



**ФАН ВА ТЕХНОЛОГИЯЛАР
ТАРАҚҚИЁТИ**
**РАЗВИТИЕ НАУКИ И
ТЕХНОЛОГИЙ**



2
2025

Тахририят ҳайъати раиси:

СИДДИҚОВА С.Ғ. –

Бухоро муҳандислик-технология институти ректори

Муовини:

НИЗАМОВ А.Б. –

БухМТИ илмий ишлар ва инновациялар бўйича проректори

Тахрир ҳайъати:

МУҚИМОВ К.М. – ЎзР ФА академиги (ЎЗМУ)

ЖАЛИЛОВ А.Т. – ЎзР ФА академиги (Тошкент кимё-технология ИТИ)

НЕГМАТОВ С.Н. – ЎзР ФА академиги (“Фан ва тараққиёт” ДУК)

БАҲОДИРОВ Ғ.А. – т.ф.д., профессор, ЎзР ФА бош илмий котиби

ХАМИДОВ О.Х. – иқтисод фанлари доктори, профессор (БухДУ)

ЖАЛИЛОВ Т.Қ. – иқтисод фанлари доктори (DSc) (ТКТИ)

МУХТАРОВ Н.Ш. – техника фанлари доктори (DSc) (“Ўзбекнефтегаз” АЖ)

ТУХСАНОВ Х.А. – иқтисод фанлари доктори (DSc) (“Ўзбекнефтегаз” АЖ)

МАДИЕВ Р.Х. – техника фанлари доктори (DSc) (“Шуртан ГKM” МЧЖ)

АДИЗОВ Б.З. – техника фанлари доктори (DSc), к.и.х., ЎзРФА УНКИ

ХУРМАМАТОВ А.М. – техника фанлари доктори, профессор, ЎзРФА УНКИ

СОБИРОВА Н.К. – филология фанлари номзоди, доцент, ЎЗМУ

ҒАФУРОВ Д.О. – Бухоро МТИ ёшлар масалалари ва маънавий- маърифий ишлар бўйича биринчи проректори ф.ф.ф.д (PhD)

ҚУРБОНОВ Ж.М. – техника фанлари доктори, профессор (Самарқанд ИСИ)

САИДОВ С.Б. – Бухоро МТИ молия ва иқтисод ишлари бўйича проректори

ШАРИПОВ М.З. – физика-математика фанлари доктори (DSc), профессор

АСТАНОВ С.Х. – физика-математика фанлари доктори, профессор

РАХМОНОВ Х.Қ. – техника фанлари доктори, профессор

ВОХИДОВ М.М. – техника фанлари доктори, профессор

ЖЎРАЕВ Х.Ф. – техника фанлари доктори, профессор

САДУЛЛАЕВ Н.Н. – техника фанлари доктори (DSc), профессор

МАЖИДОВ Қ.Х. – техника фанлари доктори, профессор

ФОЗИЛОВ С.Ф. – техника фанлари доктори, профессор

ИСАБАЕВ И.Б. – техника фанлари доктори, профессор

АБДУРАХМОНОВ О.Р. – техника фанлари доктори, профессор

НИЗОМОВ А.Б. – иқтисод фанлари доктори, профессор

ЖУМАЕВ М.Р. – физика-математика фанлари доктори (DSc), профессор

ЮНУСОВА Ғ.С. – фалсафа фанлари доктори (DSc), профессор

ЖЎРАЕВА М.М. – филология фанлари доктори (DSc), профессор

ТЎХТАЕВА З.Ш. – техника фанлари доктори (DSc), профессор

МАХМУДОВ М.Ж. – техника фанлари доктори (DSc), профессор

ХАЙИТОВ Р.Р. – техника фанлари доктори (DSc), к.и.х.

БОЗОРОВ Ғ.Р. – техника фанлари доктори (DSc), профессор

БОЛТАЕВ З.И. – физика-математика фанлари доктори (DSc), профессор

ОЛТИЕВ А.Т. – техника фанлари доктори, (DSc)

ЖАЛИЛОВ Р.Б. – техника фанлари доктори (DSc), профессор

МАХМУДОВ М.И. – техника фанлари доктори (DSc), профессор

МАЖИДОВА Н.Қ. – техника фанлари доктори (DSc), профессор

АХМЕДОВ В.Н. – кимё фанлари номзоди, профессор

МАХМУДОВ Р.А. – техника фанлари доктори (DSc), профессор

ПУЛАНОВА М.И. – физика-математика фанлари номзоди, профессор

Бош муҳаррир:

ДЎСТОВ Ҳ.Б. – кимё фанлари доктори, профессор

Муҳаррирлар:

БАРАКАЕВА Д.Ф., ОРТИҚОВА С.Ж., ИСТАМОВА Ғ.Х.

