Errata

This document contains the list of errors (with appropriate corrections) that we found after the publication of our book:


List of errors

PREFACE

1. Page xii, end of the formula in line 3 from the top.
   REPLACE
   ...(x) s,
   BY
   ...(x)ds,

CHAPTER 1

1. Page 8, formula (1.2).
   REPLACE
   \[ \|f(t, \cdot)\| \]
   BY
   \[ \|\rho(t, \cdot)\| \]

2. Page 102, Remark 2.15, second line of (A4).
   REPLACE
   ...and \[ a_{\left[\eta,\tau_{T}\right]}(\cdot) \]
   BY
   ...and, for every \( \eta \in [t, T] \), \[ a_{1_{\left[\eta,\tau_{T}\right]}(\cdot)} \]
1. Page 121, Hypothesis 2.33 (i), first line.

REPLACE

“... and \( l(t,x,a) \) are uniformly continuous in \( t \) on \([0,T]\), uniformly for \((x,a) \in B(0,R) \times \Lambda \) for every \( R > 0 \).”

BY

“... and \( l(t,x,a) \) are continuous and uniformly continuous in \((t,x)\) on \([0,T] \times B(0,R)\), uniformly for \( a \in \Lambda \) for every \( R > 0 \).”

2. Page 124, Theorem 2.36, third line.

REPLACE

“Let Hypotheses 1.125, 2.1 and 2.33-(ii)(iii) be satisfied”,

BY

“Let Hypotheses 1.125, 2.1 and 2.33 be satisfied”,

i.e. “-(ii)(iii)” should be deleted.

3. Page 128, Hypothesis 2.40 (i), first line.

REPLACE

“There exist \( C,N > 0 \) such that ...”

BY

“The functions \( b,\sigma \) and \( l \) are continuous, \( l(x,a) \) is uniformly continuous in \( x \) on \( B(0,R) \), uniformly for \( a \in \Lambda \) for every \( R > 0 \). Moreover, there exist \( C,N > 0 \) such that ...”.

4. Page 129, formula (2.69)

REPLACE

\( l(s,X(s),a(s)) \)

BY

\( l(X(s),a(s)) \)

5. Page 144, the formula in line 3 from the bottom.

REPLACE

\( \langle Ax,Dv \rangle + F(Dv) + l_2(x) ... \)

BY

\( \langle Ax + b(x),Dv \rangle + F(Dv) + l_1(x) ... \)

CHAPTER 3
1. Page 195, line 15 from the bottom.
REPLACE
\[ \tilde{v}(s, y) = u(\ldots) \]
BY
\[ \tilde{v}(s, y) = v(\ldots) \]

2. Page 197, Definition 3.34, line 4 from the bottom.
REPLACE
"A locally bounded \( B \)-upper semicontinuous function \( u \) on \([0, T) \times \overline{U} \ldots""
BY
"A locally bounded and continuous function \( u \) on \([0, T) \times \overline{U} \) which is \( B \)-upper semicontinuous on \((0, T) \times \overline{U} \ldots""

3. Page 198, Definition 3.34, line 2 from the top.
REPLACE
"A locally bounded \( B \)-lower semicontinuous function \( u \) on \([0, T) \times \overline{U} \ldots""
BY
"A locally bounded and continuous function \( u \) on \([0, T) \times \overline{U} \) which is \( B \)-lower semicontinuous on \((0, T) \times \overline{U} \ldots""

4. Page 198, Definition 3.35, line 4 from the bottom.
REPLACE
"A locally bounded \( B \)-upper semicontinuous function \( u \) on \((0, T] \times \overline{U} \ldots""
BY
"A locally bounded and continuous function \( u \) on \((0, T] \times \overline{U} \) which is \( B \)-upper semicontinuous on \((0, T) \times \overline{U} \ldots""

5. Page 199, Definition 3.35, line 2 from the top.
REPLACE
"A locally bounded \( B \)-lower semicontinuous function \( u \) on \((0, T] \times \overline{U} \ldots""
BY
"A locally bounded and continuous function \( u \) on \((0, T] \times \overline{U} \) which is \( B \)-lower semicontinuous on \((0, T) \times \overline{U} \ldots""

6. Page 252, line 2 from the top.
REPLACE
\[ \kappa_\omega(r) \]
BY
\[ \kappa_{\omega_1}(r) \]
7. Page 252, line 11 from the top.

