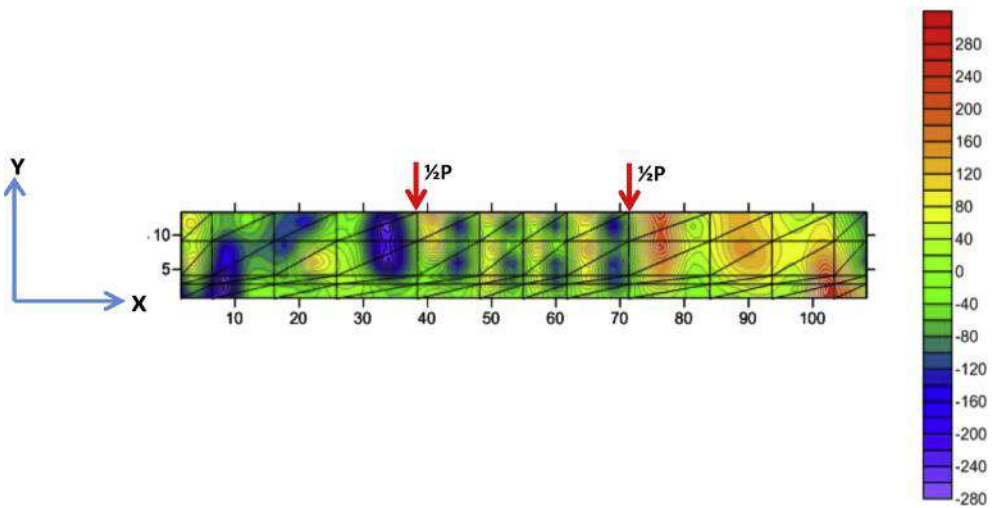


Fig. 7. The stress of XY-direction of BRC beam.

## 2. Experimental design, materials, and methods

Numerical analysis was carried out with 2D and the experiments with 3D as shown in Fig. 15. Data from 2D numerical analysis obtained data of X-direction stress, Y-direction stress, XY-direction stress, X-direction deflection, and Y-direction deflection. While the data from the experiments only obtained data on crack patterns, loads, strain, and deflection. So that the validation of both focuses on X-direction stress or tensile stress that causes cracking and Y-direction deflection. The validation of the tensile stress zone and crack patterns zone is shown in Figs. 4 and 5 and the validation of deflection are shown in Table 3, Figs. 9, and Fig. 13. The validation of Y-direction stress, XY-direction stress, and X-direction deflection are not done because experimental data are not obtained.

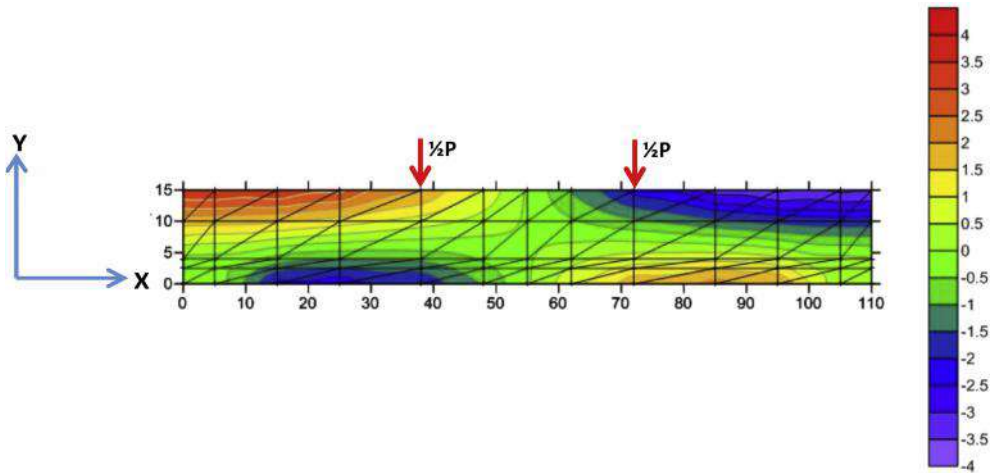


Fig. 8. The displacement of X-direction of BRC beam.