Мусахҳих:

АРТИКОВА М.М.

ФАН ВА ТЕХНОЛОГИЯЛАР ТАРАҚҚИЁТИ

ИЛМИЙ – ТЕХНИКАВИЙ ЖУРНАЛ

РАЗВИТИЕ НАУКИ И ТЕХНОЛОГИЙ

НАУЧНО – ТЕХНИЧЕСКИЙ ЖУРНАЛ

Журнал Ўзбекистон матбуот ва ахборот агентлиги Бухоро вилояти бошқармасида 2014 йил 22-сентябрда № 05-066-сонли гувоҳнома билан рўйхатга олинган

Муассис:

Бухоро муҳандислик-технология институти

Журнал Ўзбекистон Республикаси Вазирлар Маҳкамаси ҳузуридаги ОАК Раёсатининг 2017 йил 29-мартдаги №239/5-сонли қарори билан диссертациялар асосий илмий натижаларини чоп этиш тавсия этилган илмий наشرлар рўйхатига киритилган. 2019 йилда Ўзбекистон Республикаси ОАК Раёсатининг қарорлари билан қайта рўйхатдан ўтказилган.

Тахририят манзили:

200100, Бухоро шаҳри, Қ. Муртазоев кўчаси, 15-уй, Бухоро муҳандислик-технология институти

Тел: 0(365) 223-92-40

Факс: 0(365) 223-78-84

Электрон манзил:

E-mail: fantt_jurnal@umail.uz

Журналнинг тўлиқ электрон варианты билан

<https://journal.bmti.uz/>

сайти орқали танишиш мумкин.

Ушбу журналда чоп этилган материаллар тахририятнинг ёзма рухсатисиз тўлиқ ёки қисман чоп этилиши мумкин эмас. Тахририятнинг фикри муаллифлар фикри билан ҳар доим ҳам мос тушмаслиги мумкин. Журналда ёритилган материалларнинг ҳаққонийлиги учун мақолаларнинг муаллифлари ва реклама берувчилар масъулдирлар.

