

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
16 June 2022 (16.06.2022)



(10) International Publication Number
WO 2022/123121 A1

(51) International Patent Classification:

G06N 3/04 (2006.01) G06N 3/08 (2006.01)

(21) International Application Number:

PCT/FI2021/050864

(22) International Filing Date:

10 December 2021 (10.12.2021)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

20213369.0 11 December 2020 (11.12.2020) EP

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, IT, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO,

NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- of inventorship (Rule 4.17(iv))

Published:

- with international search report (Art. 21(3))

(54) Title: FLUID QUALITY MONITORING

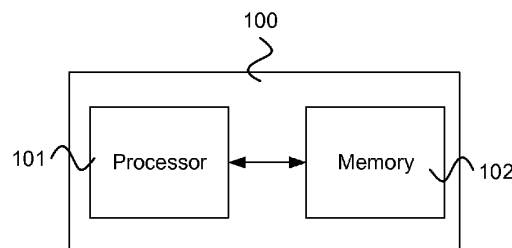


FIG. 1

(57) Abstract: It is an objective to provide a fluid quality measurement device. According to an embodiment, a fluid quality measurement device is configured to: obtain a plurality of holograms, wherein each hologram in the plurality of holograms represents a microscopic object in a fluid sample; produce a latent space representation of each hologram using a trained autoencoder neural network; assign each hologram in the plurality of holograms to a class based on the latent space representation of the hologram; and produce a fluid sample fingerprint based on the assignment of the plurality of holograms into the plurality of classes.

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