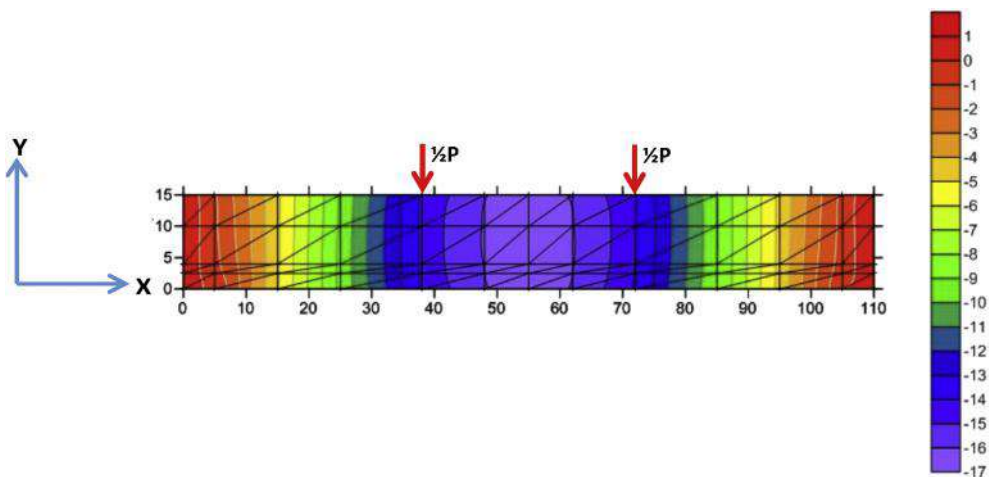


Fig. 9. The displacement of Y-direction of BRC beam.

Data validation between laboratory data and numerical analysis is carried out through a series of activities, namely beam flexural testing in the laboratory, numerical analysis with finite element method (FEM), program simulation with Fortran PowerStation 4.0, and simulation with the Surfer program. Activities in the laboratory are flexural tests of the BRC beam and the SRC beam to obtain data on crack patterns, collapse patterns, and ultimate loads. The test settings for the BRC beam and the SRC beam are shown in Fig. 15. The geometry and details of the reinforcement of BRC beams and SRC beams are shown in Fig. 14.

The material data of bamboo, steel, and concrete consists of Modulus of elasticity ( $E$ ) and Poisson's ratio ( $\nu$ ). The modulus of elasticity of bamboo ( $E_b$ ) is 17,235.74 MPa with Poisson's ratio ( $\nu_b$ ) of 0.25. The modulus of elasticity of concrete ( $E_c$ ) is 26,299.01 MPa with Poisson's ratio ( $\nu_c$ ) of 0.20. The modulus of elasticity of steel ( $E_s$ ) is 207,735.92 MPa with Poisson's ratio ( $\nu_s$ ) of 0.3.