МУНДАРИЖА - СОДЕРЖАНИЕ – CONTENT

ТЕХНИКА, ТЕХНОЛОГИЯ ВА ЖИҲОЗЛАР	
Sharipov N.Z. Gilos danagini chaqishga sarf bo‘ladigan kuchni tadqiq qilish	4
Обитов Н.М., Орипов З.Б. Повышение литейные свойства магналиев	8
Teshaboyev O.A. Momiqni tashuvchi va tozalovchi to‘rli yuzasi tebranuvchi vintli konveyer yuklanishlari va aylanish chastotalarini tajribada aniqlash	13
Oripov Sh., Mamakhonov A.A., Orifjonov S. Review of performance and applications of hybrid wind turbines	18
Беккулов Ж.Ш., Норбоев О.Н. Устройство для быстрого и непрерывного измерения влажности порошкообразных продуктов	25
Hojiyev T.S., Samiyev K.A. Passiv quyosh isitish tizimiga ega turar-joy binosi tashqi devorlarining issiqlik izolyatsiya qatlami turini tanlash	28
КИМЁ ВА КИМЁВИЙ ТЕХНОЛОГИЯЛАР	
Рахимов Ф.Ф., Джунаидов Х.Х., Сафарова Р.У. Монометилломочевина ва тетраэтоксисилан асосидаги олигомернинг квант-кимёвий ҳисоблашлари	35
Hojiyeva F.J., Amonov M.R. Ohorlovchi komponentlar tarkibini ishlab chiqishning fizik-kimyoviy asoslari	39
Abdiraximov I.E. Gazlarni qayta ishlashda gidrat hosil bo‘lishini oldini olish usullari	43
Maxmudov M.J., To‘xtayev N.N. Metil uchlamchi butil efiri ishlab chiqarishning zamonaviy texnologiyalarini tahlili.	47
Jo‘rayeva L.R. N-metilpirrolidonning xom-ahyoga nisbatan har xil nisbatda olinuvchi selektiv tozalangan rafinatlar tarkibidagi polisiklik aromatik uglevodorodlar tarkibini aniqlash	54
Xo‘jaqulov A.F., Toshov M.S. Dizel moylarining kolloid-kimyoviy xossalari turli funksional qo‘ndirmalar ta’sirini tadqiq etish	57
Xo‘jaqulov A.F., Raximov Z.Z. Kolloid sistemalarning molekulyar kinetik xossalari asosida transformator moylarini tahlili	64
Tashpulatov X.Sh., Hamdamova D.R. Bo‘yoq sezgir quyosh elementlari uchun geteroeptik mis(I) kompleks birikmalarining sintezi va tadqiqoti.	69
Eshqurbonov F.B., Abduraimov J.B. Diglitsidilkarbamid va dimetilolkarbamid asosida burg‘ulash eritmalari olish usullarini tadqiq qilish	74
Zokirov X.T., Abdullaev O.G., Toshmatov Y.R. Prospects for using waste generated at “Ferganaazot” JSC as a filler in the production of gypsum dry construction mixtures	78
Axmedova O.B., Axmedova Sh.U. Absorbent kompozitsiyalarining absorbsiya va desorbsiya jarayonlaridan keyingi fizik-kimyoviy xossalari	83
МАШИНАСОЗЛИК ВА ЭНЕРГЕТИКА	
A‘zamov S.S. Investigation of electromagnetic current transformer performance characteristics for measuring and controlling the reactive power dissipation of a short-circuited rotor asynchronous motor	89
Xushiyeve S.M., Mamadiyev X.N., Davirov A.Q. Nosimmetrik rejimlarni kuch transformatorining samaradorligiga ta’siri	94
Muratova Z.A., Juraev Z. Tibbiy maqsadlarda noto‘qima mato ishlab chiqarishda intellektual texnologiyalarining dolzarbligi va muammolari.	100
Жалилов Р.Б., Камалов У.У., Караев А.Т. Анализ действующих и исследование современных инновационных систем теплоснабжения жилых массивов городов	106
Maxmudov M.I., Sayfiyev H.O., Nurov S.S. Fotoelektrik batareyalarning energetik parametrlarini monitoring va diagnostika tizimi uchun qurilma ishlab chiqish	116