REPLACE
\( \varphi(t, x, y) = \varphi_\delta(|x - y|^2 + \gamma)^{\frac{1}{2}} (1 + t) \)

BY
\( \varphi(t, x, y) = \varphi_\delta \left( (|x - y|^2 + \gamma)^{\frac{1}{2}} \right) (1 + t) \)


REPLACE
\( m_\tau(|x - y|) \)

BY
\( m_\tau(|x - y|_{-1}) \)


REPLACE
\( X(t) = x \)

BY
\( X_n(t) = x \)

10. Page 327, line 5 from the bottom.

REPLACE
\( Q_N(-A)^{-\frac{\alpha}{2}} \int_0^t (-A)^{\frac{\alpha + \gamma}{2}} e^{(t-s)A} (-A)^{\frac{\alpha}{2}} \sigma((-A)^{\frac{\alpha}{2}} Y(s), a_1(s))dW(s) \)

BY
\( Q_N(-A)^{-\frac{\alpha}{2}} \int_0^t (-A)^{\frac{\alpha + \gamma}{2}} e^{(t-s)A} (-A)^{-\frac{\alpha}{2}} \sigma((-A)^{\frac{\alpha}{2}} Y(s), a_1(s))dW(s) \)

11. Page 327, line 3 from the bottom.

REPLACE
\( \int_0^t (-A)^{\frac{\alpha}{2}} e^{(t-s)A} (-A)^{\frac{\alpha}{2}} P_N[\sigma((-A)^{\frac{\alpha}{2}} Y_N(s), a_1(s)) - \sigma((-A)^{\frac{\alpha}{2}} Y(s), \alpha_1(s))]dW_Q(s) \)

BY
\( \int_0^t (-A)^{\frac{\alpha}{2}} e^{(t-s)A} (-A)^{-\frac{\alpha}{2}} P_N[\sigma((-A)^{\frac{\alpha}{2}} Y_N(s), a_1(s)) - \sigma((-A)^{\frac{\alpha}{2}} Y(s), \alpha_1(s))]dW_Q(s) \)

CHAPTER 4

1. Page 382, line 1 from the bottom.

REPLACE
\( |G(y(r))^{-1}G(x)h|_Y \)

BY
\( |G(y(r))^{-1}G(x)h|_Z \)
2. Page 383, line 7 from the top.

REPLACE
\[ s^{-1}[\varphi(t, s) - \varphi(t, 0)] \]
BY
\[ s^{-1}|\varphi(t, s) - \varphi(t, 0)|_Y \]

3. Page 521, line 2 from the top, formula (4.254).

REPLACE
\[ UC_b(X, \mathcal{L}_1(H)) \]
BY
\[ UC_b(H, \mathcal{L}_1(H)) \]

4. Page 541, line 16 from the top.

DELETE
pr2:exmildOUF0spsapp
There should be “Proposition 1.147” there.

CHAPTER 5

1. Page 649, Lemma 5.46, line 6 from the bottom (the first line of the formula defining \( \rho_a(\cdot) \)).

REPLACE
... \( dW_Q(r) \)
BY
... \( Q^{-1/2}dW_Q(r) \)

2. Page 650, line 3 from the bottom.

REPLACE
... \( dW_Q(r) \)
BY
... \( Q^{-1/2}dW_Q(r) \)

3. Page 650, line 1 from the bottom.

REPLACE
... \( dW_Q(r) \)
BY
... \( Q^{-1/2}dW_Q(r) \)
APPENDIX B

   REPLACE
   \[(\lambda I - A^m)(D(A_0))\]...
   BY
   \[(\lambda I - A^m)^{-1}(D(A_0))\]...