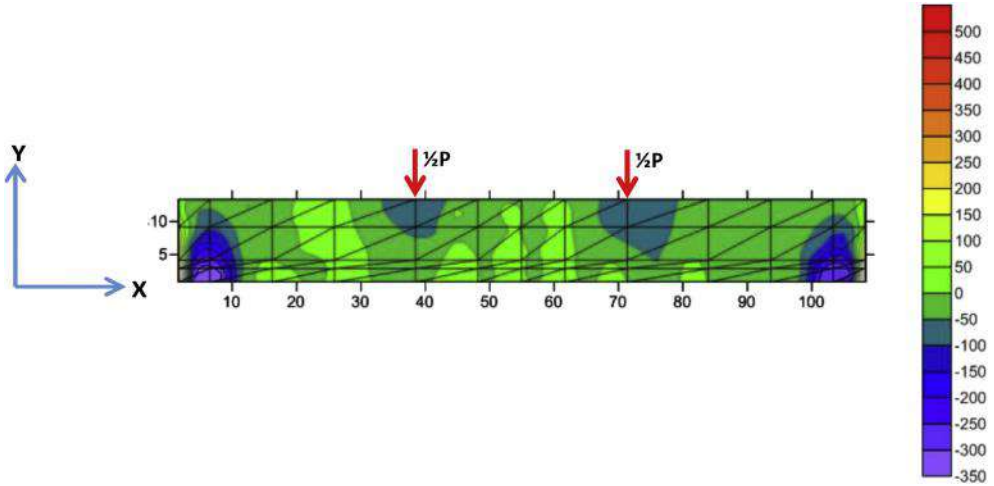


Fig. 10. The stress of Y-direction of SRC beam.

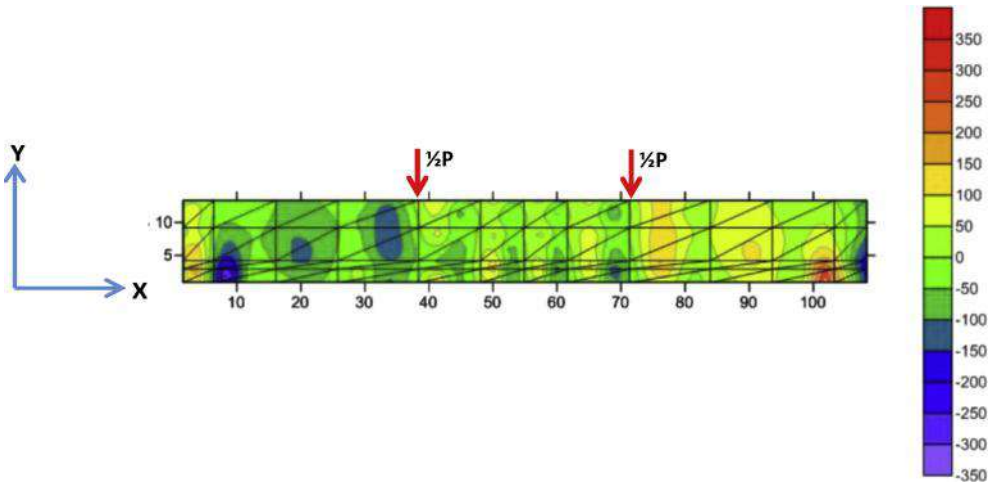


Fig. 11. The stress of XY-direction of SRC beam.

The constitutive relationship analysis of the finite element method employs plane-stress theory. The triangle element is used to model the plane-stress element with two main displacement directions at each nodal point, so that the element has six degrees of freedom. The discretization of the beam plane using the triangular element is shown in Figs. 1 and 2. Modulus of elasticity ( $E$ ) for each layer is calculated according to material conditions. Layers consisting of concrete and bamboo reinforcement are calculated using Eq. (1) [1], and for layers consisting of concrete and steel using Eq. (2) [3]. The solution to the plane-stress problem in the BRC beam and SRC beam is based on the stress-strain relationship as shown in Eq. (3) [1]. The main stresses on the BRC beam and SRC beam are calculated using Eq. (4) [1].