Xamzayev A.A., Xaydarov Sh.B., Usmonov M.Z., Niyetbaev A.D. Karyer bir cho‘michli ekskavatorlarning ish rejimlarini optimallashtirish	122
Narzullayev B.Sh., Boboqulov J.S. Qo‘zg‘atish tokini monitoringgi asosida sinxron generatorlarni energiya samaradorligini oshirish usullarining tahlili.	127
Бабаназарова Н.К., Хусенов Д.Р. Анализ расхода электроэнергии на производственные нужды, на примере газотранспортной системы	135
ИНФОРМАТИКА ВА АХБОРОТ – КОММУНИКАЦИОН ТИЗИМЛАР	
Мухамедиева Д.Т., Раупова М.Х. Квантовые вычисления на основе специального язык программирования «Qiskit».	140
Муратова З., Жураев З. Цифровизация систем управления при производстве нетканых материалов медицинского назначения путем переработки шелковых отходов	144
Мамедов Р.А. Разработка математической модели гидрокинетической турбины, адаптированной для эффективной работы в свободнопоточных водотоках	150
Shadmanov I.U., Adizova Z.M., Nosirova Z.E. G‘ovak jismlarni saqlashda issiqlik va namlik ko‘chish jarayonlarini bashoratlash uchun matematik model va sonli algoritmlar	162
Ibragimov R.R., Jumayev J., Narziyev M.S., Qo‘ldosheva F.S. To‘liq faktorli eksperiment usulida meva va sabzavotlarni sterilizatsiyalash jarayonini modellashtirish	168
Qo‘ziyev Z.E. Реактив гидротурбинали микро гидроелектр стansiyani matematik modellashtirish	175
Abdurazakov N. Robust residential load forecasting with manual feature engineering	181
O‘lmasov Q.N. Quyosh fotopanellarini «MATLAB/SIMULINK» tizimida modellashtirish	188
Хаитов Б.У., Махмудов М.Ш. Применение морфометрических данных рельефа в оценке благоустройства городских территорий	196
Safarov A.B., Sayfiddinov K.E., Qahhorov M.M. Shamol turbinasini "ANSYS FLUENT" tizimida modellashtirish	202
ОЗИҚ-ОВҚАТ САНОАТИ ТЕХНОЛОГИЯЛАРИ	
Ergasheva X.B., Elmurodova A.S., Shadiyeva M.SH. O‘zbekistonda yetishtirilgan sholi navlarining texnologik tavsifi va uni qayta ishlash mahsulotlarining kimyoviy tarkibi	215
Шодиев Б.М., Хакимов Ш.Ш. Маҳаллий махсар уруғларидан олинган мойларни рафинациялаш технологик шароитлари	220
Садуллаев С.Х., Мирзаев Ж.Д., Равшанов С.С. Тритикале ва буғдой унлари турли нисбатларининг хамир реологик хоссаларига таъсирини тадқиқ қилиш	225
Мухаммадиев Б.Т., Турсунова Н.Н. Структура отдела качества и безопасности пищевых продуктов	230
Ашурова М.З., Сулайманова Г.Х., Ганиева Н.Х. Изменение качественного и количественного состава эфирных масел пряной зелени при тепловой кулинарной обработке	234
Barakayev N.R., Kamolova M.X., Sayidaxmedov R.R., Rajabov A.N. Bug‘doy donlari va don mahsulotlarini qayta ishlash jarayonlarini zamonaviy tahlili	239
Oltiyev A.T., Bozorova D.N., Hasanova A.Sh. Biokatalizatorlarning yangi avlodi yordamida yog‘larni pereeterifikatsiya qilish texnologiyasini takomillashtirish	243
Turg‘unpo‘latova Sh.M., Saribayeva D.A. Pastila mahsulotlari assortimentini kengaytirishning ilmiy asoslari	248
Ravshanov S.S, Nurmatov I.R, Tursunxodjaev N.T, Maksumxodjaeva K, Raxmonov Q.S. Bug‘doy donini un tortishga tayyorlashda suv qattiqligining un chiqish unumiga va texnologik xossalariga ta’siri	252
Turg‘unov Sh.X., Mallabayev O.T., Saribayeva D.A. Chicorium (hindibo) o‘simligi tarkibidagi vitaminlar tadqiqi	258
Мухамедова М.Э. Нетрадиционное сырьё в производстве диабетических сухарей	262

