

# BUYANKHISHIG ZUNDUI

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## 1. Education

Degree	Discipline	Institution	Year
Bachelor	Radio communication engineering	SICT, MUST	1991
Master	Radio communication engineering	SICT, MUST	1997
PhD	Telecommunication engineering	SICT, MUST	2003

## 2. Academic experience

Institution	Rank	Title	Dates Held
SICT, MUST	Associate Professor	Head of Department	Sep,2018-present
SICT, MUST	Associate Professor	Deputy director	Feb,2016-Sep,2018
SICT, MUST	Associate Professor	Professor	2014-2016
SICT, MUST	Associate Professor	Head of Department	Jan,2007-Jul,2014
SICT, MUST	Associate Professor Senior Lecturer	Director of the center Senior Lecturer Lecturer	1993-2006

## 3. Non-academic experience

Organization	Title	Duties	Dates
Institute of Communications Industry & Research	Researcher	Designer & inventor of radio equipment	Aug,1991-Jan,1993

## 4. Teaching work experience

- Signal transmission theory, Information and coding theory
- Electronic circuit theory, Communication Power supply system
- Data communication, Digital signal processing, Microprocessor technology
- Wave propagation, Antenna feeder equipment,
- Radio transmission system, Rural communication system
- Telecommunication transmission system, Access network technology
- Optical communication technology, Broadband communication system
- Multimedia technology

## 5. Certifications or professional registrations

- 2005, Consulting engineer
- 2005, LABVIEW certification
- 2006, IELTS certification
- 2008, ICDL certification

## 6. Current membership in professional organizations:

- Member, IEEE
- Member of Professional Degree Commission

## 7. Honors and awards:

- 2020, Medal of Honor for Labor
- 2014, Outstanding Scientific Officer
- 2013, Best researcher-teacher of the Year of MUST, special prize
- 2008, Outstanding Education Officer
- 2006, Best employee of information and communication,
- 2005, Outstanding lecturer of the Year of the Consortium of Universities
- 2004, Best teaching teacher of the Year of MUST

## 8. Service activities

- Member of Academic Board of SICT
- Member of Curriculum Committee, SICT

## 9. Monographic

- “Монгол улсын улс, хот хооронд, орон нутгийн мэдээлэл холбооны нэгдсэн сүлжээг хөгжүүлэх концепц”, З.Буянхишиг, Б.Сүхбаатар ба бусад МХХТГ, ХХЗЗ, Улаанбаатар, 2004 /308х/.
- “Frequency and Timing Gradient Offsets Estimation of OFDM System”, Z.Buyankhishig, B.Otgonbayar et al, /80p, ADB/, Ulaanbaatar, 2005
- “Монгол хэлний яриаг таних техник ба програм хангамж”, З.Буянхишиг, Б.Дамдинсүрэн ба бусад, Улаанбаатар, 2008 /125х/.

## 10. Textbook:

- “Радио холбооны тоон системийн үндэс”, *Сурах бичиг*, З.Буянхишиг ба бусад /258х, МУТИС/, Улаанбаатар 2000
- “Дохио дамжуулах онол”, *Электрон сурах бичиг*, З.Буянхишиг, /CD, МТ Телко/, Улаанбаатар 2003
- “Мэдээллийн ба кодлолын онол”, *Электрон сурах бичиг*, З.Буянхишиг, /CD, Соёмбо принтинг/, Улаанбаатар 2005
- “Гэрлэн долгионы холбооны үндэс”, *Мэргэжлийн сурах бичиг*, /ISBN 978 99962 924 1 5/ З.Буянхишиг, Ш.Ганболд, /14.75хх, Ном Хур/, Улаанбаатар 2011
- “Оптик нягтруулга”, *Мэргэжлийн сурах бичиг*, /DDC 609.2 Б–819/ З.Буянхишиг, Ш.Ганболд, /22.26хх, Ном Хур/ Улаанбаатар 2013
- “Дохио дамжуулах онол”, *Мэргэжлийн сурах бичиг*, З.Буянхишиг, Ж.Жавзансүрэн, Э.Эрдэнэтуяа, /24.16хх, Ном Хур/. Улаанбаатар 2013

## 11. Publications and papers:

**Briefly list the most important publications and presentations from the past ten years – title, co-authors, where published and/or presented, date of publication or presentation**

