

ReviewForm3

JournalName:	AsianJournalofProbabilityandStatistics
ManuscriptNumber:	Ms_AJPAS_125479
TitleoftheManuscript:	OPTIMIZATIONOF EXPERIMENTALPARAMETERSINTHEBUILDINGCONSTRUCTIONPROCESSWITHFRACTIONALFACTORIALDESIGNANDRESPONSE SURFACEMETHODS
TypeoftheArticle	

PART1: ReviewComments

CompulsoryREVISIONcomments	Reviewer’scomment	Author’sFeedback(Pleasecorrectthemanuscriptandhighlightthatpart inthemanuscript.Itismandatorythatauthorsshouldwritehis/herfeedback here)
Pleasewritea fewsentencesregardingtheimportance ofthismanuscriptfor thescientificcommunity.Whydo (ordislike)thismanuscript?Aminimumof sentencesmayberequiredforthispart. youlike 3-4	Thismanuscriptisvaluabletothescientificcommunityasit tacklescriticalissuesinconstruction, particularlyoptimizingconcretemixdesignstoimprovestructuralintegrityandpreventcollapses .By usingfractionalfactorialdesignandresponsesurfacemethodology(RSM),it offersarigorous,data- driven approachtoidentifyoptimalmaterialcombinations.Thehighreliabilityofthemodel,withanR- squared valueof 99.50%,strengthensitspracticalrelevance.Iappreciateitsfocusonsolvingreal- worldproblems andimprovingafetyinconstruction,thoughmorecasestudiescouldfurtherenhanceitspractical applicability.	
Isthetitleofthearticlesuitable? (Ifnotpleasesuggestanalternativetitle)	Yes	
Istheabstractofthearticlecomprehensive?Doyou suggesttheaddition(ordelation)of somepointsinthis section?Pleasewriteyoursuggestionshere. -	Theabstracteffectivelysummarizesthestudy’sobjectivesandfindingsbutcouldbenefitfromso me revisions.IncludingtheR-squaredvalue(99.50%)wouldemphasizethemodel’srobustness. Additionally,brieflyhighlightingthepracticalimplicationsforimprovingconstructionpracticesa nd safetystandardswouldenhanceitsrelevance.Thesectiondetailingspecificparameters(e.g.,san dsize, curingtime)canbecondensedtoavoidoverloadingwithtechnicaldetails.Thiswouldmakethe abstractmorebalanced,maintainingtechnicalrigorwhileemphasizingreal-worldapplicability. Overall,theseadjustmentswouldimproveclarityandbettercommunicatethestudy’ssignificancet oa broaderaudience.	
Aresubsectionsandstructureofthemanuscri pt appropriate?	Thesubsectionsandstructureofthemanuscriptappearappropriatefora scientificstudy.Themain sections,includingtheAbstract,Introduction,StatementoftheProblem,Methodology,Resultsand Discussion,andConclusion,followa logicalflowandalignwellwiththeconventionsofresearchpapersin theengineeringfield.	
Pleasewritea fewsentencesregardingthescientific correctnessofthismanuscript.Whydoyouthinktha t thismanuscriptisscientificallyrobustandtechnica lly sound?Aminimumof 3- 4sentencesmayberequired forthispart.	Thismanuscriptisscientificallyrobustandtechnicallysoundduetoitsrigorousapplicationoffraction al factorialdesign(FFD)andresponsesurfacemethodology(RSM),bothwell-establishedstatistical techniquesforoptimizingcomplexprocesses.Theuseofthesemethodsallowsfora comprehensiveanalysis ofmultiplevariables,suchassandsize,water- cementratio,andcuringtime,ensuringthattheresultsare bothreliableandreplicable.ThehighR- squaredvalue(99.50%)furtherconfirmstheaccuracyofthe modelinpredictingcompressivestrength.Additionally,themanuscriptpresentsaclearandmethodi cal approachtoexperimentaldesign,strengtheningits scientificvalidity.	

ReviewForm3

Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.	There are references in the manuscript that are a mix of both older foundational works and more recent studies, which is generally appropriate given the subject matter. Key sources like Box and Wilson (1951) and Montgomery (2017) provide essential background on fractional factorial design and response surface methodology, ensuring a solid theoretical basis. However, many of the references are older, and only a few recent studies (e.g., Abed et al., 2023) are included. To enhance the relevance, I suggest including more recent references, particularly those addressing modern advancements in concrete optimization, sustainability in construction materials, or applications of FFD and RSM in the last 5-10 years. This would help align the study with current trends and challenges in the field.	
Minor REVISION comments	Yes	
Is the language/English quality of the articles suitable for scholarly communications?		
Optional/General comments	Based on the sections of the manuscript you've provided, there are no immediate signs of plagiarism. The content appears to be original and well-referenced, particularly the use of established methodologies like fractional factorial design (FFD) and response surface methodology (RSM), which are commonly cited in engineering and scientific research.	

PART 2:

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Are there ethical issues in this manuscript?	(If yes. Kindly please write down the ethical issues here in details)	

Reviewer Details:

Name:	Chaitanya Korra
Department, University & Country	University of New Mexico, USA