ТЎҚИМАЧИЛИК ВА ЕНГИЛ САНОАТ ТЕХНОЛОГИЯЛАРИ

Мўминов Қ.М., Хамраева С.А. Кўйлакбоп матода жойлашган танда ва арқоқ ипларининг параметрларини тадқиқ этиш.	269
Muhammedova M.O. Inson oyoq panjasining antropometrik tahlili va uning o'zgaruvchanligini tavsiflovchi statistik parametrlar.	273
Gafurova N.T., Hasanova M.E. Bolalar kiyimlariga qo'yiladigan talablarni shakllantirish	278
Асадова С.С., Хамроева М.Р. История драпировки одежды и ее значение сегодня	284
Набиджанова Н.Н., Насирова М.Б. Типовийдан фарқланувчи эркалар қоматларига кийим ишлаб чиқариш учун тўқима матоларининг физик-механик хусусиятларини ўрганиш ва таҳлил қилиш	289
Ortiqov Z.U., Sarimsakov.O.Sh. Paxta xomashyosiga ishlov berishning mexatronik namlash mashinalari va agregatlari	293
Jo'rayeva M.A., Nabidjonova N.N. Maktabgacha ta'lim muassasidagi tarbiyalanuvchilar maxsus kiyimi uchun tanlangan matoning boshqa matolardan afzaliklari	299
Sharibaev N.Yu., Homidov Q.A. Matoning sifatini tekshirishda hosil bo'ladigan qarshilik kuchlarini mexanik qoniniyat asosida nazariy taxlil qilish	302
Гафурова Н.Т., Хужаева М.Э. Разработка топографической карты специальной одежды для прядильщиков	308
Ражабова Г.Ж. Тез ўзгарувчан моданинг атроф-муҳитга таъсири	312
Tursunova Z.N. Shaxsning umumiy biosotsial strukturasi	317
Умаров А.А., Кенжаева М.И., Ортиқова К.И., Усмонов Ш.К. Аррали жин ишчи камерасида тезлатгичнинг пахта оқимиға таъсир қилувчи кучларнинг назарий таҳлили ...	321
Mamadaliyeva Z.Y., Nabidjonova N.N. Maxsus kiyimlar va ularning kelib chiqish tarixi, suv o'tkazmaydigan matolarning xususiyati va tahlili	326
Tursunov Ch.A., Qarshiyev B.E., Djamolov R.K. Tukli chigitni pnevmo-mexanik saralash mashinasida chigitlarni titkilab donadorligini oshiruvchi tishli diskli ta'minlash valigining o'lchamlarini aniqlash	330
Sayitqulov S.O., Salomov A., Рамазонов С. Arrali tola ajratgich mashinasining chigit tarog'ining ekspremental tadqiqi	335
Худойбердиев М.Р., Очиллов Т.А., Ёдгоров С.Қ. Турли селекция навларидан олинган иплар нотекислик кўрсаткичларининг ўзгариши.	338
Наврузов Н., Якубов К., Ахмедов К., Уразматова М. Ишчи камерадаги пахтанинг дастлабки оқим ҳаракати динамикаси.	343
Ismoyilov I.B., Qo'ldoshev E.I., Ismoyilov F.B., Qayumov J.A. Jun tolasi tarkibidagi begona aralashmalarni tozalash mashinasining texnologik parametrlarini nazariy asoslash	347
Qo'ldoshev E.I., Ismoyilov I.B., Ismoyilov F.B. O'zbekistonda yetishtirilayotgan jun xomashyosi maxsuldorligi va sifat ko'rsatgichlari.	354
Бебутова Н.Н., Комилова Х. Разработка коллекции спецодежды для работников АПК с применением компьютерной графики «COREL DRAW».	359
АНИҚ ВА ИЖТИМОЙ-ИҚТИСОДИЙ ФАНЛАР	
Hikmatov N.I. Energiya samaradorli qurilish uchun zamonaviy issiqlik himoyalovchi materiallar	364
Вахитов М.М., Вохидов И.М., Нозимов У.А. Техническое состояние поверхностей фасадов исторического здания японского госпиталя в г. Кагане.	368
Mirzayev Sh.R., Ismatov S.S. The influence of traditions, social and climatic factors on the tectural design of multi-storey residential buildings: the case of the city of Bukhara	374
Баракатова Д.А. Исҳоқхон тўра ибрат илмий мероси. “Мезон ун-низо” асари ҳақида ..	377
Азимова Н.Ф. Лев толстой ижоди. “Анна Каренина” романи ҳақида	381

THE INFLUENCE OF TRADITIONS, SOCIAL AND CLIMATIC FACTORS ON THE ARCHITECTURAL DESIGN OF MULTI-STORY RESIDENTIAL BUILDINGS: THE CASE OF THE CITY OF BUKHARA

Mirzayev Sh.R., Ismatov S.S.

Bukhara state technical university.

Abstract. The architectural design of multi-storey residential buildings is a complex and multifaceted process that is influenced by a variety of factors. Among these, traditions, social, and climatic factors play a significant role in shaping the design of these structures. These factors can have a profound impact on the aesthetic, functional, and sustainable aspects of multi-storey residential buildings, and thus, it is essential to examine their influence on architectural design.

Keywords: old-buildings, Bukhara, new economic city, energy consumption, new style, complexes

KO'P QAVATLI TURAR-JOY BINOLARINING ME'MORIY LOYIHALANISHIGA AN'ANALAR, IJTIMOY VA IQLIM OMILLARINING TA'SIRI: BUXORO SHAHRI MISOLIDA.

Mirzayev Sh.R., Ismatov S.S.

Buxoro davlat texnika universiteti.

Annotatsiya. Ko'p qavatli turar-joy binolarining me'moriy dizayni murakkab va ko'p qirrali jarayon bo'lib, unga turli omillar ta'sir qiladi. Ular orasida an'analar, ijtimoiy va iqlimiy omillar ushbu tuzilmalar dizaynini shakllantirishda muhim rol o'ynaydi. Ushbu omillar ko'p qavatli turar-joy binolarining estetik, funktsional va barqaror jihatlariga chuqur ta'sir ko'rsatishi mumkin, shuning uchun ularning me'moriy dizaynga ta'sirini o'rganish juda muhimdir.

Kalit so'zlar: eski binolar, Buxoro, yangi iqtisodiy shahar, energiya iste'moli, yangi uslub, majmualar.