- "Монгол улсын үндэсний хиймэл дагуулын холбоог газрын суурь сүлжээтэй хослуулан хөгжүүлэх боломж" /Ю.Отгонбаатар, Ш.Ганболд, З.Буянхишиг/ ММТ-2023, Улаанбаатар
- "Possibility study to delivery IoT services to rural nomadic life based on natioanal satellite in Mongolia" /Otgonbaatar.Y, Ganbold.Sh, Buyankhishig.Z/, The International Academic Conference-2023, Khuree University,
- "Network Architecture Design of Hybrid Terrestrial and Satellite Network for Mongolia" /Otgonbaatar.Y, Ganbold.Sh, Buyankhishig.Z/, IEEE-12th International conference on Communications, Networks and Satellite-2023 (COMNETSAT), Malang, Indonesia,
- "Comparative study of estimation of rain and cloud attenuation at high frequency on satellite links for Mongolia", /Otgonbaatar.Y, Ganbold.Sh, Buyankhishig.Z/ International journal of innovative science and research technology
- "Determination of Geometry Parameters to Geostationary Communication Satellite, Its Comparative Analysis for Mongolia", /Otgonbaatar Yura, Kwangcheol Shin, Buyankhishig Zundui/, 3rd International Conference on Electrical, Computer, Communications and Mechatronics Engineering ICECCME '23 Tenerife-Canary Islands SPAIN
- "Comparative Study of The Geometry calculation of the Geostationary satellite in space position 74E and 113.6E for Mongolia", /Otgonbaatar.Y, Buyankhishig.Z/ KHURELTOGOOT-2022, p71, Ulaanbaatar
- "Orbital Angular Momentum Shift Keying (OAM-SK) with time-Spacing for FSO" /Dolgorsuren Dulamjav, Munkhbayar Adiya, Hiroki Kishikawa, Buyankhishig Zundui/ MOC-2022 International conference, Germany
- "Some analysis of FSO link performance during rainy months in Ulaanbaatar, Mongolia" ICT Focus journal, <https://www.ictfocus.org>, /Dolgorsuren.D, Buyankhishig.Z/
- "Төрийн цахим үйлчилгээнд зориулсан Мэдээлэл Холбооны Сүлжээний дэд бүтцэд тавигдах шаардлага", /Ш.Ганболд, З.Буянхишиг/ Цахим үндэстэн-2021, Улаанбаатар
- "Е-хог хаягдал ба тогтвортой хөгжлийн асуудал" /Б.Энхжаргал, З.Буянхишиг/ Цахим үндэстэн-2021, Улаанбаатар
- "ЕБС-ийн багш нарын мэдээллийн технологийн чадамжийн судалгаа" /Д.Мөнхзул, З.Буянхишиг/ Цахим үндэстэн-2021, Улаанбаатар
- "WDM EPON сүлжээний үйлчилгээний чанарыг сайжруулах шаталсан DWBA загвар" /Б.Цэрэнлхам, Ш.Ганболд, З.Буянхишиг/ Цахим үндэстэн-2021, Улаанбаатар
- "Атмосферийн давхаргаар дамжих гэрлийн долгионы тархалтын судалгаа" /Д.Долгорсүрэн, З.Буянхишиг/ Цахим үндэстэн-2021, Улаанбаатар
- "Оптик хэрэглэгчийн сүлжээн дэх зурвас хуваарилалтын аргууд" /Б.Цэрэнлхам, Ш.Ганболд, З.Буянхишиг/ ЭШБ-ийн эмхэтгэл, ШУТИС, Улаанбаатар, 2021 №2, 279
- Атмосферийн давхаргаар дамжих оптик долгионы тархалтанд борооны нөлөөллийг тооцох нь /Д.Долгорсүрэн, З.Буянхишиг, Ш.Ганболд/ ММТ-2020, Улаанбаатар, ШУТИС
- Optical signal transmission with 8-ary OAM shift keying through the FSO communication link with phase distortion /А.Мөнхбаяр, О.Ням-Эрдэнэ З.Буянхишиг/ Хүрэл тогоот-2020, УБ
- FSO системийн тархалтыг тооцоолох нь /Д.Долгорсүрэн, З.Буянхишиг, Ш.Ганболд/ Хүрэл тогоот-2020, Улаанбаатар
- "Үйлчилгээний төрөлд нийцүүлсэн DBA алгоритм" /Б.Цэрэнлхам, З.Буянхишиг, Ш.Ганболд/ ММТ-2019, Улаанбаатар

