

CONTACT
INFORMATION

Baker Hughes Inc., Dhahran Global Technology Center
 Dhahran Techno Valley, Al-Khobar 31952, Saudi Arabia
Mobile: (966)543795493
E-mail: ardiansyah.negara@bakerhughes.com, ardiansyahnegara@gmail.com
Homepage: www.ardiansyahnegara.com

EXPERTISE

Flow in porous media; Reservoir modeling and simulations; Unconventional Reservoirs

EDUCATION

King Abdullah University of Science and Technology (KAUST)

- Ph.D., Earth Science and Engineering **September 2011 to June 2015**
- Dissertation: *Subsurface flow modeling in single and dual continuum anisotropic porous media using the multipoint flux approximation method*
 - Advisor: Dr. Shuyu Sun
 - Area of study: flow and transport in porous media, reservoir simulation, shale gas

King Abdullah University of Science and Technology (KAUST)

- M.S., Earth Science and Engineering **September 2009 to June 2011**
- Thesis: *Simulation of CO₂ injection in porous media with structural deformation effect*
 - Advisor: Dr. Shuyu Sun
 - Area of study: flow and transport in porous media, and reservoir simulation

Institut Teknologi Sepuluh Nopember (ITS)

- S.T./B.Eng, Civil Engineering **August 2005 to March 2009**
- Project: *Direct design of longitudinal reinforcement of square reinforced concrete columns*
 - Advisor: Dr. Tavio
 - Area of study: reinforced concrete structure

EXPERIENCES

Baker Hughes Inc., Dhahran, Saudi Arabia

- Petroleum Engineer* **December 2014 to present**
- Dhahran Global Technology Center, Reservoir Simulation Group
 - Project: Modeling and simulation of hydraulic fracturing propagation
 - Supervisor: Dr. Mokhtar Elgassier

The Ohio State University, Columbus, USA

- Visiting Student* **May 2014**
- School of Earth Sciences, Reservoir Simulation Group
 - Project: Combining MPFA with Discontinuous Galerkin for subsurface flow and transport modeling in porous media
 - Supervisor: Dr. Joachim Moortgat

Saudi Aramco, Dhahran, Saudi Arabia

- Co-op / Summer Internship Student* **June to July 2012**
- NA Reservoir Management Department, Qatif Reservoir Management Division
 - Project: Production rate optimization using nodal analysis
 - Supervisors: Hassan K. Mubarak and Paul N. Smith

Colorado State University, Fort Collins, USA

Summer Visiting Student

June to August 2011

- Department of Mathematics
- Project: Uncertainty quantification for flow in porous media
- Supervisor: Dr. Jianguo (James) Liu

Schlumberger Dhahran Carbonate Research Center, Dhahran, Saudi Arabia

Summer Internship Student

June to August 2010

- Production Completions and Oil Recovery Group
- Project: Salinity and temperature effect on interfacial tension
- Supervisors: Dr. Wael Abdallah and Dr. Ahmed Gmira

Saudi Aramco, Dhahran, Saudi Arabia

Summer Internship Student

May to July 2009

- Geology Technology Team, EXPEC Advanced Research Center
- Project: CO₂ underground storage/sequestration
- Supervisor: Dr. Yunlai Yang

Institut Teknologi Sepuluh Nopember (ITS), Surabaya, Indonesia

Undergraduate Researcher

January to April 2009

- Laboratory of Concrete and Building Materials
- Project: Effect of confinement on interaction diagrams of square reinforced concrete columns
- Supervisor: Dr. Tavio

PUBLICATIONS

A. Negara, A. Salama, S. Sun, Y. S. Wu, and M. Elgassier, "Numerical simulation of natural gas flow in anisotropic shale reservoirs", SPE 177481, In: *2015 SPE Abu Dhabi International Petroleum Exhibition and Conference*, Abu Dhabi, UAE, 9-12 November 2015.

A. Salama, **A. Negara**, M. F. El-Amin, and S. Sun, "Numerical investigation of nanoparticle transport in anisotropic porous media", *Journal of Contaminant Hydrology*, 181:114-130, 2015.

A. Negara, A. Salama, and S. Sun, "Multiphase flow simulation with gravity effect in anisotropic porous media using multipoint flux approximation", *Computers and Fluids*, 114:66-74, 2015.