ВЛИЯНИЕ ТРАДИЦИЙ, СОЦИАЛЬНЫХ И КЛИМАТИЧЕСКИХ ФАКТОРОВ НА АРХИТЕКТУРНОЕ ПРОЕКТИРОВАНИЕ МНОГОЭТАЖНЫХ ЖИЛЫХ ЗДАНИЙ: НА ПРИМЕРЕ ГОРОДА БУХАРЫ

Мирзаев Ш.Р., Исмаев С.С.

Бухарский государственный технический университет.

Аннотация. Архитектурное проектирование многоэтажных жилых домов – сложный и многогранный процесс, на который влияют самые разные факторы. Среди них традиции, социальные и климатические факторы играют значительную роль в формировании дизайна этих сооружений. Эти факторы могут оказать глубокое влияние на эстетические, функциональные и экологические аспекты многоэтажных жилых зданий, поэтому важно изучить их влияние на архитектурный дизайн.

Ключевые слова: старая застройка, Бухара, новый экономический город, энергопотребление, новый стиль, комплексы.

Introduction: Nowadays, constructing large residential complexes is regulated by effective construction norms that take into consideration various technical conditions, social, and climatic factors. However, the problem of the rapid development of multi-story residential construction in Asian, Arab, and some CIS countries remains unsolved. The architectural design solutions do not correspond to the demands of modern life and clearly reflect the historical and traditional heritage of these regions. In constructing multi-story residential buildings, universal architectural solutions are used contrary to the traditions of individual people and the nature of their native land. These residential buildings look monotonous, poverty-stricken, and strip the cities of unique architectural features.

The architecture of residential multi-story buildings is an inalienable feature of modern cities and urban settlements. In the process of their formation and development, people have created forms and spatial compositions of residential buildings that express not only the characteristics of the historical and cultural environment but also those of the climatic and natural one. The height of buildings, the spatial and design solutions, the functionality of such buildings, and residential areas reflect the nature of social development and ultimately serve people. This is the main purpose of architecture.

Traditions, in the form of cultural and historical influences, have a profound impact on the architectural design of multi-storey residential buildings. The design of a building is often reflective of the cultural and historical context in which it is built. For instance, in Islamic countries, arches, domes, and minarets are common features of building design, reflecting the region's rich cultural heritage. Similarly, in Japan, traditional architecture is characterized by the use of natural materials, minimal ornamentation, and an emphasis on natural light, reflecting the country's Zen Buddhist influences. These cultural and historical influences not only shape the aesthetic of the building but also inform the functional aspects of the design.

Social factors, such as demographics, lifestyle, and social norms, also play a significant role in shaping the architectural design of multi-storey residential buildings. For example, in densely populated urban areas, there is a growing trend towards compact, high-rise residential buildings that prioritize functionality and efficiency. In contrast, in suburban areas, there is a greater emphasis on single-family dwellings with larger living spaces and gardens. Furthermore, changing social norms, such as the growing importance of sustainability and environmentalism, are influencing architectural design, with many buildings incorporating green roofs, solar panels, and rainwater harvesting systems.

Today, the requirements for the quality of residential design in urban planning are increasing. In particular, economic, socio-demographic, architectural-artistic and natural-related to the accounting of climatic conditions, as well as environmental, sanitary and hygienic and aesthetic requirements. This set of requirements is realized as specific modern factors in the formation of the principles of the design of residential buildings. Taking into account the conditions of the local climate and the lifestyle and customs of the people on the basis of several hundred years of cultural development, the occupation of the northern and southern regions of the highlands of Central Asia, settlements in the lowlands was also expressed in this, among those who are engaged in the history of current architectural art, the types of In addition, there is also a type of houses of the Highlands and steppe zones. Each of these is the product of local folk schools of architecture, and at the same time also has common signs. This commonality is that in all of them the main element is the courtyard. Courtyards was usually surrounded by four enclosures with rooms connected by the means of corridors, as well as a porch and similar summer living areas, a farm and auxiliary rooms. The formation of courtyards in relation to it, the way in which rooms and summer structures were placed, gave rise to a distinctive regional appearance in the aforementioned cities and provinces. The formation of any residential area is certainly greatly influenced by the geographical environment. For example, houses built on the north side served to keep the interior of the apartments from the external environment, as the most basic requirement here was the opposite, and the houses had to be kept from the heat and overheating them. It was also necessary to harmoniously connect the inner part of the house with the external environment. Thus, on the basis of conflicting requirements, a structure (structure) of North and South houses appeared, completely dissimilar to each other. National culture and Customs also affect the structure and varieties of residential housing. Therefore, even if the southern housing in which the climate is one is similar, they change depending on the historical and customs of the indigenous people here. Therefore, the traditional settlements of the Uzbek people have adapted to their climatic conditions to the level of culture, customs and artistic traditions. The construction of residential houses in Uzbekistan has its own historical tradition. The houses were built in 2 different ways: national and European. The houses were mostly private courtyard houses. These houses are divided into 3 types according to the style of construction, these are: Bukhara houses, houses built in the Fergana and Khiva styles. Bukhara houses were highly developed during the feudal period, forming dense constructions, inverted to the street, i.e. separated from the street, with the courtyard facing the side, the rooms were one to two stories, densely built around the courtyard, and thus much cooler in the courtyard than the warm and dusty air of the street. The Bukhara residential type is usually far beyond the gate, with the overhead berk corridor starting at Dolon. Indeed, Dolon's role in the field of home-