- “Идэвхгүй оптик сүлжээний найдваржилтын загварчлал ба оновчлол” /Д.Долгорсүрэн, З.Буянхишиг, Ш.Ганболд/ ММТ-2019, Улаанбаатар
- *ONU-driven energy saving method in EPON system* /Sh.Ganbold, Z.Buyankhishig/ ICAST-2018 IEEE conference, Japan, Fukuoka
- *WDM-TDM PON сүлжээний долгионы урт болон зурвас хуваарилалтын арга*, /Б.Цэрэнлхам, З.Буянхишиг, Ш.Ганболд/ ММТ-2017 “Мэдээлэл, холбооны технологи боловсролд” ЭШХ-ын эмхэтгэл, х97-101, 2017 он
- *Pulse Compression Technique Applied to QPSK Signal Using HNLFF and SMF*, /Batdalai.S, Hiroki Kishikawa, Nobuo Goto, Buyankhishig.Z, Munkhbayar.A/ MUSTAK-2016, p72-74
- *Near Real-time Tracking Mechanism for ONU’s Service Performance*, /Z.Buyankhishig, Sh.Ganbold/, 2016 он
- *Evolution and Development of Mobile Communication Networks*, /Z.Buyankhishig, Yu. Otgonbaatar/ MUSTAK-2015, pp.170-173
- “The urgent need for E-waste management in Mongolia”, B.Enkhjargal and Z. Buyankhishig, In International Conference on Industrial Convergence Technology (ICICT -2014), pp. 256-258 , (May. 2014)
- “The global trends of e-waste issues and current situation of Mongolia”, B.Enkhjargal and Z. Buyankhishig, In 7th IEEE International Conference on Ubi-Media Computing (UMEDIA 2014), pp. 98-101 , (Jun. 2014)
- *Subscriber Reconfigurable TDM PON Architectures*. /UMEDIA-2014 7th International Conference/
- “Simulink Model of Mach-Zehnder Modulator”, Z. Buyankhishig, B.Tserenlkham In Digest of Research Papers, pp. 181-186, (June. 2013)
- “Simulink Model of Optical Modulation”, Z. Buyankhishig, In Proceedings of Research Conference on “Current and Future Trend of ICT”, pp. 52-57, (Feb. 2013).
- *Some possibility of E-integrated network solution* p119-124,/ MUSTAK-2013/
- “Some possibility of E-integrated network solution”, Yu. Otgonbaatar and Z. Buyankhishig, In International Summer workshop Computer Science, Germany, pp. 32-35, (Jul. 2013)
- *Comparative study on high order optical modulation formats*, /Z.Buyankhishig, B.Tserenlkham, J.Orgil/ IFOST-2013, 8th International Forum on Strategic Technology, pp. 168-171, (Jun. 2013)
- *Information and communication technology: Some possibility to develop through solution of integrated network in other sectors of Mongolia*, /Z.Buyankhishig, Yu.Otgonbaatar/ IFOST-2013, 8th International Forum on Strategic Technology (IFOST-2013), pp. 310-314, (Jun. 2013)
- “In issue to Development of Information and Communication Technology in Mongolian health sector”, Yu.Otgonbaatar, Z.Buyankhishig, I Technological Innovation in a Mobile Word Conference, Murcia University, pp. 79-82 , (Dec. 2012).
- “Cloud Computing and Its Application in Learning Environment”, Z. Buyankhishig, Proceedings of Research Conference on “Current and Future Trend of ICT”, pp. 133-135 , (Feb. 2012)
- Z. Buyankhishig “Optimal Solution of ONU’s type in WDM-PON System”, In Proceedings of Research Conference of Faculty and Researchers, SICT of MUST, pp. 35-41, (Apr. 2012).

**12. Briefly list the most recent professional development activities (conference and seminar):**

- Managerial Invitational Workshop, Cheonan, Korea, July 03-July 16, 2023 /KOICA project/
- IT week workshop Tokyo, Japan, Nov 04-08, 2017
- International Conference on IoT Seoul, Korea, Nov 19-20, 2015
- Workshop series of the International Accreditation, Jan-Feb, 2015, Ulaanbaatar