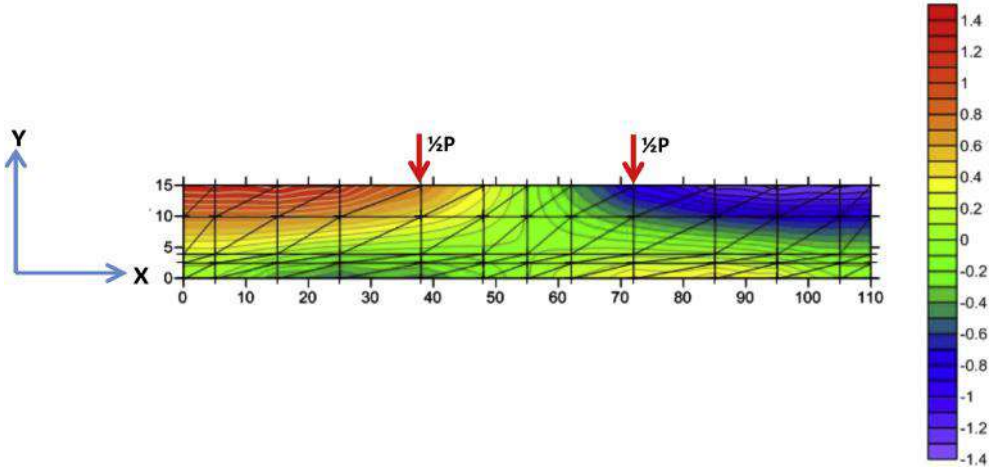


Fig. 12. The displacement of X-direction of SRC beam.

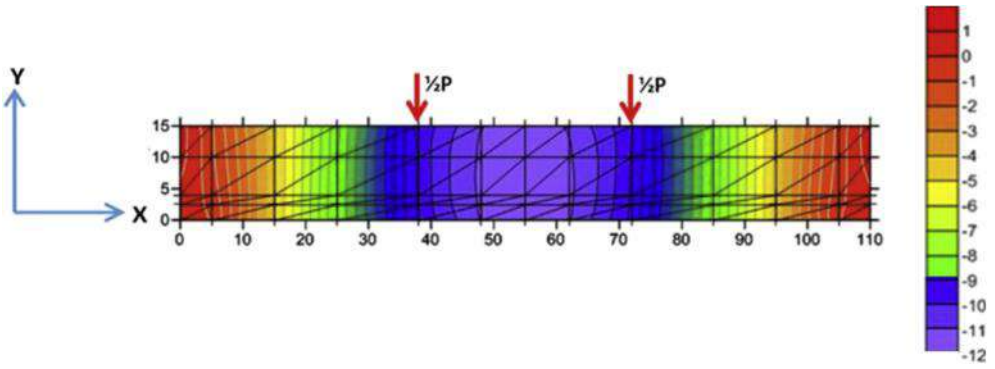


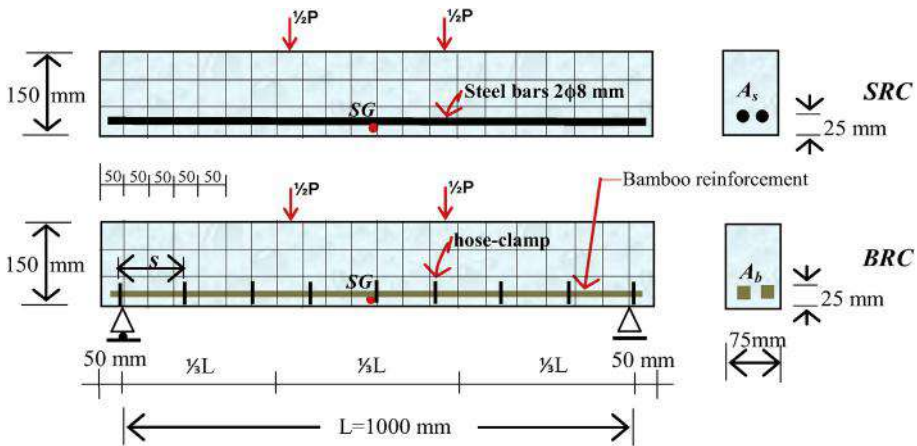
Fig. 13. The displacement of Y-direction of SRC beam.