building has been important. In his own right, he again filled the role of vestibule. In addition, an additional construction site, which also served as a shelter from the woodpecker. Dolon was more commonly used in urban courtyards. After the Dolon is the entrance or gatehouse (at some point the gatehouse was built before the Dolon). In the late 19th century, the houses were divided into" outbuildings "as well as" inner " courtyards. That was the reason. The first is to hide women from the "Foreign eye" under the influence of Islamic creeds, while the second is the division of the courtyard into economic (extraneous) and cultural (internal) zones, a habit that arose long before it. Just like that, the construction of rooms with a focus only on the side of the courtyard is of a dual nature. That is, the fact that the windows and doors do not open outside (to the street) is first within the framework of Sharia, while the secondary is the construction of the yard towards the trees and flowers in the yard, with the exception of external noise, dust, etc. Evidence of this can be traced back to the Arab occupation of this factor in Central Asian residential areas.

Climatic factors, including temperature, humidity, and sunlight, have a profound impact on the architectural design of multi-storey residential buildings. In hot and arid climates, buildings are designed to provide shade, insulation, and natural ventilation, such as through the use of windows, awnings, and courtyards. In contrast, in cold and temperate climates, buildings are designed to retain heat, using materials such as brick, stone, and insulation, and incorporating features such as double glazing and central heating. Moreover, the availability of natural resources, such as sunlight and wind, can also influence the design of buildings, with architects incorporating features such as solar panels, wind turbines, and green roofs to harness these resources.

Furthermore, the interplay between traditions, social, and climatic factors can result in a rich diversity of architectural designs, each reflecting the unique cultural, social, and environmental context in which the building is situated. For instance, in the Middle East, the traditional courtyard house, with its central courtyard, arched windows, and ornate decoration, has been adapted to incorporate modern sustainable features, such as solar panels and greywater reuse systems. Similarly, in Scandinavian countries, the traditional wooden chalet, with its steeply pitched roof and wooden cladding, has been adapted to incorporate modern insulation materials and energy-efficient systems.

In addition to their impact on the aesthetic and functional aspects of building design, traditions, social, and climatic factors also have significant implications for the sustainability of multi-storey residential buildings. For example, the incorporation of traditional building materials and techniques can reduce the carbon footprint of construction, while the use of natural ventilation and daylighting can reduce the energy consumption of buildings. Moreover, the use of sustainable materials, such as recycled materials and low-carbon concrete, can further reduce the environmental impact of building construction.

Conclusion. In conclusion, the architectural design of multi-storey residential buildings is a complex and multifaceted process that is influenced by a variety of factors. Traditions, social, and climatic factors play a significant role in shaping the design of these structures, influencing the aesthetic, functional, and sustainable aspects of building design. Understanding the interplay between these factors is essential for creating buildings that are not only aesthetically pleasing and functional but also sustainable and environmentally conscious. As the world's population continues to urbanize, the need for sustainable and environmentally conscious architectural design will only continue to grow, making the influence of traditions, social, and climatic factors on multi-storey residential buildings an increasingly important area of study.

References

1. Ubaidullayev Kh.M. Inag'omova M.M. Typological principles of residential and public building design. Tashkent 2009.
2. Voxidov.M.M, Mirzayev.Sh.R. Me'morchilik Part I. T.: "Tafakkur", 2010.