APPENDIX C

1. Page 851.
   REPLACE THE FIRST TWO LINES OF SECTION C.4 BY THE FOLLOWING:
   Let, as in Section C.2, \(H = L^2(\mathcal{O})\) and \(\Lambda = L^2(\partial\mathcal{O})\). Let \(\Xi = \Lambda, Q \in \mathcal{L}_+(\Xi)\), and let \((\mathcal{O}, \mathcal{F}, \{\mathcal{F}_s\}_{s \in [t,T]}, \mathbb{P}, W_Q)\) be a generalized reference probability space. We consider the following problem:

2. Second line of formula (C.34).
   REPLACE
   \[= h(s, y(s, \xi))\]...
   BY
   \[= h(s, \xi)\]...

3. Page 851, first line after formula (C.34).
   REPLACE
   \[\text{where } f, h : [t, T] \times \mathbb{R} \times \Omega \to \mathbb{R} \text{ and } g : [t, T] \times \partial\mathcal{O} \times \Omega \to \mathbb{R} \text{ are...}\]
   BY
   \[\text{where } f : [t, T] \times \mathbb{R} \times \Omega \to \mathbb{R} \text{ and } h, g : [t, T] \times \partial\mathcal{O} \times \Omega \to \mathbb{R} \text{ are...}\]
4. Page 851, last two lines before formula (C.35).

REPLACE

So, defining as before \( b(s, y)(\cdot) := f(s, y(\cdot)) \) and \( [\sigma(s, y)z](\cdot) := h(s, y(\cdot))z(\cdot) \), we define the mild form of (C.34), for \( s \in [t, T] \), as

BY

We now define, as in Sections C.2 and C.3, \( b(s, y)(\cdot) := f(s, y(\cdot)) \) for \( s \in [t, T] \) and \( y \in H \). Moreover we define \( \sigma : [t, T] \to \mathcal{L}(\Lambda) \) as follows: for \( s \in [t, T] \) and \( z \in \Lambda \), \( [\sigma(s)z](\cdot) := h(s, \cdot)z(\cdot) \). We define the mild form of (C.34), for \( s \in [t, T] \), as

5. Last line of formula (C.35).

REPLACE

\[ ...G_N(\sigma(r, X(r))dW_Q(r)... \]

BY

\[ ...G_N(\sigma(r)dW_Q(r)... \]


REPLACE

\[ ...N_\lambda(\sigma(s, X(s))dW_Q(s)... \]

BY

\[ ...N_\lambda(\sigma(s)dW_Q(s)... \]

7. Page 852, the formula in the third line of Section C.5.

REPLACE

\[ ...G_D(\sigma(r, X(r))dW_Q(r)... \]

BY

\[ ...G_D(\sigma(r)dW_Q(r)... \]


REPLACE

\[ ...h(s, (y(t, 0))... \]

BY

\[ ...h(s)... \]


REPLACE

\[ ...G_q(\sigma(r, X(r))dW_Q(r)... \]

BY

\[ ...G_q(\sigma(r)dW(r)... \]
   REPLACE
   \[ G_\eta \sigma (r, X(r)) dW_Q(r) \ldots \]
   BY
   \[ G_\eta \sigma (r) dW(r) \ldots \]

11. Page 853, the last line before formula (C.39) and the third line of formula (C.39).
   REPLACE
   \[ L^2(t, T; \mathbb{R}) \]
   BY
   \[ L^2_\eta \]

**APPENDIX D**

   REPLACE
   \[ f(b) - f(a) \]
   BY
   \[ |f(b) - f(a)|_Y \]

   REPLACE
   \[ f(b) - f(a) - (b - a)f'(t_0) \]
   BY
   \[ |f(b) - f(a) - (b - a)f'(t_0)|_Y \]

**REFERENCES**

1. Page 891, Reference 391.
   REPLACE
   *Gaussian Measures in Hilbert Spaces*
   BY
   *Gaussian Measures in Banach Spaces*