$$E_e = E_b \cdot V_b + E_c \cdot V_c \tag{1}$$

$$E_e = E_s \cdot V_s + E_c \cdot V_c \tag{2}$$

$$\begin{Bmatrix} \sigma_x \\ \sigma_y \\ \tau_{xy} \end{Bmatrix} = \frac{E}{(1 + \nu^2)} \begin{bmatrix} 1 & \nu & 0 \\ \nu & 1 & 0 \\ 0 & 0 & \frac{1 - \nu}{2} \end{bmatrix} \begin{Bmatrix} \epsilon_x \\ \epsilon_y \\ \gamma_{xy} \end{Bmatrix} \tag{3}$$

$$\sigma_{1,2} = \frac{\sigma_x + \sigma_y}{2} \pm \sqrt{\left(\frac{\sigma_x - \sigma_y}{2}\right)^2 + \tau_{xy}^2} = \sigma_{\max} \tag{4}$$



**Information:**

SRC = Steel reinforced concrete

BRC = Bamboo reinforced concrete

SG = Strain gauge

s = Distance of hose-clamp

(Variation of  $s_0 = 0$  cm,  $s_1 = 15$  cm,  $s_2 = 20$  cm, and  $s_3 = 25$  cm)

$A_s$  = Area of steel reinforced ( $A_s = 100,48$  mm<sup>2</sup>)

$A_b$  = Area of bamboo reinforced

(Variation of  $A_b = 140$  mm<sup>2</sup>,  $200$  mm<sup>2</sup>, and  $450$  mm<sup>2</sup>)

(Variation of  $A_b = 140$  mm<sup>2</sup>,  $200$  mm<sup>2</sup>, and  $450$  mm<sup>2</sup>)

Fig. 14. Detail and geometry of the bamboo reinforced concrete beam [1,4].

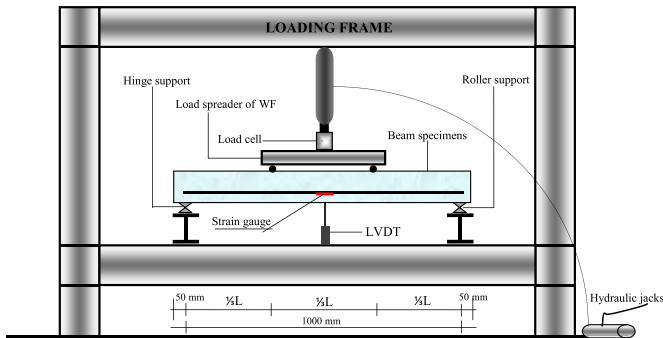


Fig. 15. Flexural test settings for the four-point flexural test method [1,4–6].

The steps for compiling the Fortran PowerStation 4.0 program data to get the beam tensile stress contour data are summarized as follows:

**Step 1.** Discretization of the plane of the BRC beam and the SRC beam with the discretization of the triangular element, as shown in Figs. 1 and 2.

**Step 2.** Numbering of the triangular elements and the nodal points, as shown in Figs. 1 and 2.

**Step 3.** Collection and calculation of the geometry data and the beam material data, such as modulus of elasticity of materials ( $E$ ), Poisson ratio ( $\nu$ ), etc.

**Step 4.** Writing the programming language for the Fortran PowerStation 4.0 program for the triangular element, as shown in the following link: <http://bit.ly/2F17w8F>.

**Step 5.** Opening the Fortran PowerStation 4.0 program. As an example, the front view in the Fortran PowerStation 4.0 program is shown in the following link: <http://bit.ly/2MTh22j>.

**Step 6.** Writing programming language data (Step 4) in the Fortran PowerStation 4.0 program. As an example, a display of programming language is shown in the following link: <http://bit.ly/2ZvZWMU>.

**Step 7.** The Input DATA.DAT of the BRC beam and SRC beam in the Fortran PowerStation 4.0 program. The input data is shown in the following links: <http://bit.ly/351FPqU> and <http://bit.ly/2MBqas9>. An example of the input data display is shown in the following link: <http://bit.ly/2u2K2xR>.

**Step 8.** Running and processing the program analysis until there are no warnings and errors. If there are warnings and errors, check and correct the program data and input data.