3. Kayumov, H., & Israyilov, E. (2022). Environment as the basis and perceptions of monuments of architecture and historical cities of Uzbekistan. *academia globe: interscience research*, 3(10), 112-125.
4. Kayumov, Kh. I. (2021). The problem of preserving the architecture of the historical environment of the ancient city and the development of tourism. *Interscience*, (20-1), 6-10.
5. Fozilova, Z. Q. (2023). Analysis of the master plans of the city of Samarkand. *Journal of Architecture, Engineering and Modern Technology*, 2(1), 117-122.
6. Fozilova, Z. Q. (2023). Irrigation System of Samarkand City. *Journal of engineering, mechanics and modern architecture*, 2(2), 64-68.
7. Salokhiddinova, D. Z. (2022). Architectural environment in Samarkand: tradition and modernity.

ИСХОҚХОН ТЎРА ИБРАТ ИЛМИЙ МЕРОСИ. “МЕЗОН УН-НИЗОМ” АСАРИ ҲАҚИДА Баракатова Д.А.

Бухоро давлат техника университети.

Аннотация. Мақолада миллий уйғониш даврининг фаол ижодкорларидан бири, серқирра истеъдод соҳиби, маърифатпарвар шоир, тилишунос олим, илк матбаачи Исҳоқхон Ибрат ҳаёт йўли, илмий ва бадий ижоди, ижтимоий фаолияти тўғрисида маълумот берилган. Асарлари моҳияти, мавзу ва гоёси ҳақида фикр юритилган. Ўзбек адабиёти тарихида муҳим ўрин эгаллаган “Мезон уз-замон” рисоласи атрофида таҳлил қилинган.

Калит сўзлар: маҳаллий мактаб, она – устоз, моҳир педагог, миллат маърифати, чет эл саёҳати, илк ўзбек матбаатчиси, илк ношир, “Матбааи Исҳоқия” литографияси, “Лугати ситта-алсина” лугати, “Мезон уз-замон” илмий асари, хизмати миллат.

ИСХОҚХОН ТУРА ИБРАТ И ЕГО НАУЧНОЕ НАСЛЕДИЕ. О ПРОИЗВЕДЕНИИ “МЕЗОН УЗ-ЗАМОН”

Баракатова Д.А.

Бухарский государственный технический университет.

Аннотация. В статье представлена информация о жизни, научном и литературном творчестве, а также общественной деятельности одного из активных деятелей периода национального возрождения, многогранно одарённого талантливого просветителя, поэта, лингвиста и первого узбекского типографа Исхокхона Ибрата. Рассмотрены сущность, тематика и идея его произведений. Проведен детальный анализ трактата “Мезон уз-замон”, занимающего важное место в истории узбекской литературы.

Ключевые слова: местная школа, мать-наставница, искусный педагог, просвещение нации, путешествие за границу, первый узбекский типограф, первый издатель, литография “Матбааи Исҳоқия”, словарь “Лугати ситта-алсина”, научный труд “Мезон уз-замон”, служение нации.

ISHOQKHON TURA IBRAT'S SCIENTIFIC HERITAGE. ABOUT THE WORK “MEZON UN-NIZOM”

Barakatova D.A.

Bukhara State Technical University.

Abstract. The article provides information about the life, scientific and literary works, and social activities of Is'hoqkhon Ibrat, one of the active creators of the national awakening period, a versatile talented scholar, an enlightened poet, a linguist, and the first Uzbek printer. The essence, themes, and ideas of his works are discussed. A comprehensive analysis is given of the treatise “Mezon uz-zamon”, which holds an important place in the history of Uzbek literature.

Keywords: local school, mother-teacher, skilled educator, national enlightenment, foreign travel, first Uzbek printer, first publisher, “Matbaai Is'hoqiya” lithography, “Lug'ati sitta-alsina” dictionary, “Mezon uz-zamon” scientific work, service to the nation.

Ўзбек маданияти тарихида ўзининг муносиб ўрнига эга мутафаккирлардан Исҳоқхон Жунайдуллаҳўжа ўғли Ибрат XIX аср охири XX аср бошларида ўз миллати маърифати, маънавияти учун курашган халқпарвар, илғор фикрли жонкуяр инсон бўлган. Исҳоқхон Ибрат 1862 йилда Наманган яқинидаги Тўрақўрғон қишлоғида туғилган. Дастлабки