A. Negara, A. Salama, and S. Sun, "Density-driven flow simulation in anisotropic porous media: application to CO₂ geological sequestration", SPE 172232, In: *2014 SPE Saudi Arabia Section Annual Technical Symposium and Exhibition*, Al-Khobar, Saudi Arabia, 21-24 April 2014.

A. Negara, A. Salama, and S. Sun, "Influence of quadrature rules on mixed finite element methods for simulating subsurface flow in porous media", In: *6th International Conference on Porous Media and Annual Meeting*, Milwaukee, USA, 27-30 May 2014.

A. Negara, A. Salama, and S. Sun, "3-D Numerical investigation of subsurface flow in anisotropic porous media using multipoint flux approximation method", SPE 165960, In: *2013 SPE Reservoir Characterization and Simulation Conference*, Abu Dhabi, UAE, 16-18 September 2013.

M. F. El-Amin, **A. Negara**, A. Salama, K. Bao, and S. Sun, "CO₂ injection into oil reservoir associated with structural deformation", SPE 160830, In: *2012 SPE Saudi Arabia Section Annual Technical Symposium and Exhibition*, Al-Khobar, Saudi Arabia, 8-11 April 2012.

M. F. El-Amin, **A. Negara**, A. Salama, and S. Sun, "Simulation of coupled flow and mechanical deformation using IMPLICIT Pressure-Displacement Explicit Saturation (IMPDES) scheme", SPE 150855, In: *2012 SPE Middle East Unconventional Gas Conference and Exhibition*, Abu Dhabi, UAE, 23-25 January 2012.

A. Negara, M. F. El-Amin, and S. Sun, "Simulation of CO₂ plume in porous media: consideration of capillarity and buoyancy effects", *International Journal of Numerical Analysis and Modeling Series B (IJNAMB)*, 2:315-337, 2011.

M. F. El-Amin, **A. Negara**, A. Salama, and S. Sun, "Modeling and simulation of structural deformation of isothermal subsurface flow and carbon dioxide injection", SPE 149073, In: *2011 SPE Saudi Arabia Section Annual Technical Symposium and Exhibition*, Al-Khobar, Saudi Arabia, 15-18 May 2011.

W. Abdallah, W. Zhao, A. Gmira, **A. Negara**, and J. Buiting, "Sensitivity analysis of interfacial tension on saturation and relative permeability model predictions", SPE 149038, In: *2011 SPE Saudi Arabia Section Annual Technical Symposium and Exhibition*, Al-Khobar, Saudi Arabia, 15-18 May 2011.

Tavio, Wimbadi, I., **Negara, A.**, and Tirtajaya, R., "Effects of confinement on interaction diagrams of square reinforced concrete columns", *Journal of Civil Engineering Science and Application, Civil Engineering Dimension*, 11:78-88, 2009.

FELLOWSHIP AND AWARDS	Academic Excellence Award by KAUST (September 2013 - August 2014) Second winner of the <i>2011 KAUST Graduate Research Symposium</i> for master degree category in Physical Science and Engineering Division, KAUST (May, 2011) KAUST Graduate Fellowship (August, 2009 to present) KAUST Discovery Scholarship (September 2008 to July 2009) Bachelor Honor for Cumlaude Graduation (March 2009) Academic Potential Achievement by Institut Teknologi Sepuluh Nopember (ITS) (2006)
WORKSHOP AND TRAINING COURSE	International Energy Agency Greenhouse Gas (IEAGHG) Summer School Program, <i>Carbon Capture and Storage</i> , The University of Texas at Austin, Texas, USA, 6-12 July 2014. SPE Training Course, <i>Advancements in Oil Enhancement Processes</i> , Kuala Lumpur, 5 July 2013. SPE Young Members Activities, Student Chapter Officers Workshop, Doha, 12-15 May 2012.
PROFESSIONAL AFFILIATIONS	Society of Petroleum Engineers (SPE), Indonesian Petroleum Association (IPA), Society of Indonesian Petroleum Engineers (IATMI), Dhahran Geoscience Society (DGS)
COMPUTER SKILLS	MS Office, LaTeX, MATLAB, Fortran, CMG Reservoir Simulator, MFrac Hydraulic Fracture Simulator, Mathematica, TecPlot, ParaView, Mac, Windows, Linux
LANGUAGES	Bahasa Indonesia (native) English