**Step 9.** Downloading stress data X-direction, Y-direction, and XY-direction. Stress data is shown in the following link: <http://bit.ly/2rDPeal> for the BRC beam stress, and <http://bit.ly/2Q4lhc1> for the SRC beam stress. For example, the display of stress data from the Fortran PowerStation 4.0 program is shown in the following link: <http://bit.ly/2ZybLCd>.

**Step 10.** Downloading displacement data X-direction and Y-direction. The displacement data for the BRC beam and SRC beam is shown in Table 3. An example of the displacement data display from the Fortran PowerStation 4.0 program is shown in the following link: <http://bit.ly/2Q7j2Wp>.

**Step 11.** Inputting stress data and displacement data on the Surfer program, running the program, and obtaining stress contour images data and displacement. Image data of stress contours and displacement are shown in Figs. 4–13.

**Step 12.** Validation of drawing data for tensile stress contours (X-direction stress) with beam crack patterns from laboratory tests.

**Step 13.** Obtaining crack zone image data and tensile stress zone contour data. Image data of crack zones and contour zones of tensile stress are shown in Figs. 4 and 5.

### 3. List of symbols

$E$	Modulus of elasticity
$E_e$	The equivalent elasticity modulus of BRC beam or SRC beam
$E_b$	Modulus of elasticity of bamboo reinforcement
$E_c$	Modulus of elasticity of concrete
$E_s$	Modulus of elasticity of steel reinforcement
$V_b$	The relative volume of bamboo reinforcement in the calculated layer
$V_c$	The relative volume of concrete in the calculated layer
$V_s$	The relative volume of steel reinforcement in the calculated layer
$\sigma_x$	Stress of X-direction
$\sigma_y$	Stress of Y-direction
$\sigma_{1,2}$	Main stress
$\tau_{xy}$	Shear stress of XY-direction
$\nu$	Poisson's ratio
$\epsilon_x$	Strain of X-direction
$\epsilon_y$	Strain of Y-direction
$\gamma_{xy}$	Shear strain of XY-direction

### Acknowledgments

The research described in this paper and publication costs are fully financially supported by the DRPM Republic of Indonesia and the Research Support Program (PBR-UMJ) of the University of Muhammadiyah Jember, Indonesia.

## Conflict of Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

## Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.dib.2020.105332>.

## References

- [1] Muhtar, S.M. Dewi, Wisnumurti, A. Munawir, Enhancing bamboo reinforcement using a hose-clamp to increase bond-stress and slip resistance, *Journal of Building Engineering* 26 (2019) 100896, <https://doi.org/10.1016/j.jobee.2019.100896>.
- [2] ACI Committee 318, *Building Code Requirements for Structural Concrete (ACI 318M-14)*, 2014.
- [3] C. Avram, I. Facaoaru, I. Filimon, O. Mirsu, I. Terteza, *Concrete strength and strain*, *Dev. Civ. Eng.* 3 (1981).
- [4] Muhtar, Experimental data from strengthening bamboo reinforcement using adhesives and hose-clamps, *Data in Brief* 27 (2019) 104827, <https://doi.org/10.1016/j.dib.2019.104827>.
- [5] Muhtar, S.M. Dewi, A. Munawir, The flexural behavior model of bamboo reinforced concrete beams using a hose clamp, *Proceedings in Materials Science, Engineering and Chemistry* 1033 (2019), <https://doi.org/10.1051/mateconf/201927601033>.
- [6] Muhtar, S.M. Dewi, Wisnumurti, A. Munawir, The stiffness and cracked pattern of bamboo reinforced concrete beams using a hose clamp, *Int. J. Civ. Eng. Technol.* 9 (2018) 273–284. [http://www.iaeme.com/MasterAdmin/uploadfolder/IJCIET\\_09\\_08\\_028/IJCIET\\_09\\_08\\_028.pdf](http://www.iaeme.com/MasterAdmin/uploadfolder/IJCIET_09_08_028/IJCIET_09_08_028.pdf).